Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: B.
Last name: E.
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, B. E.

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Phil
Last name: E.
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Phil E.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: R.
Last name: E.
Organization:
Title:
Comments:
My name is R. E. and I live in Crystal Lake, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, R. E.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Stefanie
Last name: E.
Organization:
Title:
Comments:
My name is Stefanie E. and I live in Florida City, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Stefanie E.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Amro
Last name: E
Organization:
Title:
Comments:
My name is Amro E and I live in Hayward, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Amro E

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Barbearthjus
Last name: E
Organization:
Title:
Comments:
My name is Barbearthjus E and I live in Easthampton, Massachusetts.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Barbearthjus E

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Kirsten
Last name: E
Organization:
Title:
Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Kirsten E

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Kirsten
Last name: E
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Kirsten E

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Kirsten
Last name: E
Organization:
Title:
Comments:
My name is Kirsten E and I live in New York, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Kirsten E

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Cigall
Last name: Eacott
Organization:
Title:
Comments:
My name is Cigall Eacott and I live in Santa Fe, NM. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

Wild places need to remain wild for wildlife to thrive, for our ecosystems to stay in balance, and for our future generations to have a healthy planet. I feel strongly that we need to protect Tongass National Forest and it would be devastating to open it up to the logging industry.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless

Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/11/2019 12:00:00 AM
First name: sally
Last name: eadie
Organization:
Title:
Comments:
My name is sally eadie and I live in Longwood, Florida.

Please protect one of the last pristine areas for the generations to come. We have destroyed some much and saved so little. This is too important to ignore.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, sally eadie

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/9/2019 12:00:00 AM
First name: Michael
Last name: Eagan
Organization:
Title:
Comments:
My name is Michael Eagan and I live in Winder, GA. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

Wild lands, wilderness, is key to human well-being, wildlife recovery, and native american's history. The few last remaining vestiges should be protected from resource extraction. Resource extraction is a stop-gap exercise, and the damage it does is felt well beyond the decades it takes to recover. Do not allow the current protections to be rescinded.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, support small-scale, sustainable logging, develop more recreational opportunities, like trails and cabins. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and

focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Sean
Last name: Eagan
Organization:
Title:
Comments:
Re: Roadless Rule Comments for Tongass

Dear Forest Service:

The roadless rule was enacted to slow down three processes that were happening on National Forests in the 1970s, 1980s, and 1990s:

1) More roads were being built than the forest service could maintain, and even roads that had been "put to bed" continued creating erosion making streams less productive for salmon.

2)Very little old growth (mixed aged forest with mean d.b.h. of 30" or more) remained in the lower 48 or Southeast Alaska. Old growth provides habitat for a species like Goshawks that can not live/hunt in dense young forests. Old growth has greater species richness.

3)Lower 48 residents felt that most wild place had been trammeled and the few places that were left should be preserved without roads or other development.

Admittedly the Tongass has many wild areas so the third reason is less valid on the Tongass than on the lower 48 national forests.

The Tongass still has many roads that are contributing excessive sediment to streams and many culverts that block fish passage. Like National Forests in the lower 48, the Tongass NF logged most of its old growth trees leaving little habitat for the animals that need an open forest structure and large trees. Old growth provides habitat for a much wider array of species than young forests.

Since two of the three reasons for creating the rule are still valid, my preference would be to not change the roadless rule at all.

That said, there is an argument for a little flexibility around native communities. These native communities, which are only connected by ferries, should be allowed more leeway in how the lands immediately around them are managed. I would say the native communities are the ones with Tligit/Haida names: Angoon, Hoonah, Klukwan, Kassan, Klawak, Kake, Hydaburg, Hyder e.t.c . I think a process could be set up so each could get a certain number of miles of new roads perhaps based on their population.

In public meeting USFS staff suggested Forest Plans, not roads, dictate timber harvest levels; this was disingenuous. Forest plans change about once a decade. Timber gets harvested where it can be economically

extracted and moved to a market. Roads make it cheaper (or in some cases possible) to harvest timber so more roads will increase timber harvest in the future.

The Tongass does have "wilderness" areas, but these areas often are in cold, high elevation areas not suited for growing large trees. Some of the Tongass's official Wilderness is glaciated or under permanent snowfields. Most of it has shallow soils on steep slopes with small trees or bogs. This is not the same habitat as what is being protected in the last few acres of "old growth" which are not currently accessible.

My first preference is to leave the Roadless rule 100% intact on the Tongass. If there is too much pressure from Washington for change, a small change, such as alternative 1 that just slightly changed the roadless boundary would be acceptable. It is not acceptable to use this roadless rule change to facilitate logging any of the remaining old growth. Just be patient and wait for the second growth trees to grow and retool mills for smaller trees.

Thank you for considering my comments. Please email me back that these comments have been recorded and considered.

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Gary
Last name: Eagen
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Gary Eagen

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Gary
Last name: Eagen
Organization:
Title:
Comments:
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Regards, Gary Eagen

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Robert
Last name: Eager
Organization:
Title:
Comments:
My name is Robert Eager and I live in Albuquerque, New Mexico.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Robert Eager

Date submitted (Alaskan Standard Time): 11/11/2019 12:00:00 AM
First name: Ashley
Last name: Eagle-Gibbs
Organization:
Title:
Comments:
My name is Ashley Eagle-Gibbs and I live in San Anselmo, California.

We need to greatly reduce our emissions as we face the race against a changing climate. Thank you for consideration of my comments.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Ashley Eagle-Gibbs

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/10/2019 12:00:00 AM
First name: Ursula
Last name: Eagly
Organization:
Title:
Comments:
My name is Ursula Eagly and I live in Queens, New York.

I hope it's possible to get through this administration with our natural resources intact. Please block this one!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Ursula Eagly

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/23/2019 12:00:00 AM
First name: Dan
Last name: Eakin
Organization:
Title:
Comments:
My name is Dan Eakin and I live in Billings, Montana.

Allowing continued deforestation will only create more problems for our country. Trees and forests are needed to promote life and help absorb carbon dioxide. Please do all you can to keep forests safe and healthy.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Dan Eakin

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Cindy
Last name: Eakle
Organization:
Title:
Comments:
My name is Cindy Eakle and I live in Fort Walton Beach, Florida.

Do not let greed ruin our forests!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Cindy Eakle

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Susan
Last name: eakle
Organization:
Title:
Comments:
My name is Susan eakle and I live in Palm Beach Gardens, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Susan eakle

Date submitted (Alaskan Standard Time): 10/24/2019 12:00:00 AM
First name: Charles
Last name: Eakley
Organization: Mortenson
Title:
Comments:
I want the areas that are currently roadless around Sitka and Northern Baranof Island to remain in the same roadless classification as delineated by the 2001 Roadless Area Conservation Act. Do not allow roadbuilding for old growth timber harvest, road building or reconstruction, powerline corridors, or mines. These areas are very important habitat for fish and deer. I want the FS to examine the value of these trees on the stump vs their value cut down. I also think the FS should conduct a study to examine how much carbon the Tongass sequesters annually and the impact this has on local climate change adaptation.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: April
Last name: Eales
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, April Eales

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Lee
Last name: Eames
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Lee Eames

Date submitted (Alaskan Standard Time): 12/17/2019 2:26:44 PM
First name: Talia
Last name: Eames
Organization:
Title:
Comments:
My name is Talia Eames and I live in Juneau, AK. Born and raised. I depend on the forest for hunting, foraging and protecting our salmon stream so I can fish. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, foraging for wild foods, subsistence harvesting, the peace and solitude I find in nature, recreating, practicing my culture, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on roadless areas in the Tongass National Forest for healthy fish habitat, deer habitat and subsistence hunting, foraging and gathering wild foods, practicing my culture, carbon sequestration and local climate change mitigation, recreating and enjoying nature, keeping public lands wild for future generations, viewing wildlife. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Admiralty Island, the northern mainland above Port Snettisham (around Juneau), all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because It may be federal land but what is done here does not convey the wishes of the people who will be impacted the most. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts devote resources to support our fishing and visitor industries.

Old-growth trees are important in the fight against climate change. The Tongass is so valuable, AS IT IS. Alaska is not a wholesale resource warehouse. Its our home.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Gary
Last name: Eanes
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Christine
Last name: Eardley
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Christine Eardley

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: John
Last name: Earhart
Organization:
Title:
Comments:
My name is John Earhart and I live in Sequim, Washington.

Imagine your kids ingesting this stuff!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, John Earhart

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Madison
Last name: Earhart
Organization:
Title:
Comments:
These forests are not only a massive carbon sink, but critical to the survival of all the animals that live there. The ecosystem depends on it and climate change depends on forests like these to stay intact. Please do not start cutting the forest when we need it the most.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Mary
Last name: Earhart
Organization:
Title:
Comments:
My name is Mary Earhart and I live in Dallas, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Mary Earhart

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Holland
Last name: Earle
Organization:
Title:
Comments:
HC3732

U.S. Forest Service Alaska Roadless Rule

Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Chugach and Tongass National Forest and in supporting their associated fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77, by selecting the 'no action' alternative. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Holland Earle

Roswell, GA 30076

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Nancy
Last name: Earle
Organization:
Title:
Comments:
My name is Nancy Earle and I live in Bangor, Maine.

With no clean air we are gone. It is an absolute.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Nancy Earle

Date submitted (Alaskan Standard Time): 10/27/2019 12:00:00 AM
First name: Michael
Last name: Earles
Organization:
Title:
Comments:
It is a great shame to see that the same USFS that my grandmother spent her life working for has begun to put the interests of the general public behind the interest of a small group of individuals. I am all for responsible logging on timber lands harvested in the past and I believe that it's a necessary and good practice but I can't see the value for the public that comes with logging old growth forests. The short term economic benefits of logging this land is nothing compared to the long term economic benefits from tourism. While I understand tourism has an impact on the land it's negligible compared to logging. Please preserve our old growth forests just as Teddy intended, don't let the integrity of what is arguably our most important government agency be comprised. Please let our children inherit what natural and wild land is left in this country, don't sell that opportunity out to a select few logging companies.

[Position]

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Debbie
Last name: Earley
Organization:
Title:
Comments:
My name is Debbie Earley and I live in Felton, Delaware.

Get these forever chemicals out of our food and water

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Debbie Earley

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Chuck
Last name: Early
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Gayle
Last name: Early
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Gayle Early

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: James
Last name: Early
Organization:
Title:
Comments:
HC5563

Dear U.S. Forest Service,

CC: Alaska Congressional Delegation and Federal Administration

I support the no-action alternative to leave the 2001 Roadless Rule in place on the Tongass National Forest. We must continue to phase out old-growth clear-cut logging and instead prioritize restoring degraded watersheds and fish streams that contribute to the growing fisheries and tourism-based economies of Southeast. To that end, please conserve the Tongass 77 and TNC priority areas in the final Roadless Rule.

Sincerely,

Comments: *(Eg: list locations you recreate, or why you value Tongass fish & wildlife)* [Text italicized for emphasis]

[Box unchecked] I would like to get more involved in the campaign!

*By taking this action, you are consenting to receive future communications via phone, text message, email, or mail from Sitka Conservation Society and its partners working to protect the Tongass. * [Text italicized for emphasis]

Date submitted (Alaskan Standard Time): 11/7/2019 12:00:00 AM
First name: Melissa
Last name: Early
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.

At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.

Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.

I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Teddy Roosevelt said "We have fallen heirs to the greatest legacy a people ever did receive -- our public lands." We are so fortunate to have these areas for Roadless hiking, hunting, fishing, and passing down a legacy to future generations. This is the essence of Family Values.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Tim
Last name: Early
Organization:
Title:
Comments:
3470

U.S. Forest Service Alaska Roadless Rule

Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Tim Early

Houston, TX 77043

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Jennifer
Last name: Earnest
Organization:
Title:
Comments:
My name is Jennifer Earnest and I live in Port Townsend, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jennifer Earnest

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Shinann
Last name: Earnshaw
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.
The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.
In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Keep their corrupt and dirty hands off the Tongass. Anything else if criminal!
Regards, Shinann Earnshaw

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Leonard
Last name: Earnst
Organization:
Title:
Comments:
The logging, oil, and mining industries have not shown that they can be trusted with our natural resources. The Tongass Natural Forest is a unique resource that cannot be replaced if it is damaged by them. Therefore it is my opinion that the existing roadless rule remain in place and that roads are not allowed to be built there.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Marsha
Last name: Earp
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/6/2019 3:00:00 PM
First name: Gillian
Last name: Earthman
Organization:
Title:
Comments:
My name is Gillian Earthman and I live in Newark, Delaware.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Gillian Earthman

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Christian
Last name: Easita
Organization:
Title:
Comments:
HC938

Dear Chief Christiansen,

I am a visitor to the lands and waters of Southeast Alaska. The Tongass National Forest is a large part of why I am here. Visitors like me come to witness the vast, beautiful stands of old-growth trees that can't be found on such a scale anywhere else in the United States. We come to crew on commercial fishing boats. We come to hunt, fish and hike in America's largest National Forest. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Alaskans and Americans.

I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. Tourism and commercial fishing are at the heart of Southeast's economy, not the antiquated timber industry.

Date submitted (Alaskan Standard Time): 12/13/2019 12:00:00 AM
First name: Rosemary
Last name: Easley
Organization:
Title:
Comments:
HC586

Dear Secretary Perdue and Senator Murkowski,

I am currently on a boat cruise off the coast of the West Chichagof-Yakobi Wilderness. The West Chichagof-Yakobi Wilderness was the first citizen-initiated Wilderness area in Alaska; in 1967, Sitkans who recognized the value of this area came together to protect it. This Wilderness area is rich in biodiversity and supports an incredibly productive ecosystem. Salmon are sustained by the vast freshwater stream systems that empty into fjords and inlets. Brown bears feast upon these salmon as they swim upstream, distributing their carcasses throughout the forest. These carcasses fertilize the soil and feed the Sitka spruce, mountain hemlock, and yellow cedar trees that tower over the land. Underneath this old growth canopy, Sitka Black-tail deer browse on abundant berries and shrubs.

However, the West Chichagof-Yakobi Wilderness is not the only place in Southeast Alaska with such incredible beauty and biodiversity. The flora and fauna we find in this wilderness area also thrive in inventoried roadless areas throughout the Tongass. Intact roadless areas provide our communities with important hunting, fishing, foraging, and recreating opportunities. We depend on the entirety of the Tongass for our subsistence and our livelihoods including our commercial fishing and tourism industries. I am grateful for the Wilderness designation that the West Chichagof-Yacobi area received, and would like to see such protections extended to areas such as Ushk Bay and Poison Cove.

Outside of Wilderness areas like West Chichagof, the roadless areas we depend on are threatened by politicians and special interests pushing for short term profits that have long term ecological and economic consequences. Wilderness areas, roadless areas, and the intact habitat they support are an investment in the long term sustainability of our region. Please keep the National Roadless Rule in place on the Tongass. T77 areas are particularly important to me; these watersheds are critical to maintaining the salmon runs we depend on for jobs and food. Please do not remove protections for these areas, or anywhere else on the Tongass.

Personal Comments: I am interested in learning more!

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lorraine
Last name: Eason
Organization:
Title:
Comments:
My name is Lorraine Eason and I live in University City, Missouri.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Lorraine Eason

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Denise
Last name: East
Organization:
Title:
Comments:
My name is Denise East and I live in Cupertino, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Denise East

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lawrence
Last name: East
Organization:
Title:
Comments:
My name is Lawrence East and I live in Jacksonville, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Lawrence East

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Michelle
Last name: East
Organization:
Title:
Comments:
HC3656

U.S. Forest Service Alaska Roadless Rule

Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.

Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,

Michelle East

Colorado City, CO 81019

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Michelle
Last name: East
Organization:
Title:
Comments:
3656

U.S. Forest Service Alaska Roadless Rule
Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.
Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,
Michelle East
Colorado City, CO 81019

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Darrel
Last name: Easter
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Darrel Easter

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Melinda
Last name: Easter
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Melinda Easter

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Melinda
Last name: Easter
Organization:
Title:
Comments:
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Regards, Melinda Easter

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: John
Last name: Easterday
Organization:
Title:
Comments:
My name is John Easterday and I live in Portland, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, John Easterday

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Anne
Last name: Easterling
Organization:
Title:
Comments:
My name is Anne Easterling and I live in Grapevine, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Anne Easterling

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Anne
Last name: Easterling
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Anne Easterling

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Monica
Last name: Eastham
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Monica
Last name: Eastham
Organization:
Title:
Comments:

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Comments:

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Last name: Eastham
Organization:
Title:
Comments:

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Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Monica
Last name: Eastham
Organization:
Title:
Comments:
HC1316

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

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Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Valerie
Last name: Eastland
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Valerie Eastland

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Edie
Last name: Eastley
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Edie Eastley

Date submitted (Alaskan Standard Time): 10/17/2019 12:00:00 AM
First name: Drake
Last name: Eastman
Organization:
Title:
Comments:
Old growth forests are a national treasure and this is nothing but a plundering of the nation for the benefit of private interests, in direct opposition to the interests of the public at large. There is no good reason for this to happen. America is being sold out by a politically compromised demagogue.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/14/2019 3:00:00 PM
First name: Mary
Last name: Eastman
Organization:
Title:
Comments:
My name is Mary Eastman and I live in Oklahoma City, Oklahoma.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Mary Eastman

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Mary
Last name: Eastman
Organization:
Title:
Comments:
My name is Mary Eastman and I live in Toledo, Oregon.

Why we would go backwards just does not make sense! The health of our land and citizens is our wealth.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Mary Eastman

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Philip
Last name: Eastman
Organization:
Title:
Comments:
Please do not clear cut the Tongass National Forest. Rainforests are the oxygen filters for our already warming planet. We can elect to simply let land remain untouched by human industry. It can simply exist for creatures other than ourselves. Letting this forest remain protected is an investment in the long term health of all humans. Please do not damage what cannot be undone.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Kat
Last name: Easton
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Kat Easton

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Paul
Last name: Easton
Organization:
Title:
Comments:
My name is Paul Easton and I live in Hartford, Connecticut.

Stop this giveaway of public property.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Paul Easton

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Rick
Last name: Easton
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Rick Easton

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Tim
Last name: Easton
Organization:
Title:
Comments:
HC6270

Dear U.S. Forest Service:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for more than 20 years. *Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77.* [Text bolded for emphasis] Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. *Please do not roll back roadless are protection for habitat that our irreplaceable fish and wildlife populations need to survive.* [Text bolded for emphasis]

Customize your comment by listing reasons the Tongass is important to you or why you value Alaska Roadless areas: (ex: specific locations you recreate, activities you do, or why you value fish & wildlife) [Text italicized]

Sincerely,

Would you like to volunteer with TU Alaska to Help America's Salmon Forest?

Yes No

sing songs? Benefit?

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Katherine
Last name: Eastridge
Organization:
Title:
Comments:
HC5077

U.S. Forest Service Alaska Roadless Rule Committee:

I live at the mouth of the Klamath river in California, and dream of getting to fish in Alaska one day. I have watched the Yurok tribe here fight for the rights of the river and conserve fish runs for future generations and I hope the pristine areas in Alaska are able to stay that way.

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Katherine Eastridge

BLACK MOUNTAIN, NC 28711

[Position]

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Christopher
Last name: Eastwood
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Gail
Last name: Eastwood
Organization:
Title:
Comments:
I support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.
The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.
In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Gail Eastwood

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Gail
Last name: Eastwood
Organization:
Title:
Comments:
Don't turn the national treasure that is the Tongass National Forest into big bucks for logging corporations. This forest belongs to the people in perpetuity; in particular to the traditional native custodians of the land--don't let it be destroyed.

I support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.

Regards, Gail Eastwood

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Maria
Last name: Eastwood
Organization:
Title:
Comments:
My name is Maria Eastwood and I live in Pleasanton, California.

I am against animal cruelty and destroying our forests in which animals live.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Maria Eastwood

Date submitted (Alaskan Standard Time): 11/12/2019 3:00:00 PM
First name: Stephanie
Last name: Eastwood
Organization:
Title:
Comments:
My name is Stephanie Eastwood and I live in Argyle, Wisconsin.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Stephanie Eastwood

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Chris
Last name: Eaton
Organization:
Title:
Comments:
My name is Chris Eaton and I live in Los Angeles, California.

Our world needs wild places for so many reasons. Our greatest scientific discoveries come from nature and it still holds many secrets we have not yet discovered. As creatures who evolved in wild places returning to them speaks to our souls and refreshes our spirit. This is a place we cant deminish for profit. We wont sell our souls for politics and profits.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Chris Eaton

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Clay
Last name: Eaton
Organization:
Title:
Comments:
Please keep the Tongass roadless

Sent from my iPhone

[Position]

Date submitted (Alaskan Standard Time): 11/26/2019 12:00:00 AM
First name: Jean
Last name: Eaton
Organization:
Title:
Comments:
HC280

Thurs 11/07/19

Greetings! RE: Tongass Roadless Rule Exemption NO !!!!!!!!!

I am against an exemption to the roadless rule for the Tongass National Forest. The planet needs the old growth forests to absorb the greenhouse gases, CO2 , that are causing the very destructive global warming. The planet will soon be uninhabitable in many areas if we cut our old growth forests. And what are they being cut for? Profits for industries that should be growing their own trees and funding their own logging roads. These forests belong to all Americans, and shouldn't be given to a few for profit. The local jobs are a drop in the bucket, mainly used by our politicians to talk like they are doing something for local people. Ha!

Cutting down old growth trees, or trees on mountain sides, or along rivers and streams is very bad for our fisheries. It destroys the water quality.

It would be a good thing to leave the remaining old growth forests for future generations and for people who come from all over the world to experience them: kayaking, camping, boating, fishing etc. Tourism to these beautiful areas brings in all kinds of jobs and bucks to local economies. Dollars that stay in Alaska!

It's a sad thing to drive in from the airport to Yakutat through huge, very old clearcuts showing acres of giant stumps. How wonderful it would be to experience those big old living giants instead! How did Alaskans benefit from that logging frenzy? A few individuals got jobs, the rest of the money went out of state.

I've been fishing on the beautiful little Situk River to the noise of logging trucks hauling out my trees to send them off to Asia to make pulp.

So think CLIMATE, BEAUTY, TOURISM, FISH, WILDLIFE, FUTURE!

Don't build roads and log the Tongass.

Thank you,

[Signature]

Jean Eaton

Anchorage, AK

99507

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Jeffrey
Last name: Eaton
Organization:
Title:
Comments:
My name is Jeffrey Eaton and I live in Tropic, Utah.

The original boundary for the Bears Ears National Monument should be restored. This is a magnificent area and must be protected.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Jeffrey Eaton

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Joyce
Last name: Eaton
Organization:
Title:
Comments:
Comments on Alaska Roadless Rule

Keep the Tongass National Forest roadless.

- Joyce Eaton

[Position]

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Karen
Last name: Eaton
Organization:
Title:
Comments:
My name is Karen Eaton and I live in Boston, Massachusetts.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Karen Eaton

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Linda
Last name: Eaton
Organization:
Title:
Comments:
My name is Linda Eaton and I live in Kingman, Arizona.

Alaska the Last Frontier and it needs to stay exactly that.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Linda Eaton

Date submitted (Alaskan Standard Time): 10/19/2019 12:00:00 AM
First name: Lisa
Last name: Eaton
Organization:
Title:
Comments:
No logging in are national forests

[Position]

Date submitted (Alaskan Standard Time): 11/7/2019 12:00:00 AM
First name: Mary
Last name: Eaton
Organization:
Title:
Comments:
My name is Mary Eaton and I live in Warrensburg, NY. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I live in the Adirondacks in N.Y. State and care deeply about our wildlife species. I'm also sick and tired of the way our beautiful natural places through out our country are constantly subjected to destruction from greed.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for the lifestyles of the indigenous communities that the forest supports its status as a national and global treasure, to keep public lands wild for future generations, the high density of incredible wildlife it contains, the recreational opportunities it provides, its status as the largest intact temperate rainforest in the world, its huge swaths of intact ecosystems and all the biodiversity it contains, its wild salmon populations and the world-class fishing opportunities, its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for passiveactive watershed restoration (stream and habitat) to improvemaintain roadless characteristics (culvert removalreplacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to establish the economic value of the carbon stored in the Tongass, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, restore salmon habitat that was hurt by past logging practices. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless

Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Patricia
Last name: Eaton
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Patricia Eaton

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Patricia
Last name: Eaton
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Patricia Eaton

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Paula
Last name: Eaton
Organization:
Title:
Comments:
My name is Paula Eaton and I live in Kansas City, Missouri.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Paula Eaton

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Sean
Last name: Eaton
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/23/2019 3:00:00 PM
First name: Sheryl
Last name: Eaton
Organization:
Title:
Comments:
My name is Sheryl Eaton and I live in [@advCity], Arizona.

We must do everything we can to clean the air, not pollute it further.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Sheryl Eaton

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Kelly
Last name: Eaves
Organization:
Title:
Comments:
My name is Kelly Eaves and I live in Loganville, Georgia.

We have to stop poisoning our land and water. Not to mention ourselves.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Kelly Eaves

Date submitted (Alaskan Standard Time): 12/13/2019 12:00:00 AM
First name: Jessica
Last name: Ebanks
Organization:
Title:
Comments:
HC548

Dear Secretary Perdue and Senator Murkowski,

I am currently on a boat cruise off the coast of Kruzof Island, near Baranof Island. On this cruise, I am exploring and learning about the natural habitat of this area that is so special to residents of Sitka like me.

Only 10 miles west of Sitka, Kruzof is widely used as a place for locals to fish, hunt, forage and recreate. From Sea Lion Bay to Shelikof, North Beach to Shoals Point, the Forest Service manages extensive recreation infrastructure such as cabins, trails, and the existing road system for our enjoyment. Sitka black-tailed deer are plentiful, as are chum and pink salmon that run through the numerous stream systems on the island. This island contains productive, intact fish habitat, with three Tongass 77 and four TNC 'conservation priority areas' identified on the island. Mt. Edgecumbe volcano is an incredible day hike, and only a piece of the island's fascinating geologic activity.

Kruzof is prolific and peaceful. We are incredibly lucky to have such a place to work and play so close to town, and many of us visit Kruzof often. I value Kruzof island because:

The natural beauty and the recreational aspects. We are a coast guard family who have been able to take our family fishing and camping on the island. This is an untouched piece of the US - we should protect our resources

Currently, Kruzof Island is protected from old-growth clearcutting and road building under the 2001 Roadless Rule. As it stands, the 2001 Roadless Rule safeguards our recreation and subsistence activities on Kruzof. *It is important to me that the 2001 Roadless Rule remains in place on Kruzof Island, and throughout the Tongass National Forest.* [text bolded for emphasis] Opening up this area to more clearcutting and roadbuilding will jeopardize my way of life, and will sacrifice the spirit of Sitka that brings so many people to this special place. I do not want to see the 2001 Roadless Rule repealed on Kruzof, or anywhere else in the Tongass. Please protect this land for future generations to enjoy in perpetuity.

Sincerely, Jessica Ebanks

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Kris
Last name: Ebbe
Organization:
Title:
Comments:
My name is Kris Ebbe and I live in Corvallis, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Kris Ebbe

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Riley
Last name: Ebel
Organization:
Title:
Comments:
3095

Dear Alaska Roadless Rule Planning Committee,

I live and work on the lands and waters of the Alaska. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, Alaskans rely on the intact habitat that the roadless areas of the Tongass National Forest and the Chugach NF contain. That is why I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I strongly oppose any efforts to weaken protections for Roadless areas in the Tongass National Forest and the Chugach National Forest.

The Forest Service needs to continue phasing out old-growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. The Forest Service should focus on restoring degraded watershed and fish streams and carbon sequestration.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Riley
Last name: Ebel
Organization:
Title:
Comments:
HC3095

Dear Alaska Roadless Rule Planning Committee,

I live and work on the lands and waters of the Alaska. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, Alaskans rely on the intact habitat that the roadless areas of the Tongass National Forest and the Chugach NF contain. That is why I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule.

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The Forest Service needs to continue phasing out old-growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. The Forest Service should focus on restoring degraded watershed and fish streams and carbon sequestration.

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Barry
Last name: Eben
Organization:
Title:
Comments:
My name is Barry Eben and I live in Shoreline, Washington.

This is a short-term gain versus long term benefit issue. I urge decision makers to choose the latter for the welfare of future generations.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Barry Eben

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Kristine
Last name: Eberhard
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Kristine Eberhard

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Pia
Last name: Eberheim
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Pia Eberheim

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Bruce
Last name: Eberle
Organization:
Title:
Comments:
HC5078

U.S. Forest Service Alaska Roadless Rule Committee:

While volunteering with Trout Unlimited I observed the habitat improvement after a forest area was designated "roadless". This type of habitat protection quickly improved sedimentation in streams which in turn encouraged expansion of spawning "redds".

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Bruce Eberle

Clarksville, MD 21029

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Mel
Last name: Eberle
Organization:
Title:
Comments:
As a concerned citizen & Grandfather & an avid backpacker I request that the Tongass is JUST LEFT ALONE!!
Alternative 1 is my choice, my vote!!

Leave it WILD for my grandchildren & future generations!! Thank you!!

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Tracy
Last name: Eberlein
Organization:
Title:
Comments:
Please, PLEASE, do not allow logging in the Tongas National Forest to occur. Due to climate change, we need more trees than ever before, and we certainly do not need more roads. Our national parks are our greatest treasures, so please protect them. I cannot imagine one American who would support taking these giants down; they're historic and need to be protected. I beg of you to listen to the people of America who want these trees SAVED!

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Sheri
Last name: Eberly
Organization:
Title:
Comments:
My name is Sheri Eberly and I live in Canaan, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Sheri Eberly

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: John
Last name: Ebersberger
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, John Ebersberger

Date submitted (Alaskan Standard Time): 10/24/2019 12:00:00 AM
First name: Barry
Last name: Ebersole
Organization:
Title:
Comments:
Building a road is a proven end to an environment block of wilderness. I learned this in the 1980s in environmental studies at San Diego State University. In depth proofs were shown, how a single road, caused the end of a wilderness area.

Cutting trees, alone, is not the issue. The Road - Roads - ARE the issue. The science is there proving this -- building even a single road will forever impact, change, and ultimately destroy this wilderness.

These lands belong to the people of the United States and Congress, the President, and the Courts, have them IN TRUST for us, the people. Destruction of this, or any wilderness is a VIOLATION of that trust. Build a road, is a violation of that trust.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 10/24/2019 12:00:00 AM
First name: Charissa
Last name: Ebersole
Organization: Faeryfire Cattery CFA #264916 / TICA #34790
Title:
Comments:
To Whom It May Concern:

I oppose exemption of The Tongass National Forest from the Roadless Rule. Opening the Tongass to road building would fragment "one of the world's largest unfragmented ecosystems" (Aton, 2019). What's more the Tongass "trees hold about 650 million tons of carbon, which roughly converts to half of U.S. carbon dioxide emissions in 2017" (Aton, 2019).

The Tongass is a sanctuary of wildlife and Old Growth forest. It already feels the effects of climate change elsewhere. Opening the Tongass to road building and logging would fragment and destroy it. The Trump Administration's argument that any impact from logging would be "temporary" is not supported by the IPCC report. Even the scientists cited in the administration's EIS disagree with the administration's EIS. For example, Beverly Law, of Oregon State University, calls the Trump Administration's EIS "misinformation" (Aton, 2019).

Climate change is impacting Alaska. In fact, it is occuring faster than the rest of the country. Destroying the Tongass habitat with road building and logging undermines Alaska's ability to adapt. Some of the trees are "more than a thousand years old" (Aton, 2019). It is imprudent and careless to build roads and log the Tongass for short term financial gain. We must take the long view. There is no way to replace this precious resource. For our posterity and the viabilty of the world, we must preserve intact the Tongass National Forest.

Sincerely Yours,

Charissa Ebersole

Aton, A, (2019, October 22) E&E News: Experts Dispute Trump Administration's Rationale for Alaska Logging. Scientific American. https://www.scientificamerican.com/article/experts-dispute-trump-administrations-rationale-for-alaska-logging/

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Jan
Last name: Ebersole
Organization:
Title:
Comments:
My name is Jan Ebersole and I live in [@advCity], Michigan.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jan Ebersole

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jan
Last name: Ebersole
Organization:
Title:
Comments:
My name is Jan Ebersole and I live in [@advCity], Michigan.

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Thank you for considering my comments.
Regards, Jan Ebersole

Date submitted (Alaskan Standard Time): 12/14/2019 3:00:00 PM
First name: Jan
Last name: ebersole
Organization:
Title:
Comments:
My name is Jan ebersole and I live in [@advCity], Michigan.

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Thank you for considering my comments.
Regards, Jan ebersole

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Sean
Last name: Ebersole
Organization:
Title:
Comments:
My name is Sean Ebersole and I live in Somerville, New Jersey.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Sean Ebersole

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Sean
Last name: Ebersole
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Sean Ebersole

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: regan
Last name: ebert
Organization:
Title:
Comments:
My name is regan ebert and I live in Chicago, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, regan ebert

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Deborah
Last name: Eberts
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Deborah Eberts

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: David
Last name: Ebinger
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: diana
Last name: eblen
Organization:
Title:
Comments:
My name is diana eblen and I live in Austin, Texas.

Pls don't destroy critical sites and habitat....this is what makes america beautiful . and great!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, diana eblen

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Maureen
Last name: Ebner
Organization:
Title:
Comments:
My name is Maureen Ebner and I live in Bohemia, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Maureen Ebner

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Michael
Last name: Ebner
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Michael Ebner

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Paul
Last name: Ebol
Organization:
Title:
Comments:
My name is Paul Ebol and I live in Spencer Mass.
[Your personal comment will be added here.]
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Paul Ebol

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Amber
Last name: Eby
Organization:
Title:
Comments:
My name is Amber Eby and I live in San Francisco, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Amber Eby

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Joyce
Last name: Eby
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Joyce Eby

Date submitted (Alaskan Standard Time): 12/11/2019 12:00:00 AM
First name: Travis
Last name: Eby
Organization:
Title:
Comments:
My name is Travis Eby and I live in Steelton, PA. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

SE Alaska is the most beautiful place I've ever visited. So much so that I plan to move there in the coming years. This needs to stop, this is a National Forest! Save the Tongass!

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc), low-impact recreation (camping, hiking, hunting, foraging, etc), medium-impact recreation (FS cabins, trails, mooring buoys, 3-sided shelters). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, support small-scale, sustainable logging, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes.

Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 11/6/2019 7:47:06 AM
First name: Franklin
Last name: Eccher
Organization:
Title:
Comments:
My name is Franklin Eccher and I live in Sitka, Alaska. I'm a recent transplant to SE Alaska, having just moved here in the past two months, but can already sense the myriad ways that the forest sustains lifehuman and otherwisein the Southeast. The forest is truly a part of my home here: proof of the importance of intentional conservation efforts to prevent extractive industries from razing precious ecosystems and endangering our way of life. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, subsistence harvesting, foraging for wild foods, the peace and solitude I find in nature, recreating, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It shows the Forest Service is responding to the needs and voices of Southeast Alaskan communities. I depend on roadless areas in the Tongass National Forest for keeping public lands wild for future generations, viewing wildlife, carbon sequestration and local climate change mitigation, recreating and enjoying nature, healthy fish habitat, foraging and gathering wild foods. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Baranof Island. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because It discounts the voices of many Southeast Alaskans that spoke out in support of a no action alternative, in addition to its subsequent impact on the ecological integrity of forest.. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should devote resources to support our fishing and visitor industries transition to second growth logging improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 10/18/2019 5:38:29 PM
First name: Lynne
Last name: Echard
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,
Lynne Echard
State College, PA 16801

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Brittany
Last name: Echave
Organization:
Title:
Comments:
Please preserve one of the last remaining pristine forests and protect it from development and destruction. Our future generations and our planet deserve to have these natural places untouched.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Jaime
Last name: Echeverría
Organization:
Title:
Comments:
Irrelevant to whether or not there's good business in lodging towards this region, it's well known that continuing to do anything of the sort will indicate that the USA does not, in fact, care about the environment as it is well known that cutting down forests will effectively change the ecosystem that once depended on it.

There's no good long term reason to consider this change in Alaska's policy, only selfish short term human reasons that won't end in a good way down the line.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: sylvia
Last name: echols
Organization: Ms.
Title:
Comments:
I and many oppose this plan! leave our tree's ans national parks alone!!!

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Mr.
Last name: Echternacht
Organization:
Title:
Comments:
My name is Mr. Echternacht and I live in Fort Lupton, Colorado.

Besides all the other reasons advanced for adopting ZEV is the economic advantage. I own a Chevy Volt, a dual fuel (electric/gasoline) vehicle and I enjoy significant savings on a cost per mile basis using electricity vs gasoline.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Mr. Echternacht

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jj
Last name: Eck
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Jj Eck

Date submitted (Alaskan Standard Time): 11/13/2019 3:00:00 PM
First name: Jj
Last name: Eck
Organization:
Title:
Comments:
My name is Jj Eck and I live in Chandler, Arizona.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jj Eck

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Susan
Last name: Eck
Organization:
Title:
Comments:
My name is Susan Eck and I live in Mount Vernon, Ohio.

If the EPA is unable to work for the benefit of the majority of Americans, rather than the interests of a small minority of the people, perhaps it should be shut down completely.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Susan Eck

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/5/2019 3:00:00 PM
First name: Josh
Last name: Eckard
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Gerhard
Last name: Eckardt
Organization:
Title:
Comments:
My name is Gerhard Eckardt and I live in Boise, Idaho.

Protect our Wild Forests in ALASKA!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Gerhard Eckardt

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Charles
Last name: Eckart
Organization:
Title:
Comments:
My name is Charles Eckart and I live in Point Reyes Station, California.

The forest industry should start new forests where they have already cut down old growth forests. Do not touch Tongass.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Charles Eckart

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Jennifer
Last name: Eckberg
Organization:
Title:
Comments:
My name is Jennifer Eckberg and I live in Maple Grove, Minnesota.

Please stop destroying critical habitat!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jennifer Eckberg

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Alison
Last name: Eckels
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Alison Eckels

Date submitted (Alaskan Standard Time): 12/12/2019 3:00:00 PM
First name: Shawn
Last name: Eckenrode
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/4/2019 3:00:00 PM
First name: William
Last name: Eckerle
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: William
Last name: Eckerle
Organization:
Title:
Comments:
Tongass roadless areas - select Alternative 1, "No Action" alternative

Dear Secretary Perdue and Ms. Christiansen:

I have a friend who is an Alaskan resident who relies on public lands in Alaska for hunting the meat for his family's dinners and dip netting salmon for the majority of the fish his family eats. The Tongass National Forest not only contributes to providing food for his table, it is also a huge contributor to many southeastern Alaskan's who rely on subsistence activities, commercial fishing, the outdoor recreation industry, and for personal recreational pursuits.

Fishing and tourism are the primary drivers of southeast Alaska's economy by comparison to the minimal contribution of logging. We call on Secretary Perdue to prioritize the voices of the majority of southeast Alaskans over those of timber lobbyists as he considers the future of the Roadless Rule in Alaska.

This decision goes against years of collaboration between the U.S. Forest Service, Southeastern Alaskan tribes, outdoor recreation and fishing interests and local Alaskan communities.

Allowing large-scale logging is not only a bad idea for tourism and recreation, but for the environment and climate crisis as well.

I urge you to maintain protections for the Tongass roadless areas by selecting the Alternative 1, "No Action" alternative.

Sincerely,

William Eckerle

[Position]

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: April
Last name: Eckersley
Organization:
Title:
Comments:

Dear Secretary Perdue,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: April
Last name: Eckersley
Organization:
Title:
Comments:

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First name: April
Last name: Eckersley
Organization:
Title:
Comments:

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Last name: Eckersley
Organization:
Title:
Comments:

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Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: April
Last name: Eckersley
Organization:
Title:
Comments:
HC1157

Dear Secretary Perdue,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 12/10/2019 12:00:00 AM
First name: Sandra
Last name: Eckerson
Organization:
Title:
Comments:
Roadless Rule: Please do not exempt us from this rule. We need to protect the old growth areas for many reasons, such as: Commercial fishing, Tribal subsistence, Ecco Tourism. Under the current protections small hydro projects, roads between villages, small timber sales, and mining are are still permitted. Logging, especially "clear cut", is not the way to preserve this precious resource. Much more money can be made on Ecco Tourism, without destroying the forest, land, water, wildlife, & fish that thrive in the old forest. We do not need to subsidize the dying logging industry. Times have changed. Lets keep the forest. The loggers can be retrained, just as they have in other states such as Oregon.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jacqueline
Last name: Eckert
Organization:
Title:
Comments:
My name is Jacqueline Eckert and I live in Jacksonville, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jacqueline Eckert

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jacqueline
Last name: Eckert
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Jacqueline Eckert

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Linda
Last name: Eckert
Organization:
Title:
Comments:
My name is Linda Eckert and I live in Ocean City, MD

Clear cutting is deforestation at its worst. It causes land erosion and raises the temperature of the planet the LAST thing our Mother Earth needs right now.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Linda Eckert

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: K.L.
Last name: Eckhardt
Organization:
Title:
Comments:
My name is K.L. Eckhardt and I live in Winchester, Virginia.

We can't breathe w/out trees cleaning our air -- old growth is particularly important.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, K.L. Eckhardt

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Kathleen
Last name: Eckhardt
Organization:
Title:
Comments:
Please do not allow this destruction of Americas Amazon. We need more trees, not less. This is wanton misuse of our natural resources which are not limitless. Leave something for future generations.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Delbert
Last name: Eckhart
Organization:
Title:
Comments:
My name is Delbert Eckhart and I live in Palmerton, Pennsylvania.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Delbert Eckhart

Date submitted (Alaskan Standard Time): 11/25/2019 3:00:00 PM
First name: John
Last name: Eckler
Organization:
Title:
Comments:
My name is John Eckler and I live in Lakewood, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, John Eckler

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Julie
Last name: Eckles
Organization:
Title:
Comments:
My name is Julie Eckles and I live in Atascadero, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Julie Eckles

Date submitted (Alaskan Standard Time): 11/14/2019 3:00:00 PM
First name: Sabrina
Last name: Eckles
Organization:
Title:
Comments:
My name is Sabrina Eckles and I live in Lubbock, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Sabrina Eckles

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Vonny
Last name: Eckman
Organization:
Title:
Comments:
My name is Vonny Eckman and I live in Carlisle, Pennsylvania.

[Your personal comment will be added here.]

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Clear cutting as I understand it, is nearly a practice of the PAST. With the need for environmental integrity these days why would the agency allow clear cutting EXCEPT for profit of the FEW and degradation of the REST OF US? Please make a study and report sensible conservation measures for the sake of life on this small fragile planet we call HOME!

Thank you for considering my comments.

Regards, Vonny Eckman

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Curtis
Last name: Eckstein
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Curtis Eckstein

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Susan
Last name: Eckstein
Organization:
Title:
Comments:
My name is Susan Eckstein and I live in Stanhope, New Jersey.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Susan Eckstein

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Tatyana
Last name: Eckstrand
Organization:
Title:
Comments:
My name is Tatyana Eckstrand and I live in Waldoboro, Maine.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Tatyana Eckstrand

Date submitted (Alaskan Standard Time): 11/11/2019 12:00:00 AM
First name: Constantina
Last name: Economou
Organization:
Title:
Comments:
My name is Constantina Economou and I live in Berkeley, California.

Enough! with global warming making life miserable we need to PRESERVE THE TONGASSNOT CAVE INTO GREEDY CORPORATIONS

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Constantina Economou

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Barbara
Last name: Ecton
Organization:
Title:
Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Barbara Ecton

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Hunter
Last name: Edberg
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

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Last name: Edberg
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Matthew
Last name: Edd
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Matthew Edd

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Patricia
Last name: Edde
Organization:
Title:
Comments:
My name is Patricia Edde and I live in Decorah, Iowa.

This is the one rain forest in the United States that fights climate change. We are at a crossroads in defending our planet against the complete devastation that unchecked climate change will bring. We need to save our planet, not corporate interests. You have a chance to do the right thing - DO IT!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Patricia Edde

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Beth
Last name: Eddy
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.
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Please don't be part of monetizing every last thing on earth. Many valuable things are beyond price.
Regards, Beth Eddy

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: G
Last name: Eddy
Organization:
Title:
Comments:
My name is G Eddy and I live in Lorain, Ohio.

I am sure the planet will survive this eventually-how about us humans?

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, G Eddy

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Lex
Last name: Eddy
Organization:
Title:
Comments:
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Regards, Lex Eddy

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Marcia
Last name: Eddy
Organization:
Title:
Comments:
My name is Marcia Eddy and I live in Lehighton, Pennsylvania.

Do the right thing and save the Tongass!!!!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Marcia Eddy

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Sarah
Last name: Eddy
Organization:
Title:
Comments:
HC1474

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Teresa
Last name: Eddy
Organization:
Title:
Comments:
My name is Teresa Eddy and I live in East Nassau, NY, near Albany.
Some places need to be left wild. This is one of them. It houses many species important to Earth's ecosystem.
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest.
You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
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Thank you for considering my comments.
Regards, Teresa Eddy

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Kris
Last name: Ede
Organization:
Title:
Comments:
My name is Kris Ede and I live in Gouldsboro, Maine.

Trump and the present administration and their fossil fuel cronies and fellow rapists of the land, water and sky will use and abuse all natural areas. STOP

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Kris Ede

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jennifer
Last name: Edelen
Organization:
Title:
Comments:
My name is Jennifer Edelen and I live in Louisville, Kentucky.

Protect our parks!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jennifer Edelen

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Pat
Last name: Edelen-Smith
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Pat Edelen-Smith

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Organization:
Title:
Comments:
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Regards, Pat Edelen-Smith

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Shula
Last name: Edelkind
Organization:
Title:
Comments:
comment re the Tongass National Forest

Sirs,

I am against opening this forest to the logging industry. As a rain forest in the United States, it is important to leave it alone so it can help us restrain climate change, not to mention its own integrity.

I have never seen this forest, and I would hate to visit one day and find it a sea of stumps and ruined land because of greed for trees. If you want trees, GROW TREES suitable for logging [hellip]. and leave this forest alone. I understand that the local population will not truly benefit, but rather will be injured, as will the inhabitants of the forest itself. Even the Indians -- who were there first -- want to safeguard this forest.

Leave it alone and let it remain a place of natural beauty. Get your trees and place your shopping centers somewhere else.

Shula Edelkind

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Elaine
Last name: Edell
Organization:
Title:
Comments:
My name is Elaine Edell and I live in Westlake Village, California.

keep our forests beautiful and useful

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Elaine Edell

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Richard
Last name: Edelman
Organization:
Title:
Comments:
My name is Richard Edelman and I live in Cambridge, Massachusetts.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Richard Edelman

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: William
Last name: Edelman
Organization:
Title:
Comments:
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Regards, William Edelman

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: William
Last name: Edelman
Organization:
Title:
Comments:
My name is William Edelman and I live in Philadelphia, Pennsylvania.

When the Alaskan wilderness is DESTROYED, it will be TOO LATE to be sorry. But you will be. One way or the other.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, William Edelman

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: William
Last name: Edelman
Organization:
Title:
Comments:
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Regards, William Edelman

Date submitted (Alaskan Standard Time): 11/13/2019 3:00:00 PM
First name: Gayle
Last name: Edelman-Tolchin
Organization:
Title:
Comments:
My name is Gayle Edelman-Tolchin and I live in Boca Raton, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Gayle Edelman-Tolchin

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Rachel
Last name: Edelson
Organization:
Title:
Comments:
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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Rachel Edelson

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Hillary
Last name: Edelstein
Organization:
Title:
Comments:
My name is Hillary Edelstein and I live in Marlboro, New Jersey.
[Your personal comment will be added here.]
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Hillary Edelstein

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jack
Last name: Edelstein
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Jack Edelstein

Date submitted (Alaskan Standard Time): 10/20/2019 12:00:00 AM
First name: Susan
Last name: Edelstein
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like Spruce Grouse and Northern Goshawk, and animals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

In spite of this, all the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with no return on investment. These destructive activities also degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,

Susan Edelstein

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Susan
Last name: Edelstein
Organization:
Title:
Comments:
My name is Susan Edelstein and I live in Cary, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Susan Edelstein

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Beverly
Last name: Eden
Organization:
Title:
Comments:
My name is Beverly Eden and I live in Mill Valley, California.

Our National Parks are the People's heritage. The habitat and culture must be preserved for our children and their children.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Beverly Eden

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Carolyn
Last name: Eden
Organization:
Title:
Comments:
My name is Carolyn Eden and I live in Bainbridge Island, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Carolyn Eden

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Jonathan
Last name: Eden
Organization:
Title:
Comments:
My name is Jonathan Eden and I live in Berkeley, California.

PFAS are toxic, and the government of the U.S. is not doing its job in more carefully regulating them. Please do your job!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Jonathan Eden

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/12/2019 12:00:00 AM
First name: Van
Last name: Eden
Organization:
Title:
Comments:
I oppose removing the roadless area designation of the Tongass National Forest. Preserve this wilderness for its important role in helping to mitigate climate change. It is a vital carbon sink that needs to be protected.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Teresa
Last name: Edens
Organization:
Title:
Comments:
My name is Teresa Edens and I live in Kansas City, Missouri.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Teresa Edens

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Mauricia
Last name: Edenshaw
Organization:
Title:
Comments:

Dear Secretary Perdue,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Mauricia
Last name: Edenshaw
Organization:
Title:
Comments:

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Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Mauricia
Last name: Edenshaw
Organization:
Title:
Comments:
HC1231

Dear Secretary Perdue,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

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Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Mauricia
Last name: Edenshaw
Organization:
Title:
Comments:

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Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Mauricia
Last name: Edenshaw
Organization:
Title:
Comments:

Dear Secretary Perdue,

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Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Yvonne
Last name: Eder
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Yvonne Eder

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Grazel
Last name: Edfelt
Organization:
Title:
Comments:
HC4957

Dear U.S. Forest Service,

CC: Alaska Congressional Delegation and Federal Administration

I support the no-action alternative to leave the 2001 Roadless Rule in place on the Tongass National Forest. We must continue to phase out old-growth clear-cut logging and instead prioritize restoring degraded watersheds and fish streams that contribute to the growing fisheries and tourism-based economies of Southeast. To that end, please conserve the Tongass 77 and TNC priority areas in the final Roadless Rule.

Sincerely,

Comments: *(Eg: list locations you recreate, or why you value Tongass fish & wildlife)* [Text italicized for emphasis]

Leave nature as it is, and don't let alaska be like other state.

[Box unchecked] I would like to get more involved in the campaign!

*By taking this action, you are consenting to receive future communications via phone, text message, email, or mail from Sitka Conservation Society and its partners working to protect the Tongass. * [Text italicized for emphasis]

RRN TP1 RRS1

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Michelle
Last name: Edgar
Organization:
Title:
Comments:
My name is Michelle Edgar and I live in Somerville, New Jersey.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Michelle Edgar

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: corydon
Last name: edgecomb
Organization:
Title:
Comments:
My name is corydon edgecomb and I live in Placerville, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, corydon edgecomb

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Tonya
Last name: Edgington
Organization:
Title:
Comments:
My name is Tonya Edgington and I live in Fremont, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Tonya Edgington

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Mark
Last name: Edgren
Organization:
Title:
Comments:
My name is Mark Edgren and I live in Fairfield, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Mark Edgren

Date submitted (Alaskan Standard Time): 10/18/2019 8:16:56 AM
First name: Sonny
Last name: Edie Gegolick
Organization:
Title:
Comments:
No changes to the Roadless Rule in Alaska!

Mr. Schmid and Secretary Perdue,

I recently visited Alaska in June and was proud to witness a gorgeous, relatively untamed country.

Having said that, I'm strongly opposing any modification to the Roadless Rule in Alaska! These changes will undermine safeguards, and facilitate increased old-growth logging in the Tongass and the Chugach National Forests. Logging prohibitions contained within the Roadless Rule are a key component of the long-awaited transition away from old-growth clearcutting on the Tongass. The Roadless Rule protects over 2.5 million acres of productive old-growth (which constitutes half of the old-growth forests remaining on the Tongass) and prevents the fragmentation of large unbroken landscape. Rolling back the Roadless Rule in Alaska would ignore overwhelming public support, put wildlife and critical habitat at risk, and threaten access to safe drinking water. The rule change would be a step away from sustainable development and would run counter to the interests of all Americans, as well as Alaskans, and is not in the best interest of taxpayers.

Scientists overwhelmingly agree that clear cutting of old growth trees for timber puts whole systems at risk and destroys wildlife habitats, yet the Forest Service's amendment to the Tongass plan allows clearcutting to continue for well over another ten years! This rule change will promote further, as well as rapid, destruction.

Both the Tongass and the Chugach play a vital role in capturing excess carbon from the atmosphere and mitigating some of the impact of global warming, as well as providing ecosystems services that reach beyond Alaska. In Alaska, which experienced unprecedented heat waves this summer, the Tongass serves as a buffer against climate change. Much like the Amazon rainforest, the Tongass' stands of ancient trees are champions at absorbing greenhouse gas emissions, storing approximately 8 percent of the total carbon in all national forests of the lower 48 states.

The Tongass National Forest is home to more than 9 million acres of roadless area. The Roadless Rule protects ecosystems, which, in turn, helps make the Tongass the country's single most important national forest for carbon sequestration and climate change
mitigation.

Again, I strongly urge you against granting any exemptions or exceptions to the Roadless Rule in Alaska, as is offered in alternative 1, and advise the Forest Service to refrain from pursuing an Alaska version of the Roadless Rule. Rather, continue to uphold the 2001 Roadless Area Conservation Rule, maintaining protections against logging and roadbuilding in Tongass roadless areas.

The agency's mission is "Caring for the Land and Serving the People." The Forest Service should strive to protect the Tongass National Forest and ensure our public lands serve the people and wildlife of today and future generations.

Thank you.

Waiting your reply,

Edie Gegolick
Alberta CANADA ????

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Elizabeth
Last name: Edinger
Organization:
Title:
Comments:
My name is Elizabeth Edinger and I live in Los Angeles, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support for the Tongass and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy. Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and worsen climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Elizabeth Edinger

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Iris
Last name: Edinger
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Iris Edinger

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Michele
Last name: Edison
Organization:
Title:
Comments:
This needs to stop!! Our planet just lost almost the ENTIRE Amazon rainforest! Please, our planet needs to heal, we need to stop killing it.Please, for the love of God, stop selling our future, stop killing the trees.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Nancy
Last name: Edlan
Organization:
Title:
Comments:
HC3074

Dear Secretary Perdue,

I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections intact for the Tongass National Forest. Old-growth forests like the Tongass are powerful tools for fighting climate change - they store carbon, protect wildlife, and support local communities that rely on tourism and recreation. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of America's best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.

Sincerely,

Trees are the earth's *lungs * [text underlined for emphasis]

[Signature]

Date submitted (Alaskan Standard Time): 11/14/2019 3:00:00 PM
First name: Pat
Last name: Edley
Organization:
Title:
Comments:
My name is Pat Edley and I live in Nehalem, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Pat Edley

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: James
Last name: Edman
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, James Edman

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: John
Last name: Edman
Organization:
Title:
Comments:
My name is John Edman and I live in Glendale, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, John Edman

Date submitted (Alaskan Standard Time): 10/20/2019 12:00:00 AM
First name: Joe
Last name: Edmonds
Organization:
Title:
Comments:
Please do not exempt the Tongass National Forest from the 2001 Roadless Area Conservation Rule. Keep it like it was.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Steven
Last name: Edmonds
Organization:
Title:
Comments:
My name is Steven Edmonds and I live in Glide, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Steven Edmonds

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Steven
Last name: Edmonds
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Steven Edmonds

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Steven
Last name: Edmonds
Organization:
Title:
Comments:
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Regards, Steven Edmonds

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Teresa
Last name: Edmonds
Organization:
Title:
Comments:
My name is Teresa Edmonds and I live in Carmel Valley, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Teresa Edmonds

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Cynthia
Last name: Edmondson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Cynthia Edmondson

Date submitted (Alaskan Standard Time): 11/5/2019 3:00:00 PM
First name: Davis
Last name: Edmondson
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Dominique
Last name: Edmondson
Organization:
Title:
Comments:
My name is Dominique Edmondson and I live in Upper Marlboro, Maryland.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Dominique Edmondson

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: JACKIE
Last name: EDMONDSON
Organization:
Title:
Comments:
My name is JACKIE EDMONDSON and I live in Johnson City, Tennessee.

The Tongass National Forest in Alaska is a rare temperate rainforest. Its often referred to as Americas Climate Forest because, much like the Amazon, it plays a critical role in fighting climate change by retaining vast stores of carbon in its old-growth trees.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, JACKIE EDMONDSON

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Nancy
Last name: Edmondson
Organization:
Title:
Comments:
My name is Nancy Edmondson and I live in Atlanta, Georgia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Nancy Edmondson

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Rick
Last name: Edmondson
Organization:
Title:
Comments:
My name is Rick Edmondson and I live in Danville, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Rick Edmondson

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Steve
Last name: Edmunds
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Steve Edmunds

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Chris
Last name: Edner
Organization:
Title:
Comments:
My name is Chris Edner and I live in Marshall, NC. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

It is vital to the survival of our species to start protecting our environment. We are in the 6th mass extinction event due to our own actions.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, support small-scale, sustainable logging, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless

Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 11/23/2019 3:00:00 PM
First name: Jane
Last name: Edsall
Organization:
Title:
Comments:
My name is Jane Edsall and I live in Mount Sinai, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jane Edsall

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Karen
Last name: Edstrom
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Karen Edstrom

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Benjamin
Last name: Edwards
Organization:
Title:
Comments:
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Regards, Benjamin Edwards

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Brent
Last name: Edwards
Organization:
Title:
Comments:
Tongass Roadless Rule Draft EIS Comments

Dear Forest Service folks -

Attached is my letter commenting on the Tongass Roadless Rule Draft EIS and Draft ROD. A hard copy of these comments was sent via the US Mail today.

I appreciate your careful consideration of my comments.

Sincerely

Brent Edwards

The following text was copy/pasted from an attached letter. The system cannot display the formatting, graphics, or tables from the attached original.

VIA U.S. MAIL:

USDA Forest Service

Attn: Alaska Roadless Rule

P.O. Box 21628

Juneau, Alaska, 99802

ELECTRONIC COPY VIA E-MAIL:

akroadlessrule@fs.fed.us

RE: Comments on the Draft Environmental Impact Statement Alaska Roadless Areas and Draft Record of Decision.

Dear Secretary Purdue and Forest Service;

These are comments on proposed changes to the management of the Tongass National Forest under the Roadless Rule. I implore you, and the Forest Service, to not make any changes to the application of the Roadless Rule to the Tongass National Forest. The Draft EIS has no valid articulated reason why the Roadless Rule should be replaced with the complete absence of roadless protections. The Draft EIS also fails to take a hard look at the impacts of changing the Roadless Rule. This is particularly important to the people living in the Southeast Alaska region because the current Roadless Rule protects tourism, fishing and small scale timber industries that are currently the bedrock of the Southeast Alaska economy.

There is no "Why" in the Draft EIS Purpose or Need

All Draft and Final Environmental Impact Statements require an "underlying purpose and need to which the agency is responding". 1 The purpose and need section of an EIS is supposed to describe "in detail why action is being proposed at that location and at that time. In this way, the purpose and need reflects the difference between the existing condition and the desired condition." 2

In the October 2019 Draft Environmental Impact Statement, Rulemaking for Alaska Roadless Areas, (the "Draft EIS or "DEIS") the purpose and need for changing the Roadless Rule's application to the Tongass National Forest ("the Tongass") is stated as:

In response to the State of Alaska's petition for rulemaking, the Forest Service and State of Alaska agree the controversy surrounding the management of Tongass roadless areas may be resolved through state-specific rulemaking. A long-term, durable

approach to roadless area management is desired that accommodates the unique biological, social, and economic situation found in and around the Tongass.

DEIS p. 1-4. This supposed purpose and need doesn't meet the applicable regulation or handbook guidance because it is wholly manufactured.

Controversy

The controversy that the State government and Forest Service agree upon is never spelled out in the several hundred page Draft EIS. The Roadless Rule has been applied to the Tongass National Forest since 2011. Just three years ago the Roadless Rule was incorporated into the 2016 Forest Management Plan for the Tongass National Forest ("2016 Plan"). So there is not a controversy on the rule's face. It is the rule. It is being applied. And by all accounts this rule is steering timber harvests in the Tongass toward a young growth industry in accord with congressional mandates. The bare agreement between the State government and the Forest Service that they desire to change the Roadless Rule's application to the Tongass doesn't make the status quo controversial. 3

Any controversy that does exist is actually generated by the State government's petition and this NEPA process. In other words, the State government and Forest service agreement to change the Roadless Rule is the controversy. The Scoping Report for this NEPA process documents that many many other individual and organizations in Southeast Alaska find the idea of changing the application of the Roadless Rule to the Tongass controversial. 4 If an agency proposes an action that it knows will be controversial the agency can't then use that controversy as its reason why the action is needed. That is the very definition of circular reasoning which is arbitrary and capricious.

I have no doubt that any changes to the Roadless Rule that result from this NEPA process will create more controversy than maintaining the status quo. One reason is because the Draft EIS document does not come close to describing impacts of changes (discussed more below). Another reason is that any change to the Roadless Rule does not have regional buy-in. As mentioned already the bulk of the scoping comments were in favor of maintaining the Roadless Rule in its current form. I expect that my voice in this letter will be joined by the voices of tens or maybe hundreds of thousands of other voices expressing opposition to changes to the Roadless Rule's application to the Tongass. Indeed, the City and Borough of Sitka has resolved in favor of keeping the Roadless Rule in place5, as has the Sitka regional State Fish and Game advisory committee. 6 Likewise the six federally recognized tribal governments in Southeast Alaska have expressed their lack of support for the preferred alternative. 7 It is not my job or role as a private citizen to catalog all of the letters in opposition to changing the Roadless Rule. For the purposes of this letter it suffices to say that at the individual and regional organization level the opposition is substantial and well reasoned.

The vast number of people and organizations opposed to changing the Roadless Rule is important because if the existing rule were truly controversial then people and organization in this region would not be supporting the Roadless Rule. You and the Forest Service should hear that the voices of the region support the Roadless Rule or the No Action Alternative in the Draft EIS. Ignoring these voices, which is precisely what the Preferred Alternative and Draft ROD does, is going to stir the mother of all controversies among those of us living in the Tongass.

It is safe to say that by kicking off this review of the Tongass Roadless Rule the State government and Forest Service has only multiplied controversy. Law suits and procedural grid lock certainly will follow. The difference is that if the application of the Roadless Rule to the Tongass is changed via this NEPA process and your final ROD the law suits will be brought by the people living this region and regional organizations instead of the State government.

Including "controversy" in the purpose and need section of the Draft EIS makes it look like this NEPA planning process is actually kicked off to settle the lawsuits that the State government has maintained against the application of the Roadless Rule. In fact, the State government in its petition points out that it continues to litigate the application of the Roadless Rule to the Tongass and to the Chugach National Forest. 8 The State government has pressed on with these suits even though it has continually lost when trying to get judicial changes to the Roadless Rule. The State government also has a record of past failures to convince the Forest Service to change the Tongass Roadless Rule as evidenced by the Forest Service's rejection of the State government's position when forming the 2016 Plan. Given the current State AG's consistent failure to prevail in its suits meant to advance this Governor's agenda I suspect that the State government's law suits and other efforts regarding the Roadless Rule would be destined to continue. It would be nice if instead of burning tax payer money with no real benefits to the State of Alaska's citizens the State government stepped back and listened to what the people living in the Southeast Alaska region have to say about changes to the Tongass Roadless Rule. I am urging you and the Forest Service to continue to be the bulwark against this bad State governance and not cave to the State government's demands in its petition or pending lawsuits.

While on the topic of controversies I think it is important to point out that the State government's petition relies heavily on the 2003 Exemption of the Tongass from the Roadless Rule. That 2003 Exemption was invalidated and never reinstated. Yet, the State government tries to gloss over the invalidity of the 2003 Exemption by saying the Exemption's fatal issue was in Forest Service's failure to adequately explain a change of position. 9 It is twisted logic to claim, as the State government does, that the reasoning in the 2003 Exemption is golden over 15 years later because it was only inadequate. 10 Without adequate underpinnings the 2003 Exemption is not valid at its very core. It makes no sense to go to that very stale decision and try to cherry pick. The 2003 Exemption as it stands should have had no part in the kicking off of this NEPA planning process.

If the State government or Forest Service wanted to underpin this NEPA process using the 2003 Exemption then the 2003 Exemption needed to be supplemented with legally adequate support. The 2003 Exemption should also be brought up to date since the invalid 2003 Exemption is about old enough to drive. The State government and Forest Service certainly have the resources to try to provide the necessary supplement as part of the State government's petition or in this NEPA planning process. Yet I see nothing in the State's petition or the Draft EIS which addresses the inadequacies of the 2003 Exemption. This problem makes the State government's petition and this NEPA process needlessly more controversial.

Long Term and Durable Planning and the 2016 Plan

The second purpose and need in the Draft EIS is a "long-term, durable approach" to the management of the Tongass. It is not explained why disposing of underlying rules that have guided development in the Tongass National Forest since 2011 is an action that is long-term or durable. Nor is it obvious that the current application of the Roadless Rule to the Tongass is not long-term and durable.

On closer inspection it seems clear that the State government is not seeking a long[shy]term or durable approach. Nor does the Forest Service's Draft EIS or your Draft ROD propose a long-term durable approach. Instead the long-term and durable Roadless Rule management we already have is getting tossed.

The fact that the State government is not motivated by a noble search for a long-term and durable plan is made plain by the State's request that the Forest Service amend the December 2016 Land Resource Management Plan ("2016 Plan") at the same time the Forest Service changes the Roadless Rule. 11 Yet, according to the 2016 Plan:

By transitioning away from the harvest of old-growth timber, I expect adoption of the Selected Alternative to improve the capability of the communities in Southeast Alaska to support the network of relationships, traditions, culture, and activities that connect people to the Tongass National Forest and support vibrant communities. 12

So, the 2016 Plan implements what is needed for long-term and durable planning for vibrant communities in Southeast Alaska. In addition the 2016 Plan finds that:

Based on my review of the Final EIS and the project record, I believe the best way to bring stability to the management of roadless areas on the Tongass is to not recommend any modifications to the Roadless Rule. Harvest in roadless areas is not necessary to meet the purpose and need of the amendment. 13

Thus, the Forest Service already has its long-term durable planning in place. Within 13 months after the 2016 Plan became effective the State government petitioned for a change to the Tongass Roadless Rule and the 2016 Plan. 14 The State government's January 18, 2019 petition whines that it had objected to the implementation of the Roadless Rule in the 2016 Plan but didn't get what it wanted. 15 It didn't get what it wanted at that time and so it is now seeking change to the Roadless Rule AND to the 2016 Plan. The State sounds a lot like a spoiled child. This move by the State government is a set up for interminable planning not long term-durable planning. Please just stop this madness! Please recognize in this NEPA process and the final rule making that the State's government's position on changes to the Roadless Rule and the 2016 Plan do not reflect long-term durable planning.

In short, the State government didn't have a legitimate articulated reason to ask the Forest Service to embark on this NEPA planning process in order to find long-term durable planning which already exists.

While the Forest Service has agreed to go along with a NEPA analysis for changes to the Roadless Rule (for flawed reasons across the board) the Draft EIS clearly states that the official Forest Service line is that amendment to the 2016 Plan is not on the table. Indeed, the Draft EIS continuously touts in its "impacts analysis" that little change will happen in the management of the Tongass because the 2016 Plan maintains the roadless values of the Roadless Rule. The Draft ROD does the same thing.

Let's get real - there is no way that the 2016 Plan will stand if the Roadless Rule is eliminated or altered. There is both motive and mechanisms to change that plan once the Roadless Rule is eliminated. As I get into more detail when discussing the Alaska government's "state specific" reason for seeking the elimination of the Roadless Rule the reason why this NEPA process is happening is to increase timber harvests. As the Draft EIS points out, even if the Roadless Rule is eliminated only modest increases in timber harvests can occur under the 2016 Plan. In order to have the potential increases in timber harvests the State government wants then the 2016 Plan will need to be revised or amended. This is the motive for changing the 2016 Plan. The State government is keenly aware that the 2016 Plan throttles timber harvest since the State government has already petitioned for changes to the 2016 Plan. 16 And, given the deference you have given to the State government in the Draft ROD 17 it is likely that if the Roadless Rule changes the 2016 Plan will change soon after.

The mechanisms for changing the 2016 Plan after the Roadless Rule is eliminated are simple. The 2016 Plan is actually a limited amendment to a 2008 Plan. Forest Service management plans have a life of 10 to 15 years and coming up with a new plan takes a couple of years. After this NEPA process NOTHING stops the State government and Forest Service from deciding that it is time to go back and completely revise an already 11 year old plan. Nothing! It would be very easy, and even logical, for the State government and Forest Service to take this simple approach which would give them what they wanted - more roads and more logging, albeit without an honest hard look at the impacts in a NEPA process.

Alternatively, the 2016 Plan could be amended. The applicable regulations gives the Forest Service "the discretion to determine at any time that conditions on a plan area have changed significantly such that a plan must be revised." 18 Put differently the Forest Service should use plan amendments "to keep plans current and to help units adapt to new information or changing conditions." 19 The regulations do not spell out when conditions in the plan area have changed significantly but I am pretty sure that modifying the Roadless Rule (alternatives 2-5) or eliminating the Roadless Rule (alternative 6) would suffice. Moreover, the regulations say that forest plans should "[i]dentify the maximum quantity of timber that may be removed from the plan area". 20 If the Roadless Rule no longer applies to the Tongass then the maximum quantity of harvestable timber will change and so it seems inevitable that 2016 Plan would change too.

My expectation that the 2016 Plan will change once the Roadless Rule is eliminated is even supported by the 2016 Plan ROD and EIS. The 2016 Plan explains that:

[T]he Tongass has been subject to the Roadless Rule since 2011 and remains so today. While the analysis for the 2008 Tongass Plan Amendment assumed the 2001 Roadless Rule would not apply because it was prepared during the time the Tongass was exempt, the 2016 Tongass Forest Plan Amendment I am approving today [mdash] and the analysis in the associated Final EIS is fully consistent with the Roadless Rule. 21

Thus, history shows that changes to the application of the Roadless Rule to the Tongass are sufficient to cause changes to the Tongass's forest plan. It is reasonable to expect history will repeat itself if the application of the

Roadless Rule is changed again. 22 Also, the 2016 ROD says "I believe the best way to bring stability to the management of roadless areas on the Tongass is to not recommend any modifications to the Roadless Rule." 23 Yet the Draft EIS says that the current Roadless Rule management of the Tongass is "controversial." 24 If the 2016 decision causes controversy surrounding the management of the Tongass under the Roadless Rule that this NEPA process was kicked off to resolve (a point that I indeed find laughable as already discussed in this letter) then it seems reasonably certain that the 2016 Plan will be amended to remove that controversy.

The practical certainly that the 2016 Plan will change is important for two reasons. First, it further shows that this NEPA process is not about long term and durable planning in the Tongass. Rather, the long term durable planning that is already in place is being undermined by this NEPA process. Second, the Draft EIS and Draft ROD are wrong every time that these say that 2016 Plan will continue to maintain the roadless values of the Roadless Rule. The 2016 Plan is not a backstop where the impacts analysis ends. Rather, a hard look at the impacts of changing the Roadless Rule would take into account the foreseeable changes to the 2016 Plan. The results are not academic. This is where the true impacts of changing the Roadless Rule will happen. Yet, the Draft EIS explicitly ducks this hard look.

The Forest Service could have, and SHOULD HAVE, rejected the State government's petition to change the Roadless Rule just like it has rejected (for now) the State government's request for change to the 2016 Plan. Despite having started this NEPA planning process you and the Forest Service can still decide the State government's petition lacks merit and pull the plug. Alternatively, the No Action alternative should be chosen to bolster the current long-term durable planning that is in place. Then the State government will have scratched its itch to fight over the application of the Roadless Rule in the NEPA forum and can go back to manufacturing controversy and wasting tax payer money in court.

State-specific Rule Making

Lastly, the Purpose and Need says state-specific rule making is necessary. State-specific rule making could be useful if there are state-specific issues at play. Put another way, legitimate state-specific rule making could constitute a solid "why" we should be looking at amending the Tongass Roadless Rule. Other state-specific Roadless Rules adopted in Colorado and Idaho are tailored to specific state issues: ski areas (Colorado), fire control (Colorado & Idaho), specific mines (Colorado & Idaho).

The State government's petition fails to clearly articulate a single state-specific issue that the State wants addressed in this rule making process. Instead the State government throws out some undefined references to serious socioeconomic consequences and devotes several pages to timber harvest.

The State government makes no effort to define the serious socioeconomic consequences we are suffering in Southeast Alaska except to state that these consequences are as compelling today as they were in 2003. 25 I have not found ANYWHERE in the Draft EIS what 2003 socioeconomic consequences are supposed to be addressed by this NEPA planning process. Nor is there any reason given in the State government's petition or the Draft EIS to conclude that the 2003 serious socioeconomic consequences that the State nebulously relies upon were not addressed in the 2016 Plan.

It makes no sense for the State government or the Forest Service to kick off this process using regional socioeconomics from before 2003 without laying out what is actually happening today. I have lived in Southeast Alaska for 11 years now26 and take issue with the State government's lack of insight into the resilience of Southeast Alaska communities. I understand that some communities here were once heavily dependent on logging. And I can readily concede that some communities shrunk considerably once large scale clear cut logging tapered off and in places ceased. However this is not a Roadless Rule issue. Everyone knows that the timber industry was in steep decline before the Roadless Rule was applied to the Tongass. Moreover the past and current socioeconomics of the Southeast Alaska region are not confined to one sector of our regional economy. Since 2003 tourism and fishing (commercial and charter) have taken up slack in the economy. So its pretty ridiculous to rely on 2003 socioeconomics and the timber industry interests, as the State government has done.

The ridiculousness of the State government's dated socioeconomic concerns is highlighted by the State government's recent shake up of regional socioeconomics by severely cutting back on the Alaska Marine Highway (aka ferry services.) What really should happen is the money that the Forest Service is willing to waste on building roads for timber harvesting should instead go to a Marine Highway System. I know that

suggesting that the Forest Service or the USDA fund ferry service is bound to wind up in the "not our area" section of the Final EIS. But think about it for a moment. The changes that the State government requests and that you and the Forest Service are considering are all at their core about road building. The road we really need in Southeast Alaska is a functioning marine highway system. The socioeconomic benefits of the marine highway would benefit Southeast Alaskans more than costly roads and short term economic benefits of an expanded timber harvest.

More to the point though, the deep cuts to ferry service are actually substantive to the NEPA analysis and your rulemaking decision. The cuts to ferry service is a recent change that is impacting our region greatly (far more recent than the 2003 impacts that the State government's petition references.) Yet this regional impact is not noted in Draft EIS. If (big big IF) the economic timber boom that State government is betting on were to happen it would not take place with the Southeast Alaska regional transportation system that existed when timber harvests were an economic driver in this region. That's a pretty significant change. It's like planning a major project and ignoring the fact that the bridge to the project site is washed out. The State government's gutting of the ferry service raises current and timely impact issues because our regional transportation system is, for lack of a better term, a mess.

Besides the outdated 2003 socioeconomic impacts the State government's only other state-specific concern is logging. The State government's petition makes no secret that it wants to increase timber harvests. 27 Looking outside the State government's petition this state-specific interest is also pretty obvious. In a March 1, 2019 letter to President Trump Alaska Governor Dunleavy said that removing the Roadless Rule would be "a significant victory for the timber industry in Southeast Alaska and their efforts to increase the annual timber harvest".28 News reports indicate that Governor Dunleavy discussed with President Trump removing the Roadless Rule protections in order to benefit the timber industry. 29 And it appears that President Trump has ordained which alternative would be chosen by you, although given this administration's lack of transparency the public is being kept in the dark on how involved the President has been in the decision making process. 30

Despite the fact that increased logging is THE primary driver for the State government's petition, this NEPA process, and possible rule changes the Draft EIS statement of purpose and need does not specify that the Draft EIS is intended to increase timber harvests. I think it is safe to say that the Draft EIS goes out of its way to avoid stating that the reason why the Forest Service is analyzing changes to the Tongass Roadless Rule is to increase timber harvests. 31 Now is a good time to remember what exactly the statement of purpose and need in an EIS is supposed to do. The statement of purpose and need in an EIS is to lay out the "underlying purpose and need to which the agency is responding". 32 "[T]he purpose and need reflects the difference between the existing condition and the desired condition." 33 Obviously the Draft EIS's statement of purpose and need fails at this very fundamental NEPA requirement.

The Draft ROD is euphemistic when addressing the State government's specific interest in increasing timber harvests where it says:

In selecting the proposed rule among the several alternatives considered, the Department has given substantial weight to the State's policy preferences as expressed in the incoming Petition. The State's preference to emphasize rural economic development opportunities is consistent with the findings of the Interagency Task Force on Agriculture and Rural Prosperity established by Executive Order 13790 (issued Apr.

25, 2017)..... The State's views on how to balance economic development and environmental protection offer valuable insight when making management decisions concerning NFS lands within Alaska. 34

Translation - "This change is intended to benefit the timber industry." Why not just come out and say it? Instead the Draft ROD continues the Draft EIS's contorted charades.

The arbitrariness of giving deference in the Draft ROD to the State government's desire to increase timber harvests by eliminating the Roadless Rule is clear. Just 13 month before its petition the same arguments were made by the State government and were rejected in the 2016 Plan. It makes no sense to all of the sudden give the State government's unwise policy preferences any weight, certainly not substantial weight. Nor does the State government's position on the application of the Roadless Rule to the Tongass involve any valuable insight that the State hadn't offered in prior planning processes or in litigation. 35

Identifying that timber harvests are THE reason why this NEPA process is going on is not merely academic or legalistic. A clear statement of purpose and need in the Draft EIS would give the public a fair opportunity to comment on the true proposed government action. Hiding the ball, as the Draft EIS and Draft ROD do, frustrates the public, creating more needless controversy.

A clear and honest statement of purpose and need is also essential for the crafting of impacts analysis. Instead of giving a true and honest analysis of the impacts of likely increased timber harvests in the Tongass the Draft EIS says:

While environmental impacts should be disclosed as soon as information is reasonably available and at the earliest practicable stage, it is not reasonable or efficient to develop numerous timber harvest or other project-level scenarios, nor is the public served by developing worst-case, best-case, or other hypothetical activity scenarios. It is reasonable and efficient to limit detailed site-specific impact analyses to when specific proposals are brought before the agency. 36

In essence the Draft EIS comes out and says that it is not going to analyze the impacts of increased timber harvests. This is outrageous when increases in timber harvests are real reason for this NEPA planning process. Couple this with dubious reliance on the 2016 Plan as a backstop that protects roadless values and its clear Draft EIS's impact analysis will not hold up to scrutiny. Additionally, nowhere do the applicable NEPA regulations give the Forest Service the option to forego relevant analysis in an EIS just because the agency deems such analysis "not reasonable or efficient." Rather, the Forest Service is tasked with taking a hard look at reasonably foreseeable impacts of removing the Roadless Rule. Outright dodging this task is arbitrary and capricious. 37

Without this kind of analysis of the foreseeable increased timber harvests in the Tongass the Draft EIS cannot begin to look at the environmental, socioeconomic or cumulative impacts of the Preferred Alternative. No one can tell if the Preferred Alternative will have greater negative impacts than its positive impacts. This is inconsistent with the applicable NEPA regulations requiring full analysis of "reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 38

Further evidence that there is not a state-specific purpose for this NEPA Process, other than increased timber harvests, is found in the State government's preference for Alternative 6 which has no specific management of local concerns built into it. 39 None! Let that sink in before moving on.

The purpose and needs section of the Draft EIS (but not the State government's petition) says that State government and Forest Service are seeking to develop a rule that "accommodates the unique biological, social, and economic situation found in and around the Tongass."40 This quoted language is probably another euphemism for something like "the State and Forest Service are seeking to increase timber harvests in the Tongass." If this is correct then this letter's discussions of the problems with not so stating and the problems with the Draft EIS's lack of analysis of increased timber harvests apply equally to this part of the statement of purpose and need.

But, what if developing a rule that "accommodates the unique biological, social, and economic situation found in and around the Tongass" 41 is supposed to mean something more than just increasing timber harvest? Then this sounds kinda nice nice - like maybe the Forest Service's intention is to address some region specific concerns in this NEPA planning process even if the State government failed to articulate state-specific needs besides logging. But alas, these words are just window dressing. As already discussed, if the State government had specific concerns it wanted addressed in a change to the Roadless Rule the State government would have spelled those out in its petition. 42 The Draft EIS does not recognize state interests articulated by our State government (even increased timber harvests.)

The distinct failure of you and the Forest Service to lay out any "unique biological, social, and economic situation found in and around the Tongass"43 is evidenced by the choosing of the alternative (the State's preferred alternative) in the Draft EIS and Draft ROD that would gut all the protections of the Roadless Rule. In other words, after all the work of the NEPA planning process you and the Forest Service intend to settle on rule making that is inconsistent with the very stated purpose and need of the NEPA process. 44 In this regard it strikes me as odd that at its beginning the Draft EIS says:

The USDA and Forest Service believe the 2001 Roadless Rule prohibitions on timber harvest and road construction/reconstruction can be adjusted for the Tongass in a manner that meaningfully addresses local economic and development concerns and roadless area conservation needs. (Emphasis added.)

No reasonable person would call completely doing away with the Roadless Rule an "adjustment!" It seems that not all of the Draft EIS was scrubbed to meet the President's orders.

Maybe there is room to argue that action alternatives two, three, four or five in the Draft EIS accommodates "unique biological, social, and economic situation found in and around the Tongass"45 better than the Roadless Role. As I understand it some aspects of these alternatives were developed using public input. To at least put lipstick on this pig of a NEPA process one of the alternatives developed with public input should have been chosen in the Draft EIS and Draft ROD. 46 Instead the public is presented with a the worst case scenario as the Forest Service's preferred alternative. Fairness, and good decision making, would afford the public another chance to comment if you select an action alternative other than the Draft EIS Preferred Alternative. That would give the public a chance to focus comments on whether Tongass will be managed to accommodate local concerns. 47

Living in Southeast Alaska it is pretty obvious that actual specific regional concerns are best protected by the Roadless Rule as it is currently applied to the Tongass. My personal concern is that the Roadless Rule best protects the sustainability of the deer that my family relies upon. About half of the dinners I feed to my boys (ages 7 and 9) feature deer. Both boys are allergic to fish (and a number of other common staples such as dairy and eggs) which means that we cannot substitute deer with locally caught fish. For many years we couldn't even safely substitute deer with commercial beef as my boys tested positive for allergies to beef. Lucky for us now we can at least substitute deer meat with lesser quality beef. But like most groceries in Southeast Alaska beef is expensive.

Protecting my family's deer harvest is not as simple as me drawing a circle on a map or me listing the areas where I hunt and asking that these areas be kept off limits to road building and timber harvests. There are two reasons for this. First, where I hunt changes constantly and varies widely. I have a few places I regularly go to like Verstovia Mountain, Bear Mountain, Gavan Hill and the Indian River valley. These go to spots are local and easy to access. But these aren't the only places where my family's deer is harvested. A few years ago I could have said that I have never hunted north of Salisbury Sound. Lately though areas north of Salisbury Sound have become more important to our harvest. Some years all the deer we harvest are taken from above 1000 feet. Other years we get a significant portion of our deer from easy beach hunts. Some years too I have harvested a significant portion of deer south of Cape Brunof. My point is that the harvest of deer for my household is not a static trip to one or two areas. This is why a broad and wide ranging Roadless Rule provides the only level of protection to my family's deer harvest that I am comfortable with.

The second reason is that we aren't talking about drawing just one circle on a map that could protect my personal specific interests. There are thousands of other people in Southeast Alaska who rely on the harvest of deer to feed their families. Even if my broadest definition of a hunting area were protected and the hunting area of someone else who didn't comment in this process winds up being whittled away with new roads and new logging that means that there likely would be more hunting pressure in the areas where I go.

I don't intend for this letter to focus on a detailed discussion of my deer harvests in Southeast Alaska. But I get into this level of detail to make the point that the "unique biological, social, and economic situation found in and around the Tongass" 48 is complicated. It is very complicated. My personal deer harvest example is matched (or exceeded) by thousands of other social, biological and economic issues in the Tongass. This includes the subsistence and commercial fishermen sharing similar concerns about impacts to fish stocks, the tourism industry and its thousands of employees who have a stake in Southeast Alaska maintaining its premium wilderness experiences, the wilderness values of the people who live in Southeast Alaska and the accompanying cultural values of its native peoples.

By ending up with a decision to remove the Roadless Rule protections the Draft EIS and Draft ROD have downplayed or completely ignored these local regional concerns. The State government does not speak for us in its petition or by its involvement in this NEPA process. Please listen to our voices in our comments and keep the Roadless Rule in tact.

While on the topic of the actual concerns of the people living in the Tongass I also want to point out that even when the Draft EIS tries to address impacts of removing the Roadless Rule it does a crummy job. For example, regarding the impacts of timber harvests on deer the Draft EIS says:

Reduction in habitat quality can be reduced through management (i.e. thinning) of young-growth stands. 49

First off, this is not plain language. 50 I had to read this sentence over and over to get that it is supposed to say that thinning of second growth can improve deer habitat. Second, this, and other substantive impacts discussions are buried in the Draft EIS appendixes. Few people are going to read through the Draft EIS. Fewer people are going to take the time to go on to read the appendixes which one would understandably expect to contain back ground information (like the State government's petition.) 51 But most disturbing it how meaningless this sentence is. Just because thinning of second growth can improve deer habitat that doesn't mean that thinning is happening. In my personal experience I am aware of huge second growth swaths of the Tongass that have not been thinned. There isn't a plan in place (or even discussed as a mitigation measure in the Draft EIS) to tackle the problem that these areas are effectively choked out dead zones with hardly any life. This kind of meaningless discussion permeates the Draft EIS. 52

In summary, if this NEPA process was intended to take into account the complicated "unique biological, social, and economic situation found in and around the Tongass" then it couldn't have ended up with the gutting of the Roadless Rule as its Preferred Alternative. 53

Conclusion

For the reasons discussed in this letter I support the continuation of the Roadless Rule in the Tongass. The Roadless Rule protects not only my harvest of deer but also regional socio-economics. I urge you and the Forest Service to do the same by keeping the Roadless Rule as it is.

Moving forward with a change to the Roadless Rule would not be good for the people living in the Tongass. It would also spur grid lock and well founded controversy since the Draft EIS has failed to meet NEPA's requirements to clearly state a purpose and need. Finally the Draft EIS doesn't take a hard look at the impacts of changes to the Roadless Rule by either ducking the analysis altogether or by relying on the 2016 Plan as a backstop.

Thank you for your consideration.

Sincerely,

_Signed Hard Copy__
Brent Edwards

References

1 40 CFR 1502.13.

2 National Environmental Policy Act HANDBOOK,

Amendment No.: 1909.15-2011-5, Effective Date: September 14, 2011, p 15.

3 By way of analogy - There is a 25 mile per hour speed limit on my neighborhood street. If my neighbors and I want change that speed limit to 55 our desire to do so doesn't make the 25 mph speed limit controversial.

4 https:llcara.ecosystem-management.org/Public//ReadingRoom?Project-54511.

s https://sitka.legistar.com/LegislationDetail.aspx?ID=4249517&GUID=D638E4DD-A7D4-4395- B32D-73195F14 7EB3&Options=IDITextl&Search=Roadless

6 https://aws.state.ak.us/OnlinePublicNotices/Notices/Attachment.aspx?id=120087

7 Sitka Daily Sentinel, October 17, 2019, p. 2 "Respect for Tribal Rights on the Tongass Question."

8 DEIS Appendix A p A-5.

9 DEIS p. A-3, A-6, A-7. This last reliance on the 2003 Exemption is discussing an analysis of timber demand that the USFS apparently did in 2003 or before. Relying on a flawed analysis from 15 years ago is a controversial move.

10 DEIS A-3 ("No judge questioned the fact that the USDA had a right to change position on exempting the Tongass, if the change was adequately explained.") & A-6.

11 DEIS A-3, A-8. To avoid controversy the State should have relied upon this more up-to-date document to support its 2018 Petition. Of course it didn't do so because the 2016 Plan and the planning that went into that document contradicts the State's purported reason for its petition.

12 2016 Plan ROD p.18 .

13 2016 Plan ROD p. 19.

14 DEIS Appendix A, p. 8.

15 DEIS Appendix A, p. 8.

16 Draft EIS Appendix A.

17 Draft ROD, 84 FR 55522, 55523.

18 36 CFR 219.?(a).

19 36 CFR 219.13(a). See also[sect] 219.13(b)(1) The Forest Service "shall: .... Base an amendment on a preliminary identification of the need to change the plan. The preliminary identification of the need to change the plan may be based on a new assessment; a monitoring report; or other documentation of new information, changed conditions, or changed circumstances ..... " (Emphasis added.)_

20 36 CFR 219.11 (d)(6)).

21 December 2016 ROD p. 4. See also p. 6 - explaining how the 2016 preferred alternative is

consistent with the Roadless Rule. p. 19 "Inventoried Roadless Areas"

22 One might point out that the change it the applicability of the Roadless Rule was just one of several reasons given in the 2016 ROD to support amending the 2008 Plan. I would readily concede this point. But the other reasons for the the 2016 Plan amendment wouldn't support keeping the 2016 Plan in tact if the Roadless Rule is eliminated. For example, one major reason given for the updates in the 2016 Plan amendment were the collaborative fruits of Tongass Futures Roundtable (which was disbanded in 2011). Cramming this NEPA process down the throats of the Southeast Alaska region's residents based on the the State government's bogus petition is inconsistent with that past collaboration. Moving forward with the preferred alternative it would be the death knell to that past collaboration.

23 2016 ROD p. 19.

24 As laid out already this controversy is specious. I am pointing out here that if permitted to stand as a purpose and need for the Draft EIS then the purported controversy will undoubtably be used to justify changes to the 2016 Plan.

25 DEIS Appendix A, p. 7.

26 I have lived in Alaska my entire 47 years except for time spent Outside going to undergraduate school and then law school.

27 See DEIS Appendix A.

28 https://www.documentcloud.org/documents/5976294-030119-DunleavyLetterToTrump.html

29 https://thehill.com/policy/energy-environment/459070-trump-moves-to-permit-new-logging[shy]-in-alaskas-tongass-national

30 https://www.washingtonpost.com/climate-environment/trump-pushes-to-allow-new-logging[shy] in-alaskas-tongass-national-forest/2019/08/27/b4ca78d6-c832-11e9-be05-f76ac4ec618cstory.html. For all we know President Trump directed you to start raking the

forests like the Fins.

31 While communications between Governor Dunleavy and the Administration have been opaque it is obvious that Governor Dunleavy believed that the Forest Service was engaged in this NEPA process in order to increase timber harvests. https://www.documentcloud.org/ documents/5976294-030119-DunleavyletterToTrump.html.

32 40 CFR 1502.13.

33 National Environmental Policy Act HANDBOOK, Amendment No.: 1909.15-2011-5, Effective Date: September 14, 2011, p 15.

34 Draft ROD, 84 FR 55522, p. 55523. The ellipsis in this block quote cuts out your reference to Executive Order 13771. This Executive Order calls for the elimination of two regulations for the adoption of any new regulation. The elimination of the Tongass Roadless Rule is a deregulatory action that would indeed help fulfill the eliminate two regulations for every new regulation quota established in Executive Order 13771. Draft ROD, 84 FR 55522, p. 55527.

However, this two for one directive from the President does not trump congressional mandates on how an agency is supposed to fulfill its purpose. Rather it invites arbitrary and capricious actions by our federal agencies because it pushes for unreasoned decisions, like the one at hand.

35 The Report to the President of the United States from the Task Force on Agriculture and Rural Prosperity (Oct. 21, 2017) cited in the Draft ROD is a pretty bland overly broad document that does not have a secret equation for Southeast Alaska's prosperity. In particular this document does not address when resource extraction threatens other drivers of rural prosperity such as tourism, fishing or subsistence. The State government elevation of timber harvests above other regional economic interests fails in this regard too. One thing that this Task Force report gets right is the central importance that transportation plays in rural communities. Id. At 22. Southeast Alaska regional transportation issues are not a concern for this State's current administration so it is off putting when the State feigns interest in our rural prosperity.

36 DEIS p. 1-12.

37 The Forest Service did actually analyze future road building and reasonably foreseeable future timber harvests in its EIS for the Idaho Roadless Rule. Idaho FEIS p. 95, 96, 196, 2657.

38 40 CFR1508.7.

39 DEIS 2-16, 3-19.

40 DEIS p.1-4.

41 DEIS p.1-4.

42 The Roadless Rule Exemption Petition regulations that were invalidated required a state to spell out the specific reasons why it sought an exemption. While those regulation are not applicable here they provide some scaffolding that the State could have followed to make a petition that was tailored towards state-specific concerns.

43 DEIS p.1-4.

44 Interestingly, Governor Dunleavy's March 1, 2019 letter to President Trump says that the Forest Service is "working hard" to reverse the Roadless Rule. https://www.documentcloud.org/documents/5976294-030119-DunleavyLetterToTrump.html.

45 DEIS p.1-4.

46 DEIS p. 1-5. I think its pervertedly backwards that the heavy burden was put on the citizens of Southeast Alaska to advocate for their specific concerns when the State government kicked off this process with its petition of flimsy and out-of-date concerns.

47 I wonder whether you might already expect to choose one of the less impactful alternatives laid out in the Draft EIS but have publicly preferred the most impactful alternative in the Draft EIS and Draft ROD to make the public less opposed to a final decision that protects at least some of the primary concerns of Southeast Alaska's residents. I hope that I am being overly cynical.

48 DEIS p.1-4.

49 DEIS p. E-15.

50 An EIS "shall be written in plain language" 2012 Final Guidance on Improving the Process for Preparing Efficient and Timely Environmental Reviews Under the National Environmental Policy Act (see also 40 CFR 1502.8) "Environmental impact statements shall be written in plain language and may use appropriate graphics so that decision makers and the public can readily understand them.")

51 By now its pretty clear that I think that the State's petition is not worth the paper it is written on. Yet, it is the first appendix in the Draft EIS, placing it ahead of what is supposed to be the NEPA impacts analysis.

52 Road washouts are another persistent problem in the Tongass. These threaten salmon streams which one reason why the fishing community is pretty much united against getting rid of the Roadless Rule. As far as I can tell the Draft EIS has no plan to mitigate this problem. It is inconsistent with reality to think that building new roads using standards that are different from those used in the 1980s will eliminate the washout problem, and corresponding fish impacts. In my experience the roads in the Sitka area that were rebuilt to modern standards (St. John the Baptist Bay and Eagle River at the head of Krestof Sound) washed out again in just a few years after being reworked.

53 If the application of the Roadless Rule to the Tongass National Forest can be gutted based on a purpose and need as flimsy as what is in the Draft EIS then there is nothing stopping the gutting of the Roadless Rule Nation-wide. Any state government can put forward the same nebulous reasons for change and, if this is NEPA process is allowed to stand, then the Forest Service can simply cook up an EIS and poof - the Roadless Rule is dead. I don't doubt that this current administration would like this result. But its not right, sustainable, durable or fair to the process.

[Position]

Brent Edwards

Sitka, AK. 99835

December 17, 2019

VIA U.S. MAIL:

USDA Forest Service
Attn: Alaska Roadless Rule
P.O. Box 21628
Juneau, Alaska, 99802

ELECTRONIC COPY VIA E-MAIL:

akroadlessrule@fs.fed.us

RE: Comments on the Draft Environmental Impact Statement Alaska Roadless Areas and Draft Record of Decision.

Dear Secretary Purdue and Forest Service;

These are comments on proposed changes to the management of the Tongass National Forest under the Roadless Rule. I implore you, and the Forest Service, to not make any changes to the application of the Roadless Rule to the Tongass National Forest. The Draft EIS has no valid articulated reason why the Roadless Rule should be replaced with the complete absence of roadless protections. The Draft EIS also fails to take a hard look at the impacts of changing the Roadless Rule. This is particularly important to the people living in the Southeast Alaska region because the current Roadless Rule protects tourism, fishing and small scale timber industries that are currently the bedrock of the Southeast Alaska economy.

There is no "Why" in the Draft EIS Purpose or Need

All Draft and Final Environmental Impact Statements require an "underlying purpose and need to which the agency is responding".[1] The purpose and need section of an EIS is supposed to describe "in detail why action is being proposed at that location and at that time. In this way, the purpose and need reflects the difference between the existing condition and the desired condition." [2]

In the October 2019 Draft Environmental Impact Statement, Rulemaking for Alaska Roadless Areas, (the "Draft EIS or "DEIS") the purpose and need for changing the Roadless Rule's application to the Tongass National Forest ("the Tongass") is stated as:

> In response to the State of Alaska's petition for rulemaking, the Forest Service and State of Alaska agree the controversy surrounding the management of Tongass

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[1] 40 CFR 1502.13.

[2] National Environmental Policy Act HANDBOOK,
Amendment No.: 1909.15-2011-5, Effective Date: September 14, 2011, p 15.

> roadless areas may be resolved through state-specific rulemaking. A long-term, durable approach to roadless area management is desired that accommodates the unique biological, social, and economic situation found in and around the Tongass.

DEIS p. 1-4. This supposed purpose and need doesn't meet the applicable regulation or handbook guidance because it is wholly manufactured.

Controversy

The controversy that the State government and Forest Service agree upon is never spelled out in the several hundred page Draft EIS. The Roadless Rule has been applied to the Tongass National Forest since 2011. Just three years ago the Roadless Rule was incorporated into the 2016 Forest Management Plan for the Tongass National Forest ("2016 Plan"). So there is not a controversy on the rule's face. It is the rule. It is being applied. And by all accounts this rule is steering timber harvests in the Tongass toward a young growth industry in accord with congressional mandates. The bare agreement between the State government and the Forest Service that they desire to change the Roadless Rule's application to the Tongass doesn't make the status quo controversial.[3]

Any controversy that does exist is actually generated by the State government's petition and this NEPA process. In other words, the State government and Forest service agreement to change the Roadless Rule is the controversy. The Scoping Report for this NEPA process documents that many many other individual and organizations in Southeast Alaska find the idea of changing the application of the Roadless Rule to the Tongass controversial.[4] If an agency proposes an action that it knows will be controversial the agency can't then use that controversy as its reason why the action is needed. That is the very definition of circular reasoning which is arbitrary and capricious.

I have no doubt that any changes to the Roadless Rule that result from <u>this NEPA process will create more controversy</u> than maintaining the status quo. One reason is because the Draft EIS document does not come close to describing impacts of changes (discussed more below). Another reason is that any change to the Roadless Rule does not have regional buy-in. As mentioned already the bulk of the scoping comments were in favor of maintaining the Roadless Rule in its current form. I expect that my voice in this letter will be joined by the voices of tens or maybe hundreds of thousands of other voices expressing opposition to changes to the Roadless Rule's application to the Tongass. Indeed, the City and Borough of Sitka has resolved in favor of keeping the Roadless Rule in place[5], as has the Sitka regional State Fish and Game advisory committee.[6] Likewise the six federally recognized tribal governments in Southeast Alaska have expressed their lack of support for the preferred alternative.[7] It is not my job or role as a private citizen to catalog all of the letters in opposition

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[3] By way of analogy - There is a 25 mile per hour speed limit on my neighborhood street. If my neighbors and I want change that speed limit to 55 our desire to do so doesn't make the 25 mph speed limit controversial.

[4] https://cara.ecosystem-management.org/Public//ReadingRoom?Project=54511.

[5] https://sitka.legistar.com/LegislationDetail.aspx?ID=4249517&GUID=D638E4DD-A7D4-4395-B32D-73195F147EB3&Options=ID|Text|&Search=Roadless

[6] https://aws.state.ak.us/OnlinePublicNotices/Notices/Attachment.aspx?id=120087

[7] Sitka Daily Sentinel, October 17, 2019, p. 2 "Respect for Tribal Rights on the Tongass Question."

to changing the Roadless Rule. For the purposes of this letter it suffices to say that at the individual and regional organization level the opposition is substantial and well reasoned.

The vast number of people and organizations opposed to changing the Roadless Rule is important because if the existing rule were truly controversial then people and organization in this region would not be supporting the Roadless Rule. You and the Forest Service should hear that the voices of the region support the Roadless Rule or the No Action Alternative in the Draft EIS. Ignoring these voices, which is precisely what the Preferred Alternative and Draft ROD does, is going to stir the mother of all controversies among those of us living in the Tongass.

It is safe to say that by kicking off this review of the Tongass Roadless Rule the State government and Forest Service has only multiplied controversy. Law suits and procedural grid lock certainly will follow. The difference is that if the application of the Roadless Rule to the Tongass is changed via this NEPA process and your final ROD the law suits will be brought by the people living this region and regional organizations instead of the State government.

Including "controversy" in the purpose and need section of the Draft EIS makes it look like this NEPA planning process is actually kicked off to settle the lawsuits that the State government has maintained against the application of the Roadless Rule. In fact, the State government in its petition points out that it continues to litigate the application of the Roadless Rule to the Tongass and to the Chugach National Forest.[8] The State government has pressed on with these suits even though it has continually lost when trying to get judicial changes to the Roadless Rule. The State government also has a record of past failures to convince the Forest Service to change the Tongass Roadless Rule as evidenced by the Forest Service's rejection of the State government's position when forming the 2016 Plan. Given the current State AG's consistent failure to prevail in its suits meant to advance this Governor's agenda I suspect that the State government's law suits and other efforts regarding the Roadless Rule would be destined to continue. It would be nice if instead of burning tax payer money with no real benefits to the State of Alaska's citizens the State government stepped back and listened to what the people living in the Southeast Alaska region have to say about changes to the Tongass Roadless Rule. I am urging you and the Forest Service to continue to be the bulwark against this bad State governance and not cave to the State government's demands in its petition or pending lawsuits.

While on the topic of controversies I think it is important to point out that the State government's petition relies heavily on the 2003 Exemption of the Tongass from the Roadless Rule. That 2003 Exemption was invalidated and never reinstated. Yet, the State government tries to gloss over the invalidity of the 2003 Exemption by saying the Exemption's fatal issue was in Forest Service's failure to adequately explain a change of position.[9] It is twisted logic to claim, as the State government does, that the reasoning in the 2003 Exemption is golden over 15 years later because it was *only* inadequate.[10] Without adequate underpinnings the 2003 Exemption is not valid at its very core. It makes no sense to go to that very stale decision and try to cherry pick. The 2003 Exemption as it stands should have had no part in the kicking off of this NEPA planning process.

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[8] DEIS Appendix A p A-5.

[9] DEIS p. A-3, A-6, A-7. This last reliance on the 2003 Exemption is discussing an analysis of timber demand that the USFS apparently did in 2003 or before. Relying on a flawed analysis from 15 years ago is a controversial move.

[10] DEIS A-3 ("No judge questioned the fact that the USDA had a right to change position on exempting the Tongass, if the change was adequately explained.") & A-6.

If the State government or Forest Service wanted to underpin this NEPA process using the 2003 Exemption then the 2003 Exemption needed to be supplemented with legally adequate support. The 2003 Exemption should also be brought up to date since the invalid 2003 Exemption is about old enough to drive. The State government and Forest Service certainly have the resources to try to provide the necessary supplement as part of the State government's petition or in this NEPA planning process. Yet I see nothing in the State's petition or the Draft EIS which addresses the inadequacies of the 2003 Exemption. This problem makes the State government's petition and this NEPA process needlessly more controversial.

Long Term and Durable Planning and the 2016 Plan

The second purpose and need in the Draft EIS is a "long-term, durable approach" to the management of the Tongass. It is not explained why disposing of underlying rules that have guided development in the Tongass National Forest since 2011 is an action that is long-term or durable. Nor is it obvious that the current application of the Roadless Rule to the Tongass is not long-term and durable.

On closer inspection it seems clear that the State government is not seeking a long-term or durable approach. Nor does the Forest Service's Draft EIS or your Draft ROD propose a long-term durable approach. Instead the long-term and durable Roadless Rule management we already have is getting tossed.

The fact that the State government is not motivated by a noble search for a long-term and durable plan is made plain by the State's request that the Forest Service amend the December 2016 Land Resource Management Plan ("2016 Plan") at the same time the Forest Service changes the Roadless Rule.[11] Yet, according to the 2016 Plan:

> By transitioning away from the harvest of old-growth timber, I expect adoption of the Selected Alternative to improve the capability of the communities in Southeast Alaska to support the network of relationships, traditions, culture, and activities that connect people to the Tongass National Forest and support vibrant communities.[12]

So, the 2016 Plan implements what is needed for long-term and durable planning for vibrant communities in Southeast Alaska. In addition the 2016 Plan finds that:

> Based on my review of the Final EIS and the project record, I believe the best way to bring stability to the management of roadless areas on the Tongass is to not recommend any modifications to the Roadless Rule. Harvest in roadless areas is not necessary to meet the purpose and need of the amendment. [13]

Thus, the Forest Service already has its long-term durable planning in place. Within 13 months after the 2016 Plan became effective the State government petitioned for a change to the Tongass Roadless Rule and the 2016 Plan.[14] The State government's January 18, 2019

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[11] DEIS A-3, A-8. To avoid controversy the State should have relied upon this more up-to-date document to support its 2018 Petition. Of course it didn't do so because the 2016 Plan and the planning that went into that document contradicts the State's purported reason for its petition.

[12] 2016 Plan ROD p.18.

[13] 2016 Plan ROD p. 19.

[14] DEIS Appendix A, p. 8.

petition whines that it had objected to the implementation of the Roadless Rule in the 2016 Plan but didn't get what it wanted.[15] It didn't get what it wanted at that time and so it is now seeking change to the Roadless Rule AND to the 2016 Plan. The State sounds a lot like a spoiled child. This move by the State government is a set up for interminable planning not long term-durable planning. Please just stop this madness! Please recognize in this NEPA process and the final rule making that the State's government's position on changes to the Roadless Rule and the 2016 Plan do not reflect long-term durable planning.

In short, the State government didn't have a legitimate articulated reason to ask the Forest Service to embark on this NEPA planning process in order to find long-term durable planning which already exists.

While the Forest Service has agreed to go along with a NEPA analysis for changes to the Roadless Rule (for flawed reasons across the board) the Draft EIS clearly states that the official Forest Service line is that amendment to the 2016 Plan is not on the table. Indeed, the Draft EIS continuously touts in its "impacts analysis" that little change will happen in the management of the Tongass because the 2016 Plan maintains the roadless values of the Roadless Rule. The Draft ROD does the same thing.

Let's get real - there is no way that the 2016 Plan will stand if the Roadless Rule is eliminated or altered. There is both motive and mechanisms to change that plan once the Roadless Rule is eliminated. As I get into more detail when discussing the Alaska government's "state specific" reason for seeking the elimination of the Roadless Rule the reason why this NEPA process is happening is to increase timber harvests. As the Draft EIS points out, even if the Roadless Rule is eliminated only modest increases in timber harvests can occur under the 2016 Plan. In order to have the potential increases in timber harvests the State government wants then the 2016 Plan will need to be revised or amended. This is the motive for changing the 2016 Plan. The State government is keenly aware that the 2016 Plan throttles timber harvest since the State government has already petitioned for changes to the 2016 Plan.[16] And, given the deference you have given to the State government in the Draft ROD[17] it is likely that if the Roadless Rule changes the 2016 Plan will change soon after.

The mechanisms for changing the 2016 Plan after the Roadless Rule is eliminated are simple. The 2016 Plan is actually a limited amendment to a 2008 Plan. Forest Service management plans have a life of 10 to 15 years and coming up with a new plan takes a couple of years. **After this NEPA process NOTHING stops the State government and Forest Service from deciding that it is time to go back and completely revise an already 11 year old plan**. Nothing! It would be very easy, and even logical, for the State government and Forest Service to take this simple approach which would give them what they wanted - more roads and more logging, albeit without an honest hard look at the impacts in a NEPA process.

Alternatively, the 2016 Plan could be amended. The applicable regulations gives the Forest Service "the discretion to determine at any time that conditions on a plan area have changed significantly such that a plan must be revised."[18] Put differently the Forest Service should use plan amendments "to keep plans current and to help units adapt to new

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[15] DEIS Appendix A, p. 8.

[16] Draft EIS Appendix A.

[17] Draft ROD, 84 FR 55522, 55523.

[18] 36 CFR 219.7(a).

information or changing conditions."[19] The regulations do not spell out when conditions in the plan area have changed significantly but I am pretty sure that modifying the Roadless Rule (alternatives 2-5) or eliminating the Roadless Rule (alternative 6) would suffice. Moreover, the regulations say that forest plans should "[i]dentify the maximum quantity of timber that may be removed from the plan area".[20] If the Roadless Rule no longer applies to the Tongass then the maximum quantity of harvestable timber will change and so it seems inevitable that 2016 Plan would change too.

My expectation that the 2016 Plan will change once the Roadless Rule is eliminated is even supported by the 2016 Plan ROD and EIS. The 2016 Plan explains that:

> [T]he Tongass has been subject to the Roadless Rule since 2011 and remains so today. While the analysis for the 2008 Tongass Plan Amendment assumed the 2001 Roadless Rule would not apply because it was prepared during the time the Tongass was exempt, the 2016 Tongass Forest Plan Amendment I am approving today — and the analysis in the associated Final EIS is fully consistent with the Roadless Rule. [21]

Thus, history shows that changes to the application of the Roadless Rule to the Tongass are sufficient to cause changes to the Tongass's forest plan. It is reasonable to expect history will repeat itself if the application of the Roadless Rule is changed again.[22] Also, the 2016 ROD says "I believe the best way to bring stability to the management of roadless areas on the Tongass is to not recommend any modifications to the Roadless Rule."[23] Yet the Draft EIS says that the current Roadless Rule management of the Tongass is "controversial."[24] If the 2016 decision causes controversy surrounding the management of the Tongass under the Roadless Rule that this NEPA process was kicked off to resolve (a point that I indeed find

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[19] 36 CFR 219.13(a). See also § 219.13(b)(1) The Forest Service "shall: . . . . Base an amendment on a preliminary identification of the need to change the plan. The preliminary identification of the need to change the plan may be based on a new assessment; a monitoring report; or other documentation of new information, <u>changed conditions, or changed circumstances</u>. . . . ." (Emphasis added.)

[20] 36 CFR 219.11(d)(6)).

[21] December 2016 ROD p. 4. See also p. 6 - explaining how the 2016 preferred alternative is consistent with the Roadless Rule. p. 19 "Inventoried Roadless Areas"

[22] One might point out that the change it the applicability of the Roadless Rule was just one of several reasons given in the 2016 ROD to support amending the 2008 Plan. I would readily concede this point. But the other reasons for the the 2016 Plan amendment wouldn't support keeping the 2016 Plan in tact if the Roadless Rule is eliminated. For example, one major reason given for the updates in the 2016 Plan amendment were the collaborative fruits of Tongass Futures Roundtable (which was disbanded in 2011). Cramming this NEPA process down the throats of the Southeast Alaska region's residents based on the the State government's bogus petition is inconsistent with that past collaboration. Moving forward with the preferred alternative it would be the death knell to that past collaboration.

[23] 2016 ROD p. 19.

[24] As laid out already this controversy is specious. I am pointing out here that if permitted to stand as a purpose and need for the Draft EIS then the purported controversy will undoubtably be used to justify changes to the 2016 Plan.

laughable as already discussed in this letter) then it seems reasonably certain that the 2016 Plan will be amended to remove that controversy.

The practical certainly that the 2016 Plan will change is important for two reasons. First, it further shows that this NEPA process is not about long term and durable planning in the Tongass. Rather, the long term durable planning that is already in place is being undermined by this NEPA process. Second, **the Draft EIS and Draft ROD are wrong every time that these say that 2016 Plan will continue to maintain the roadless values of the Roadless Rule.** The 2016 Plan is not a backstop where the impacts analysis ends. Rather, a hard look at the impacts of changing the Roadless Rule would take into account the foreseeable changes to the 2016 Plan. The results are not academic. This is where the true impacts of changing the Roadless Rule will happen. Yet, the Draft EIS explicitly ducks this hard look.

The Forest Service could have, and SHOULD HAVE, rejected the State government's petition to change the Roadless Rule just like it has rejected (for now) the State government's request for change to the 2016 Plan. Despite having started this NEPA planning process you and the Forest Service can still decide the State government's petition lacks merit and pull the plug. Alternatively, the No Action alternative should be chosen to bolster the current long-term durable planning that is in place. Then the State government will have scratched its itch to fight over the application of the Roadless Rule in the NEPA forum and can go back to manufacturing controversy and wasting tax payer money in court.

State-specific Rule Making

Lastly, the Purpose and Need says state-specific rule making is necessary. State-specific rule making could be useful if there are state-specific issues at play. Put another way, legitimate state-specific rule making could constitute a solid "why" we should be looking at amending the Tongass Roadless Rule. Other state-specific Roadless Rules adopted in Colorado and Idaho are tailored to specific state issues: ski areas (Colorado), fire control (Colorado & Idaho), specific mines (Colorado & Idaho).

The State government's petition fails to clearly articulate a single state-specific issue that the State wants addressed in this rule making process. Instead the State government throws out some undefined references to serious socioeconomic consequences and devotes several pages to timber harvest.

The State government makes no effort to define the serious socioeconomic consequences we are suffering in Southeast Alaska except to state that these consequences are as compelling today as they were in 2003.[25] I have not found ANYWHERE in the Draft EIS what 2003 socioeconomic consequences are supposed to be addressed by this NEPA planning process. Nor is there any reason given in the State government's petition or the Draft EIS to conclude that the 2003 serious socioeconomic consequences that the State nebulously relies upon were not addressed in the 2016 Plan.

It makes no sense for the State government or the Forest Service to kick off this process using regional socioeconomics from before 2003 without laying out what is actually happening today. I have lived in Southeast Alaska for 11 years now[26] and take issue with the State government's lack of insight into the resilience of Southeast Alaska communities. I

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[25] DEIS Appendix A, p. 7.

[26] I have lived in Alaska my entire 47 years except for time spent Outside going to undergraduate school and then law school.

understand that some communities here were once heavily dependent on logging. And I can readily concede that some communities shrunk considerably once large scale clear cut logging tapered off and in places ceased. However this is not a Roadless Rule issue. Everyone knows that the timber industry was in steep decline before the Roadless Rule was applied to the Tongass. Moreover the past and current socioeconomics of the Southeast Alaska region are not confined to one sector of our regional economy. Since 2003 tourism and fishing (commercial and charter) have taken up slack in the economy. So its pretty ridiculous to rely on 2003 socioeconomics and the timber industry interests, as the State government has done.

The ridiculousness of the State government's dated socioeconomic concerns is highlighted by the State government's recent shake up of regional socioeconomics by severely cutting back on the Alaska Marine Highway (aka ferry services.) What really should happen is the money that the Forest Service is willing to waste on building roads for timber harvesting should instead go to a Marine Highway System. I know that suggesting that the Forest Service or the USDA fund ferry service is bound to wind up in the "not our area" section of the Final EIS. But think about it for a moment. The changes that the State government requests and that you and the Forest Service are considering are all at their core about road building. The road we really need in Southeast Alaska is a functioning marine highway system. The socioeconomic benefits of the marine highway would benefit Southeast Alaskans more than costly roads and short term economic benefits of an expanded timber harvest.

More to the point though, the deep cuts to ferry service are actually substantive to the NEPA analysis and your rulemaking decision. The cuts to ferry service is a recent change that is impacting our region greatly (far more recent than the 2003 impacts that the State government's petition references.) Yet this regional impact is not noted in Draft EIS. If (big big IF) the economic timber boom that State government is betting on were to happen it would not take place with the Southeast Alaska regional transportation system that existed when timber harvests were an economic driver in this region. That's a pretty significant change. It's like planning a major project and ignoring the fact that the bridge to the project site is washed out. The State government's gutting of the ferry service raises current and timely impact issues because our regional transportation system is, for lack of a better term, a mess.

Besides the outdated 2003 socioeconomic impacts the State government's only other state-specific concern is logging. The State government's petition makes no secret that it wants to increase timber harvests.[27] Looking outside the State government's petition this state-specific interest is also pretty obvious. In a March 1, 2019 letter to President Trump Alaska Governor Dunleavy said that removing the Roadless Rule would be "a significant victory for the timber industry in Southeast Alaska and their efforts to increase the annual timber harvest".[28] News reports indicate that Governor Dunleavy discussed with President Trump removing the Roadless Rule protections in order to benefit the timber industry.[29] And it appears that President Trump has ordained which alternative would be chosen by you, although given this

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[27] See DEIS Appendix A.

[28] https://www.documentcloud.org/documents/5976294-030119-DunleavyLetterToTrump.html

[29] https://thehill.com/policy/energy-environment/459070-trump-moves-to-permit-new-logging-in-alaskas-tongass-national

administration's lack of transparency the public is being kept in the dark on how involved the President has been in the decision making process.[30]

Despite the fact that increased logging is THE primary driver for the State government's petition, this NEPA process, and possible rule changes the Draft EIS statement of purpose and need does not specify that the Draft EIS is intended to increase timber harvests. **I think it is safe to say that the Draft EIS goes out of its way to avoid stating that the reason why the Forest Service is analyzing changes to the Tongass Roadless Rule is to increase timber harvests.**[31] Now is a good time to remember what exactly the statement of purpose and need in an EIS is supposed to do. The statement of purpose and need in an EIS is to lay out the "underlying purpose and need to which the agency is responding".[32] "[T]he purpose and need reflects the difference between the existing condition and the desired condition." [33] Obviously the Draft EIS's statement of purpose and need fails at this very fundamental NEPA requirement.

The Draft ROD is euphemistic when addressing the State government's specific interest in increasing timber harvests where it says:

> In selecting the proposed rule among the several alternatives considered, the Department has given substantial weight to the State's policy preferences as expressed in the incoming Petition. The State's preference to emphasize rural economic development opportunities is consistent with the findings of the Interagency Task Force on Agriculture and Rural Prosperity established by Executive Order 13790 (issued Apr. 25, 2017). . . . . The State's views on how to balance economic development and environmental protection offer valuable insight when making management decisions concerning NFS lands within Alaska.[34]

Translation - "This change is intended to benefit the timber industry." Why not just come out and say it? Instead the Draft ROD continues the Draft EIS's contorted charades.

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[30] https://www.washingtonpost.com/climate-environment/trump-pushes-to-allow-new-logging-in-alaskas-tongass-national-forest/2019/08/27/b4ca78d6-c832-11e9-be05-f76ac4ec618c_story.html. For all we know President Trump directed you to start raking the forests like the Fins.

[31] While communications between Governor Dunleavy and the Administration have been opaque it is obvious that Governor Dunleavy believed that the Forest Service was engaged in this NEPA process in order to increase timber harvests. https://www.documentcloud.org/documents/5976294-030119-DunleavyLetterToTrump.html.

[32] 40 CFR 1502.13.

[33] National Environmental Policy Act HANDBOOK,
Amendment No.: 1909.15-2011-5, Effective Date: September 14, 2011, p 15.

[34] Draft ROD, 84 FR 55522, p. 55523. The ellipsis in this block quote cuts out your reference to Executive Order 13771. This Executive Order calls for the elimination of two regulations for the adoption of any new regulation. The elimination of the Tongass Roadless Rule is a deregulatory action that would indeed help fulfill the eliminate two regulations for every new regulation quota established in Executive Order 13771. Draft ROD, 84 FR 55522, p. 55527. However, this two for one directive from the President does not trump congressional mandates on how an agency is supposed to fulfill its purpose. Rather it invites arbitrary and capricious actions by our federal agencies because it pushes for unreasoned decisions, like the one at hand.

The arbitrariness of giving deference in the Draft ROD to the State government's desire to increase timber harvests by eliminating the Roadless Rule is clear. Just 13 month before its petition the same arguments were made by the State government and were rejected in the 2016 Plan. It makes no sense to all of the sudden give the State government's unwise policy preferences any weight, certainly not substantial weight. Nor does the State government's position on the application of the Roadless Rule to the Tongass involve any valuable insight that the State hadn't offered in prior planning processes or in litigation.[35]

Identifying that timber harvests are THE reason why this NEPA process is going on is not merely academic or legalistic. A clear statement of purpose and need in the Draft EIS would give the public a fair opportunity to comment on the true proposed government action. Hiding the ball, as the Draft EIS and Draft ROD do, frustrates the public, creating more needless controversy.

A clear and honest statement of purpose and need is also essential for the crafting of impacts analysis. Instead of giving a true and honest analysis of the impacts of likely increased timber harvests in the Tongass the Draft EIS says:

> While environmental impacts should be disclosed as soon as information is reasonably available and at the earliest practicable stage, it is not reasonable or efficient to develop numerous timber harvest or other project-level scenarios, nor is the public served by developing worst-case, best-case, or other hypothetical activity scenarios. It is reasonable and efficient to limit detailed site-specific impact analyses to when specific proposals are brought before the agency.[36]

In essence the Draft EIS comes out and says that it is not going to analyze the impacts of increased timber harvests. This is outrageous when increases in timber harvests are real reason for this NEPA planning process. Couple this with dubious reliance on the 2016 Plan as a backstop that protects roadless values and its clear Draft EIS's impact analysis will not hold up to scrutiny. Additionally, nowhere do the applicable NEPA regulations give the Forest Service the option to forego relevant analysis in an EIS just because the agency deems such analysis "not reasonable or efficient." Rather, the Forest Service is tasked with taking a hard look at reasonably foreseeable impacts of removing the Roadless Rule. Outright dodging this task is arbitrary and capricious.[37]

Without this kind of analysis of the foreseeable increased timber harvests in the Tongass the Draft EIS cannot begin to look at the environmental, socioeconomic or cumulative impacts of the Preferred Alternative. No one can tell if the Preferred Alternative will have greater

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[35] The Report to the President of the United States from the Task Force on Agriculture and Rural Prosperity (Oct. 21, 2017) cited in the Draft ROD is a pretty bland overly broad document that does not have a secret equation for Southeast Alaska's prosperity. In particular this document does not address when resource extraction threatens other drivers of rural prosperity such as tourism, fishing or subsistence. The State government elevation of timber harvests above other regional economic interests fails in this regard too. One thing that this Task Force report gets right is the central importance that transportation plays in rural communities. Id. At 22. Southeast Alaska regional transportation issues are not a concern for this State's current administration so it is off putting when the State feigns interest in our rural prosperity.

[36] DEIS p. 1-12.

[37] The Forest Service did actually analyze future road building and reasonably foreseeable future timber harvests in its EIS for the Idaho Roadless Rule. Idaho FEIS p. 95, 96, 196, 2657.

negative impacts than its positive impacts. This is inconsistent with the applicable NEPA regulations requiring full analysis of "reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."[38]

Further evidence that there is not a state-specific purpose for this NEPA Process, other than increased timber harvests, is found in the State government's preference for Alternative 6 which has no specific management of local concerns built into it.[39] None! Let that sink in before moving on.

The purpose and needs section of the Draft EIS (but not the State government's petition) says that State government and Forest Service are seeking to develop a rule that "accommodates the unique biological, social, and economic situation found in and around the Tongass."[40] This quoted language is probably another euphemism for something like "the State and Forest Service are seeking to increase timber harvests in the Tongass." If this is correct then this letter's discussions of the problems with not so stating and the problems with the Draft EIS's lack of analysis of increased timber harvests apply equally to this part of the statement of purpose and need.

But, what if developing a rule that "accommodates the unique biological, social, and economic situation found in and around the Tongass"[41] is supposed to mean something more than just increasing timber harvest? Then this sounds kinda nice nice - like maybe the Forest Service's intention is to address some region specific concerns in this NEPA planning process even if the State government failed to articulate state-specific needs besides logging. But alas, these words are just window dressing. As already discussed, if the State government had specific concerns it wanted addressed in a change to the Roadless Rule the State government would have spelled those out in its petition.[42] The Draft EIS does not recognize state interests articulated by our State government (even increased timber harvests.)

The distinct failure of you and the Forest Service to lay out any "unique biological, social, and economic situation found in and around the Tongass"[43] is evidenced by the choosing of the alternative (the State's preferred alternative) in the Draft EIS and Draft ROD that would gut all the protections of the Roadless Rule. In other words, after all the work of the NEPA planning process you and the Forest Service intend to settle on rule making that is

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[38] 40 CFR1508.7.

[39] DEIS 2-16, 3-19.

[40] DEIS p.1-4.

[41] DEIS p.1-4.

[42] The Roadless Rule Exemption Petition regulations that were invalidated required a state to spell out the specific reasons why it sought an exemption. While those regulation are not applicable here they provide some scaffolding that the State could have followed to make a petition that was tailored towards state-specific concerns.

[43] DEIS p.1-4.

inconsistent with the very stated purpose and need of the NEPA process.[44] In this regard it strikes me as odd that at its beginning the Draft EIS says:

> The USDA and Forest Service believe the 2001 Roadless Rule prohibitions on timber harvest and road construction/reconstruction *can be adjusted* for the Tongass in a manner that meaningfully addresses local economic and development concerns and roadless area conservation needs. (Emphasis added.)

No reasonable person would call completely doing away with the Roadless Rule an "adjustment!" It seems that not all of the Draft EIS was scrubbed to meet the President's orders.

Maybe there is room to argue that action alternatives two, three, four or five in the Draft EIS accommodates "unique biological, social, and economic situation found in and around the Tongass"[45] better than the Roadless Role. As I understand it some aspects of these alternatives were developed using public input. To at least put lipstick on this pig of a NEPA process one of the alternatives developed with public input should have been chosen in the Draft EIS and Draft ROD.[46] Instead the public is presented with a the worst case scenario as the Forest Service's preferred alternative. Fairness, and good decision making, would afford the public another chance to comment if you select an action alternative other than the Draft EIS Preferred Alternative. That would give the public a chance to focus comments on whether Tongass will be managed to accommodate local concerns.[47]

Living in Southeast Alaska it is pretty obvious that actual specific regional concerns are best protected by the Roadless Rule as it is currently applied to the Tongass. My personal concern is that the Roadless Rule best protects the sustainability of the deer that my family relies upon. About half of the dinners I feed to my boys (ages 7 and 9) feature deer. Both boys are allergic to fish (and a number of other common staples such as dairy and eggs) which means that we cannot substitute deer with locally caught fish. For many years we couldn't even safely substitute deer with commercial beef as my boys tested positive for allergies to beef. Lucky for us now we can at least substitute deer meat with lesser quality beef. But like most groceries in Southeast Alaska beef is expensive.

Protecting my family's deer harvest is not as simple as me drawing a circle on a map or me listing the areas where I hunt and asking that these areas be kept off limits to road building and timber harvests. There are two reasons for this. First, where I hunt changes constantly and varies widely. I have a few places I regularly go to like Verstovia Mountain, Bear Mountain, Gavan Hill and the Indian River valley. These go to spots are local and easy to access. But

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[44] Interestingly, Governor Dunleavy's March 1, 2019 letter to President Trump says that the Forest Service is "working hard" to reverse the Roadless Rule. https://www.documentcloud.org/documents/5976294-030119-DunleavyLetterToTrump.html.

[45] DEIS p.1-4.

[46] DEIS p. 1-5. I think its pervertedly backwards that the heavy burden was put on the citizens of Southeast Alaska to advocate for their specific concerns when the State government kicked off this process with its petition of flimsy and out-of-date concerns.

[47] I wonder whether you might already expect to choose one of the less impactful alternatives laid out in the Draft EIS but have publicly preferred the most impactful alternative in the Draft EIS and Draft ROD to make the public less opposed to a final decision that protects at least some of the primary concerns of Southeast Alaska's residents. I hope that I am being overly cynical.

these aren't the only places where my family's deer is harvested. A few years ago I could have said that I have never hunted north of Salisbury Sound. Lately though areas north of Salisbury Sound have become more important to our harvest. Some years all the deer we harvest are taken from above 1000 feet. Other years we get a significant portion of our deer from easy beach hunts. Some years too I have harvested a significant portion of deer south of Cape Brunof. My point is that the harvest of deer for my household is not a static trip to one or two areas. This is why a broad and wide ranging Roadless Rule provides the only level of protection to my family's deer harvest that I am comfortable with.

The second reason is that we aren't talking about drawing just one circle on a map that could protect my personal specific interests. There are thousands of other people in Southeast Alaska who rely on the harvest of deer to feed their families. Even if my broadest definition of a hunting area were protected and the hunting area of someone else who didn't comment in this process winds up being whittled away with new roads and new logging that means that there likely would be more hunting pressure in the areas where I go.

I don't intend for this letter to focus on a detailed discussion of my deer harvests in Southeast Alaska. But I get into this level of detail to make the point that the "unique biological, social, and economic situation found in and around the Tongass"[48] is complicated. It is very complicated. My personal deer harvest example is matched (or exceeded) by thousands of other social, biological and economic issues in the Tongass. This includes the subsistence and commercial fishermen sharing similar concerns about impacts to fish stocks, the tourism industry and its thousands of employees who have a stake in Southeast Alaska maintaining its premium wilderness experiences, the wilderness values of the people who live in Southeast Alaska and the accompanying cultural values of its native peoples.

By ending up with a decision to remove the Roadless Rule protections the Draft EIS and Draft ROD have downplayed or completely ignored these local regional concerns. The State government does not speak for us in its petition or by its involvement in this NEPA process. Please listen to our voices in our comments and keep the Roadless Rule in tact.

While on the topic of the actual concerns of the people living in the Tongass I also want to point out that even when the Draft EIS tries to address impacts of removing the Roadless Rule it does a crummy job. For example, regarding the impacts of timber harvests on deer the Draft EIS says:

> Reduction in habitat quality can be reduced through management (i.e. thinning) of young-growth stands.[49]

First off, this is not plain language.[50] I had to read this sentence over and over to get that it is supposed to say that thinning of second growth can improve deer habitat. Second, this, and other substantive impacts discussions are buried in the Draft EIS appendixes. Few people are going to read through the Draft EIS. Fewer people are going to take the time to go on to read the appendixes which one would understandably expect to contain back ground information

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[48] DEIS p.1-4.

[49] DEIS p. E-15.

[50] An EIS "shall be written in plain language" 2012 Final Guidance on Improving the Process for Preparing Efficient and Timely Environmental Reviews Under the National Environmental Policy Act (see also 40 CFR 1502.8) "Environmental impact statements shall be written in plain language and may use appropriate graphics so that decision makers and the public can readily understand them.")

(like the State government's petition.)[51] But most disturbing it how meaningless this sentence is. Just because thinning of second growth can improve deer habitat that doesn't mean that thinning is happening. In my personal experience I am aware of huge second growth swaths of the Tongass that have not been thinned. There isn't a plan in place (or even discussed as a mitigation measure in the Draft EIS) to tackle the problem that these areas are effectively choked out dead zones with hardly any life. This kind of meaningless discussion permeates the Draft EIS.[52]

In summary, if this NEPA process was intended to take into account the complicated "unique biological, social, and economic situation found in and around the Tongass" then it couldn't have ended up with the gutting of the Roadless Rule as its Preferred Alternative.[53]

Conclusion

For the reasons discussed in this letter I support the continuation of the Roadless Rule in the Tongass. The Roadless Rule protects not only my harvest of deer but also regional socio-economics. I urge you and the Forest Service to do the same by keeping the Roadless Rule as it is.

Moving forward with a change to the Roadless Rule would not be good for the people living in the Tongass. It would also spur grid lock and well founded controversy since the Draft EIS has failed to meet NEPA's requirements to clearly state a purpose and need. Finally the Draft EIS doesn't take a hard look at the impacts of changes to the Roadless Rule by either ducking the analysis altogether or by relying on the 2016 Plan as a backstop.

Thank you for your consideration.

Sincerely,

_Signed Hard Copy__
Brent Edwards

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[51] By now its pretty clear that I think that the State's petition is not worth the paper it is written on. Yet, it is the first appendix in the Draft EIS, placing it ahead of what is supposed to be the NEPA impacts analysis.

[52] Road washouts are another persistent problem in the Tongass. These threaten salmon streams which one reason why the fishing community is pretty much united against getting rid of the Roadless Rule. As far as I can tell the Draft EIS has no plan to mitigate this problem. It is inconsistent with reality to think that building new roads using standards that are different from those used in the 1980s will eliminate the washout problem, and corresponding fish impacts. In my experience the roads in the Sitka area that were rebuilt to modern standards (St. John the Baptist Bay and Eagle River at the head of Krestof Sound) washed out again in just a few years after being reworked.

[53] If the application of the Roadless Rule to the Tongass National Forest can be gutted based on a purpose and need as flimsy as what is in the Draft EIS then there is nothing stopping the gutting of the Roadless Rule Nation-wide. Any state government can put forward the same nebulous reasons for change and, if this is NEPA process is allowed to stand, then the Forest Service can simply cook up an EIS and poof - the Roadless Rule is dead. I don't doubt that this current administration would like this result. But its not right, sustainable, durable or fair to the process.

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Carol
Last name: Edwards
Organization:
Title:
Comments:
My name is Carol Edwards and I live in Chestertown, Maryland.

I simply dont understand these continued attacks on our environment and the damaging effects they have on peoples health.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Carol Edwards

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Christian
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Christian Edwards

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Christopher
Last name: Edwards
Organization:
Title:
Comments:
HC3655

U.S. Forest Service Alaska Roadless Rule

Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.

Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,

Christopher Edwards

Honolulu, HI 96816

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Christopher
Last name: Edwards
Organization:
Title:
Comments:
3655

U.S. Forest Service Alaska Roadless Rule
Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.
Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,
Christopher Edwards
Honolulu, HI 96816

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: cindy
Last name: edwards
Organization:
Title:
Comments:
I have lived in the Tongass Rainforest for almost 30 years. It's been my home in so many ways as I've worked as a counselor, bike and hike guide, and community center director. We hike, camp, kayak, fish, and explore this wild and remote island year round. We live here for the quality of life that wilderness allows.

There is ABSOLUTELY NO ROOM FOR anything but FULL PROTECTION of this miraculous forest. We have proven our greed and short sightedness in a myriad of ways on this planet, but we must not include the Tongass in any more human devastation. The roadless rule must stay in effect. It was put there for a critical reason and that reason still exists. Our habitat is best when protected from greed and ill politics. It is an honor to live in this unique place and our current climate needs a complete forest for our local economy, our healthy air, and our struggling oceans and habitat.

Thank you for doing the right thing and keeping the roadless rule intact and fully protective. -Cindy

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: cynthia
Last name: edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, cynthia edwards

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: cynthia
Last name: edwards
Organization:
Title:
Comments:
My name is cynthia edwards and I live in Ann Arbor, Michigan.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, cynthia edwards

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: David
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, David Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: David
Last name: Edwards
Organization:
Title:
Comments:
My name is David Edwards and I live in Olympia, Washington.

These monuments are irreplaceable !!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, David Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Denise
Last name: Edwards
Organization:
Title:
Comments:
My name is Denise Edwards and I live in Cottonwood, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Denise Edwards

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Donna
Last name: Edwards
Organization:
Title:
Comments:
My name is Donna Edwards and I live in Indiana, Pennsylvania.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Donna Edwards

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Douglas
Last name: Edwards
Organization:
Title:
Comments:
My name is Douglas Edwards and I live in Milwaukie, Oregon.

Please plan for Tongass long term development for our nation and not short term goals that will permanently impact this globally significant rain forest.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Douglas Edwards

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/14/2019 12:00:00 AM
First name: Ella
Last name: Edwards
Organization:
Title:
Comments:
My name is Ella Edwards and I live in Wilmington, North Carolina.

It is critical to protect this national forest and all others from industry - vital for species habitats and climate change. You must vote to protect.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Ella Edwards

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Eric
Last name: Edwards
Organization:
Title:
Comments:
My name is Eric Edwards and I live in West Chicago, Illinois.

Literal insanity...

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Eric Edwards

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Gretta
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Gretta Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Gretta
Last name: Edwards
Organization:
Title:
Comments:
My name is Gretta Edwards and I live in Chuluota, Florida.

Please protect our environment. Think about the future for our children.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Gretta Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Ian
Last name: Edwards
Organization:
Title:
Comments:
My name is Ian Edwards and I live in San Anselmo, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Ian Edwards

Date submitted (Alaskan Standard Time): 12/13/2019 12:00:00 AM
First name: Jennifer
Last name: Edwards
Organization:
Title:
Comments:
HC349

Dear Chief Christiansen,

I am upset to hear the proposal to increase logging in the Tongass National Forest. *Don't* [text double underlined for emphasis] put industry First. Protect this temperate rainforest, the old growth trees and the wildlife that depends on it.

Sincerely,

Jennifer Edwards

[Position]

Date submitted (Alaskan Standard Time): 12/14/2019 3:00:00 PM
First name: Jeri
Last name: Edwards
Organization:
Title:
Comments:
My name is Jeri Edwards and I live in Iron Station, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jeri Edwards

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Jill
Last name: Edwards
Organization:
Title:
Comments:
Please continue the current regulations & protections of the Tongass NF in Alaska, and ALL National Lands, Forests, Lakes, Streams, Monuments, etc. our ecological futures depend on our leadership's wisdom.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/24/2019 3:00:00 PM
First name: Joe
Last name: Edwards
Organization:
Title:
Comments:
My name is Joe Edwards and I live in Shipman, Virginia.

We need to save this area.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Joe Edwards

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: joy
Last name: edwards
Organization:
Title:
Comments:
My name is joy edwards and I live in Glen Arm, Maryland.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, joy edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Karen
Last name: Edwards
Organization:
Title:
Comments:
My name is Karen Edwards and I live in Sag Harbor, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Karen Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Kris
Last name: Edwards
Organization:
Title:
Comments:
My name is Kris Edwards and I live in Columbus, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Kris Edwards

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Kris
Last name: Edwards
Organization:
Title:
Comments:
My name is Kris Edwards and I live in Manhattan Beach, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Kris Edwards

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Larry
Last name: Edwards
Organization: Alaska Rainforest Defenders
Title:
Comments:
From: Alaska Rainforest Defenders

Attn: USDA Secretary Perdue

Alaska Roadless Rule

USDA Forest Service, Alaska Region

Ecosystem Planning and Budget Staff

P.O. Box 21628

Juneau, Alaska 99802-1628

Dear Sec. Perdue and planning team;

Attached are comment of Alaska Rainforest Defenders, on the Alaska roadless rulemaking.

Sincerely,

Larry Edwards, president

Sitka, Alaska

The following text was copy/pasted from an attached letter. The system cannot display the formatting, graphics, or tables from the attached original.

A l a s k a R a i n f o r e s t D e f e n d e r s

A regional environmental organization established in 2011 (formerly GSACC)

Box 6064 Sitka, Alaska 99835
defenders@akrainforest.org

December 16, 2019

Attn: USDA Secretary Perdue

Alaska Roadless Rule

USDA Forest Service, Alaska Region

Ecosystem Planning and Budget Staff

P.O. Box 21628

Juneau, Alaska 99802-1628

Submitted via: www.fs.usda.gov/project/?project=54511

Re: Alaska Roadless Rulemaking
Dear Secretary Perdue,

These are timely comments of the Alaska Rainforest Defenders ("Defenders") for the proposed USDA Forest Service Alaska Roadless Rulemaking process. Exhibits were sent to you by postal mail earlier today, on a thumb drive.

We urge that you select the No-Action alternative.

Defenders' members use the Tongass National Forest for recreation, commercial fisheries, subsistence, wildlife viewing, scientific research and other activities. We have a long-standing interest in the ecological integrity of the Alaska Alexander Archipelago and its importance to local and regional economies, both cash and subsistence. In particular, our board members have engaged in considerable advocacy on behalf of iconic Tongass wildlife species, such as the Alexander Archipelago Wolf, Queen Charlotte Goshawk, black and brown bear, and Sitka black-tailed deer and have a long history of participation in and dependence on southeast Alaska's commercial salmon fisheries.

As over 200 scientists wrote in January 2018:

"Nowhere are the benefits of protecting roadless areas and similar ecologically important lands greater than on the Tongass. With towering old-growth trees that can live 700 to 1000 years, it is our country's largest expanse of native forest and one of the last remaining intact coastal rain forests in the world."1

We agree. The 2001 Roadless Rule is sound socio-economic policy for the socio-economic well-being of Southeast Alaska.

Roadless Rule exemption alternatives reflect a transparent attempt by the Alaska Governor's office, the Forest Service, and the Alaska's congressional delegation to expand the scale of clearcutting in some of southeast Alaska's most ecologically important ecosystems that provide roadless refugia for salmon and wildlife in areas otherwise surrounded by clearcuts. The decision to open up unlogged, unroaded areas is unacceptable.

1 Scientists letter on Alaska forest riders to Members of Congress United States Senate and House of Representatives. January 26, 2018.

https:/www.dropbox.com/s/pukgfha9fn4x6j6/Scientists% 20ltr% 20re% 20Alaska% 20forest% 20riders.pdf?dl=0

This proposed Rulemaking if approved, will continue the trend of mismanaging Southeast Alaska's public old-growth forests as a subsidized federal timber colony that provides high value cedar to Viking Lumber's de facto parent corporation in Washington State or other Pacific Rim wood processors far outside the region. The Forest Service would then manage its maturing second-growth forests as a plantation for some other out-of-state timber broker, delaying watershed recovery and permanently eliminating habitat for wildlife.

There have long been concerns for deer populations on many central and southern southeast Alaska islands affected by this rulemaking. The Forest Service and State of Alaska have authorized Viking Lumber and Alcan Forest Products/Transpac to destroy much of the best remaining publicly owned winter deer habitat throughout central and southern southeast Alaska. Further removals could cause local wildlife extirpations and force the few survivors into isolated patches of lower quality habitat.

There have been recent and severe declines in pink salmon harvests in Alaska Department of Fish and Game (ADF&G) regulatory districts in southeast Alaska. In 2016 the pink salmon fishery was a disaster and in 2018 returns were far worse. These declines make it essential for the Forest Service to consider whether the need to provide aquatic habitat for fishery resources used by hundreds of local fishermen and processors should take priority over perceived need to enable one or two timber companies to realize harvest cost savings of a million or two dollars.

A Taxpayers for Common Sense analysis using Forest Service budget data calculated that implementation of Tongass Advisory Committee's 2016 Forest Plan Amendment timber sales will generate taxpayer losses of $367.5 million over the next fifteen years.2 Isn't that enough for the timber companies?

Southeast Alaska residents and numerous non-resident businesses that rely on the region's natural capital contained within coastal forest island ecosystems. Industrial activities associated with the removal of remaining old-growth forest and implementation of plantation forestry for recovering second-growth forests will also render the southeast Alaska island shorelines and interior areas undesirable or even inhospitable for visitors to the region who come for recreation - particularly sport fishing and hunting.

Defenders requests that you cease this misguided Rulemaking exercise to build new roads into Tongass wildlands.

Defenders supports the no-action alternative, and we discuss our specific concerns in the following sections.

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2 https://www.taxpayer.net/energy-natural-resources/u-s-forest-services-tongass-timber-plan-

proposes-increased-costs-for-taxpa/

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I. Purpose & Need and socio-economic analysis

A. The DEIS hides the timber industry purpose of this rulemaking behind an ambiguous, meaningless stated purpose

The DEIS claims that the purpose of this rulemaking is to create "a long-term, durable approach to roadless area management ... that accommodates the unique biological, social and economic situation found in and around the Tongass.3 This statement is so ambiguous as to be meaningless, and masks the true narrow purpose of this action - the Forest Service wants to remove Roadless Rule protections in order to expand the old-growth acreage available for large timber sales to "meet the needs of industry."4 The State of Alaska's

3 DEIS at 1-4.

4 Alaska Roadless Rulemaking Cost Benefit Analysis at 30.

petition to which this rulemaking responds makes clear its primary purpose is to increase the acreage available to federal timber sale purchasers.5

The Forest Service projects that the additional acreage may result in cost savings to timber operators, and thus enable the Forest Service to offer positively appraised timber sales.6 Specifically, the Forest Service hopes that Roadless Rule exemption alternatives would enable two federal timber sale purchasers to realize $1-2 million in annual harvest cost savings.7 The DEIS admits that the proposed rulemaking will not increase employment levels or have any other positive economic impacts.8 In other words, the singular goal of this is to allow the two companies who purchase large timber sales from the government opportunities to realize some cost-savings by authorizing them to clearcut some of the last remaining stands of high volume old-growth forest from the southern portion of the Tongass National Forest.9It is beyond dispute that this rulemaking would benefit only one of two private companies. As shown in the Forest Service's 2016 market demand study, Viking Lumber monopolizes the small amount of federal timber utilized for mill production (see chart).

5 State of Alaska. Petition for Rulemaking to exempt the Tongass National Forest from application of the Roadless Rule and other actions. January 19, 2018. Available at: https://www.fs.usda.gov/nfs/11558/www/nepa/109834_FSPLT3_4406959.pdf. Some aspects of this action purport to address non-timber infrastructure purposes. Those purposes are superfluous. This comment letter

focuses on the effort to repeal prohibitions on timber harvest and road construction. The focus of the Roadless Rule itself was on timber and timber road construction due to the public cost and potential scale of environmental degradation.

The stated non-timber purposes are disingenuous. The petition focused exclusively on southeast Alaska's "forest sector" and made no mention of any other resource concerns. The petition references "timber" 23 times in the eight page document. The petition requested an exemption for the Tongass National Forest and not the Chugach National Forest. If the rule really obstructed these potential projects on the Tongass then the petition would have requested exemptions for both Forests. The only difference between the two Forests is the absence of a large timber sale program from the Chugach.

During the Sept. 25, 2018 Petersburg open house, state and federal officials could not name even one example of a project hindered by the Roadless Rule. The agency's handout stated that it had approved 57 projects within inventoried roadless areas, including for energy development (hydroelectric), mining exploration, and interties.

6 Alaska Roadless Rulemaking Cost-Benefit Analysis at 38.

7 Id. at 31.

8 DEIS at 3-49.

9 See Alaska Roadless Rulemaking Cost Benefit Analysis at 30.

The other company, Alcan/Transpac, currently holds 56 percent of sold and uncut Tongass timber and Viking Lumber currently holds 28 percent of sold and uncut Tongass timber.10 This actual purpose is unlawfully and unreasonably narrow because it responds solely to timber operational objectives rather than to the Forest Service's multiple use management responsibilities.11 The Forest Service cannot allow the perceived needs of private entities to narrowly define the scope of a proposed project.12 Instead, agency actions must look to other relevant factors, including the views of Congress as expressed in the agency's statutory authority and other congressional objectives.13 Congress enacted the National Forest Management Act in part to respond to "widespread public distress and scientific concern over the Forest Service's post-World War II shift to massive, heavily subsidized timber production in the National Forests."14 The goal was to ensure that timber production would not be the "sole objective" of the Forest Service and to direct forest managers to protect other resources such as fish and wildlife habitats.15 Defenders submits that the agency's true purpose reflects an overly narrow focus on providing timber for two companies.

B. The Socio-economic analysis fails to address how the Roadless Rule contributes to southeast Alaska's socio-economic well-being

All Roadless Rule exemption alternatives will do significant harm to the economic viability of southeast Alaska communities in general and further inhibit market-based economic growth by perpetuating a federal land use policy that has been unsuccessful for decades and

inhibits the transition toward proven and successful 21st century southeast Alaska economic models. The Forest Service isn't planning this project for an industry in the conventional sense of businesses employing workers - this is merely a corporate welfare program for Viking and Alcan that simultaneously supports a massive number of federal, state, and other for-profit and not-for-profit corporate bureaucrats.

The Forest Service's myopic focus on supporting Viking or Alcan/Transpac fails to recognize the region's market-based transition away from federal timber dependency and toward a more diversified and sustainable economy that depends on Roadless Rule protections for fisheries and tourism.16 NEPA requires federal agencies to disclose sufficient information as needed to ensure "informed decisionmaking and informed public participation." NEPA analyses cannot serve this essential function if they reflect misleading economic

assumptions "by skewing the public's evaluation of a project."17 NEPA thus requires that "[a]gencies shall insure the professional integrity ... of the discussions and analyses."18

It is hard to understand how a rulemaking aimed at providing harvest cost savings for two companies is relevant to regional socio-economic well-being or the rural workforce. The timber industry makes no positive economic contribution to the majority of southeast Alaska communities and the habitat damage it causes reduces economic outputs from their primary

10 DEIS at 3-36.

11 See, e.g. National Parks Conservation Ass'n v. Bureau of Land Management, 606 F.3d 1058, 1070 (9th Cir. 2010)(cert. denied, March 28, 2011); City of Carmel-by-the-Sea v. U.S. Dep't of Transportation, 123 F.3d 1142, 1155 (9th Cir. 1997).

12 Id. (citing Citizens Against Burlington, Inc. 938 F.2d at 196).

13 Citizens Against Burlington, Inc. 938 F.2d at 196.

14 Sierra Club v. Peterson, 185 F.3d 349, 353-54 (5th Cir. 1999)(superseded on other grounds, 228 F.3d 559 (5th Cir. 2000).

15 S. Rep. 94-893, reprinted in 1976 U.S.C.C.A.N. 6662, 6671.

16 40 C.F.R. [sect] 1502.1; Robertson v. Methow Valley Citizens Council, 490 U.S. 332. 349 (1989)

17 Hughes River Watershed Conservancy v. Glickman, 81 F.3d, 437, 446 (4th Cir. 1996).

18 40 C.F.R. [sect] 1502.24.

business sectors. Only two of the 24 smaller rural communities have any timber activity at all, while the rest depend primarily on fishing and tourism.19 The amended Forest Plan FEIS addresses the needs of those two communities (both on Prince of Wales Island) separately with an old-growth set-aside for the cottage industry.20 Larger communities such as Petersburg, Wrangell and Ketchikan that once participated in the timber economy have fully transitioned toward economies based on tourism and fishing.21

The planning record for the 2016 LRMP Amendment shows a broad decline in the U.S. share of the global timber economy - declines that reflect "powerful, on-going changes in the role the U.S. plays in global markets."22 The competitive disadvantage is particularly significant for southeast Alaska timber.23 The Pacific Northwest Research Station's own publications verify these significant downward trends.24 These changes have weakened the Forest Service's timber sale program to the point of irrelevancy from a regional private sector perspective. Indeed, the private sector component of the industry is smaller than it was over a century ago.25 Timber worker earnings are less than 1% of total employment related earnings in the region; federal timber generates a fraction of a percent (0.2%) of regional employment.26

The timber industry in southeast Alaska has become very small during the 21st Century and concentrated in just two communities. There have been no new sawmills established since 2000 and the overall number of sawmills declined by more than half to eight active operations since 2000.27 The Forest Service's own data show that there are a total of 51.3 mill jobs in southeast Alaska - 43.1 mill jobs on Prince of Wales Island, 8 mill jobs in Hoonah, and 0.2 mill jobs in the three central southeast Alaska communities of Kake, Petersburg and Wrangell and no jobs in the larger communities of Ketchikan, Juneau and Sitka.28 15 MMBF of Tongass timber employed a total of 24 loggers in 2017 - most from out of state.29

Despite the industry's absence from most regional communities, the Forest Service recently threatened the central southeast Alaska communities of Kake, Wrangell and Petersburg with economic harm unless the

agency succeeded in implementing the pending Central Tongass Project.30 Petersburg timber employment declined from five to two people in between 1999

19 2016 LRMP FEIS at 3-547-3-689.

20 Id. at 3-152.

21 Id. at 3-613, 3-639, 3-684-685.

22 See 2016 LRMP FEIS PR Folder 763_02_000084 (Niemi 2016, Socioeconomic Comments on Timber Demand at 12).

23 Id. at 14

24 See 2016 LRMP FEIS PR Folder 763_02_000088, documents PNW RB-265 (Zhou 2013)) and PNW RB-266.

25 See 2016 LRMP FEIS at 3-485, Table 3.22-4. 2016 LRMP FEIS PR 769_05_000340 at 10 (Southeast Conference 2014).

26 Id. at 3; Cf. 2016 LRMP FEIS at 3-480, Table 3.22-2 (53,145 total jobs); id. at 3-485, Table 3.22-4 (federal timber provided 123 jobs) Id. at 3-481, Table 3.22-3; Raincoast Data 2017 at 3. Available at http://raincoastdata.com/portfolio

27 Central Tongass Project PR 832_0357 at 2 (Parrent & Grewe 2018)

28 Central Tongass Project PR 832-0537 at 4, Table 4 (Parrent & Grewe 2018)).

29 Central Tongass Project PR 832_0614 at 4 (Daniels 2018); https://cara.ecosystem-management.org/Public/DownloadCommentFile?dmdId=FSPLT3_4326267https://www.fs.usda.gov/project/?project=51766

30 Central Tongass Project DEIS at 3-68; 3-316.

and 2007.31 The two mills in operation in 2006 processed a total of 250 MBF of timber.32 Forest Service data show that 2017 central southeast Alaska mill production is 34 MBF out of a total 15,544 MBF - or .002% of the mill production in the region - even though the Forest Service has 100 MMBF for sale in the Petersburg and Wrangell Ranger Districts.33 The Forest Service already has 100 MMBF available in the Wrangell and Petersburg Ranger Districts.34 The Petersburg economy did fine following the end of the pulp mill era because it is primarily based on commercial fishing.35

Further, it is unclear how many federal-timber loggers reside in southeast Alaska communities. Broadly, non-resident employment accounts for a significant amount of jobs in southeast Alaska's resource-dependent sectors.36 The 2016 Forest Plan FEIS record similarly shows that overall, workers from areas other than southeast Alaska comprise a significant proportion of the natural resource-based work force, and nearly half of the timber related jobs in southeast Alaska are held by non-residents.37 The number of actual timber workers across the region is so small that reports by the Alaska Department of Labor lump logging jobs with other natural resource-based job categories.38 And, as noted by Forest Service personnel, the region's large timber sale purchasers import loggers from other states.39 There is no existing logging company in Ketchikan, requiring Alcan to import workers from elsewhere.40

There appears to be little or no workforce interested in or available for the 20th Century-style jobs supplied by the companies that the Forest Service hopes will realize harvest cost savings from this rulemaking. The Southeast Conference reports a "graying" of the regional timber workforce and states that the "workforce is aging/in decline while the new workforce does not have the same work ethic or interest in physical work."41 But

the industry itself believes that young people can't or won't do physical work, and the Southeast Conference's report recognizes that "[l]ogging has become a socially unacceptably business to be in."42 And these jobs can be unpleasant or even dangerous experiences.43

In sum, it is hard to understand how the Forest Service's goal of providing harvest cost savings to Viking Lumber and Alcan/Transpac is meaningful to southeast Alaska's socio[shy]economic well-being or rural workforce. These companies function as federal timber brokers for raw log export markets with perhaps some small token amount milled by Viking Lumber to maintain the illusion of local employment. Allowing Viking Lumber and Alcan/Transpac to further liquidate publicly owned forests will harm the economic viability of communities

31 Id.

32 Id.

33 Id. at 3-315.

34 Id.

35 2016 Forest Plan FEIS 3-662.

36 Id. at 3-483.

37 2016 LRMP FEIS PR 769_05_000329 at 16-18, 22. (ADOL 2015).

38 2016 LRMP FEIS PR 769_05_000344; -000314; -000318; - 000319 (Alaska Department of Labor data).

39 https://cara.ecosystem-management.org/Public/DownloadCommentFile?dmdId=FSPLT3_4326267

40 https://www.fs.usda.gov/project/?project=51766

41 http://raincoastdata.com/portfolio/southeast-alaska-2020-economic-plan

42 Id.

43 https://www.osha.gov/pls/imis/establishment.inspection_detail?id=314290701. https://www.ripoffreport.com/reports/phoenix-logging-company/klawock-alaska-99925/phoenix-logging-company-phoenix-loggingphoenix-logging-company-that-does-not-care-about-t-1276625.

that depend on fisheries and wildlife. The DEIS arbitrarily fails to provide any meaningful information justifying Roadless Rule exemption alternatives and failed to confront significant economic issues and long-term changing local workforce needs.

C. The Alaska Roadless Rulemaking exemption alternatives support the 45th President's trade rivals

Our scoping comments requested that the DEIS address the timber economy decline and disclose that any cost savings benefit realized by Viking and Alcan will accrue to the United States' chief trade rival, China, where large timber sale purchasers send federal timber for processing. It is impossible to reconcile the region's socio-economic well-being with this rulemaking, which would extract timber from inventoried roadless areas mostly for processing in Asian mills under the practice of waiving its generous export policies.

In 2007, the Regional Forester developed a limited interstate shipment policy that it expanded in 2009 to allow timber sale purchasers to export 50 percent of total Sitka spruce and western hemlock sawlog volume.44 The export policy further reduces the return to the local economy from the public spending on the timber program by diminishing local utilization of timber and local manufacturing employment. The 2016 Forest Plan FEIS makes

clear that the Forest Service intends to authorize the export of roughly two-thirds of the timber removed from federal forests as unprocessed logs.45 According to the Alaska Division of Forestry, raw log exports significantly reduce local employment - a position that recognizes that transportation and logging workers are less likely to be residents than sawmill workers.46Federal timber in 2017 resulted in only 8.3 MMBF of mill production.47 Given the Petersburg Ranger District's recent decision to authorize 100% raw log export from federal lands on Kuiu Island and longstanding practice of doing so elsewhere, it seems possible that the Forest Service may be planning to work with Alcan to export all of the company's federal timber from inventoried roadless areas to Chinese mills. The willingness to waive export policies designed to protect local businesses, elimination of scenic integrity objectives, and this rulemaking reflect Forest Supervisor Earl Stewart's desperation to meet Tongass Advisory Committee timber targets in order to maintain funding for the timber sale program.48 The agency's data show that these companies ship so many logs overseas that export volume exceeds the actual timber take (see image of slide, right).

44 2016 Forest Plan FEIS, Appx. H at H-4-5.

45 Id. at 3-492-3-493, Tables 3.22-8, 3.22-9.

46 http://forestry.alaska.gov/timber/index.

47 Central Tongass Project PR 832-0537 at 6, Table 6a (Parrent & Grewe 2018).

48 Exh. 2 (Stewart 2018).

This job transfer to foreign timber processors should be critical to ascertaining whether Roadless Rule exemption alternatives have any relevance to regional socio-economic well[shy]being. The Central Tongass DEIS for example acknowledges that the majority of Alaska timber goes to China - 76% in 2015.49 Why is the Forest Service spending millions of dollars providing timber for Chinese mills at a time when the President of the United States is waging war to address unfair trade practices?50 This means the Forest Service is not only deceiving itself and the public with this project, but perhaps also even the 45th President of the United States, who is waging war on China to stop the very types of trade and manufacturing imbalances perpetrated by Alcan/Tranpac and Viking Lumber.

A log ship being loaded with whole-logs, at a wharf just north of the Viking Lumber mill. This load was exported to China. (Photo by David Beebe, Jan. 2017)

49 Central Tongass Project DEIS at 3-317.

50 https://www.nytimes.com/2018/09/17/us/politics/trump-china-tariffs-trade.html

II. Direct and Indirect Taxpayer Losses and Timber Theft:

A. The DEIS fails to explain how this rulemaking will increase timber sale program costs

When the Forest Service promulgated the Roadless Rule, the timber sale program in Region 10 (Alaska) was one of the two worst performing Regions by generating the largest losses per thousand board feet sold, and ten times the taxpayer loss of all other Forest Service Regions combined.51

This poor performance primarily reflected higher administrative costs and higher road construction costs.52 Road construction in Alaska was at least twice as expensive as in the lower 48, with permanent road costs estimated (in 2000 dollars/2018 inflation-adjusted dollars) at $140,000/205,000 per mile and temporary roads at $120,000/175,000 per mile.53 Alaska, despite its small population, also had the second largest road maintenance backlog in the nation - largely because of the Tongass National Forest.54

The Roadless Rule was a fiscally responsible regulation because budget constraints allowed for effective management of only a small portion of the agency's road system.55 Promulgation of the rule rested largely on the rationale that it makes little sense to build new roads, particularly in inventoried roadless areas, when the agency historically has had a huge backlog in unfunded, deferred road maintenance costs.56 The Roadless Rule provided the greatest reduction of future maintenance costs for roads, planning costs, overall timber program costs, and other administrative costs.57

51 Roadless Rule FEIS at 3-298, Table 3-57 (Region 3 and Region 10 generated taxpayer losses of $178 and $179 per thousand board feet, respectively, 22 times as much the only other region that operated timber sales at a deficit).

52 Id. at 3-303.

53 Id. at 3-324

54 Exh. 13 (Taxpayers for Common Sense 2004).

55 Roadless Rule FEIS at 1-15.

56 Id. at 1-5.

57 Id. at 2-36.

The sole economic benefit resulting from this Rulemaking would be "estimated harvest cost savings" of $1 - 2 million for a timber sale purchaser in areas where timber extraction costs would otherwise be prohibitively expensive.58 The DEIS and Cost-Benefit Analysis arbitrarily fail to recognize additional direct and long-term public costs associated with Roadless Rule exemption alternatives, including higher costs associated with road construction in inventoried roadless areas, costs associated with expanding the timber sale program, and long-term deferred maintenance costs.59

Because this rulemaking would undo a policy intended to ensure fiscal responsibility, the agency costs are critical to the pending decision. The Cost-Benefit Analysis references three separate Executive Orders related to costs and savings associated with new and repealed regulations.60 But nowhere does the analysis candidly confront the cost control rationale underlying the 2000 Roadless Rule or disclose the true costs of public expenditures on the timber sale program that would result from Roadless Rule exemption alternatives.

NEPA's hard look requirement mandates that a cost-benefit analysis be reasonable.61 This means that the analysis must "fully and accurately" disclose the costs.62 There must be sufficient information to "balance a project's economic benefits against its adverse effects."63 The analysis failed to provide the information the public needs to evaluate this rulemaking with respect to timber sale program costs.64 Further, the Roadless Rule sought to reduce agency costs. The DEIS does not provide any explanation how the agency intends to reduce its backlog, violating the APA.65

The Cost-Benefit Analysis admits that the Forest Service spent $12.5 million annually to administer timber sales from 2005-2014, and in turn received $1.1 million in revenue.66 This loss alone -$11.4 million per year - is alarming. Those loss disclosures rely on a Government Accountability Office (GAO) audit of the program that excludes timber road construction costs and other administrative costs associated with the Forest Service

timber sale program.67 Because of the staggering taxpayer losses associated with the Tongass National Forest's timber sale program, there have been several independent estimates that exceed the amounts shown in the GAO audit. (See table, next page.)

58 Alaska Roadless Rulemaking Cost-Benefit Analysis at 6.

59 Id. at 37.

60 Id. at 4-5.

61 36 C.F.R. [sect] 219.12(g); 40 C.F.R. [sect][sect] 1502.14, 1502.16; 40 C.F.R. [sect] 1502.24; Natural Resources Defense Council, 421 F.3d at 811-12.

62 Sierra Club v. Sigler, 695 F.2d 957, 975-76 (1983).

63 Hughes River Watershed Conservancy, 81 F.3d at 446.

64 Columbia Basin Land Protection Ass'n, 643 F.2d at 594.

65 Organized Village of Kake v. U.S. Dept. of Agriculture, 795 F.3d 956, 967 (9th Cir. 2015).

66 Alaska Roadless Rulemaking Cost-Benefit Analysis at 38.

67 Id.;https://www.gao.gov/products/GAO-16-456.

One major problem with the Cost-Benefit Analysis is that the cost disclosures omit the cost of timber road construction. Taxpayers for Common Sense's table (above) shows that the Tongass National Forest spent $632 million from 1999-2018 on timber sale preparation, reforestation and timber roads.68 When adding in road construction and maintenance costs, the Tongass National Forest's taxpayer losses rise to $33.8 million a year.69 Based on these data, the taxpayer losses were $612,000 per million board feet of timber sold over two decades.70 Headwaters Economics utilizes similar timber budget cost categories and

68 Exh. 10 (Taxpayers for Common Sense 2019).

69 Id.

70 Id.

identified an average taxpayer cost of $771,000 per million board feet sold between 2009 and 2013.71 Federal timber sale expenditures exceeded $22.3 million per year in southeast Alaska.72 Revenue returns were $1.7 million, or an annual loss of $20.5 million.73

The taxpayer losses caused by the timber sale program are even worse when factoring in "overhead costs" such as the personnel and facility costs.74

Taxpayer losses caused by this rulemaking may be even worse because Tongass National inventoried roadless areas are remote, difficult to access thus have higher sale preparation

71 Exh. 11 (Headwaters Economics 2014).

72 Id.

73 Id.

74 Exh. 12 (Mehrkens 2016).

costs.75 A related problem is that the Cost-Benefit Analysis ignores the adverse cost consequences of expanded timber sale acreage: more timber extraction = higher taxpayer costs.76

This means that exemption alternatives could add millions of dollars in taxpayer costs needed to subsidize large timber sale purchasers.77 As noted by Taxpayers for Common Sense, taxpayer costs have declined over the past decade largely because of declines in extraction levels.78 The current Forest Plan projects nearly half a billion board feet in Tongass National Forest timber removals over the next decade.79 If fully implemented at current costs, the plan could generate a taxpayer loss exceeding a third of a billion dollars using the Headwaters Economics estimated taxpayer cost of $771,000 per million board feet. Similarly, Taxpayers for Common Sense estimates that the Tongass National Forest losses could increase over the next four years to $180 million based on plans to sell 290 million board feet of timber.80

In other words, if Roadless Rule exemption alternatives increase the amount of logging, there will be a corresponding increase in taxpayer subsidies needed to support Alcan and Viking.

B. Culvert Costs to Communities

The Forest Service's budget also is relevant to another taxpayer cost caused by the timber sale program - habitat loss that causes costs to commercial fisheries. The absence of barrier culverts and stream crossings from inventoried roadless areas is an important reason why inventoried roadless areas function as biological strongholds and refuges for salmon - unroaded or low road density watersheds are more likely to support healthy populations.81 Barrier culverts can block access to habitat and adversely impact salmon stream productivity, by reducing spawning success, impairing juvenile growth and rearing, and obstructing migration. Removing them immediately benefits salmon production because salmon immediately re-colonize the previously inaccessible habitat.

A Roadless Rule rationale related to the significant adverse impacts associated with barrier culverts: reduced habitat connectivity, fish species vulnerability to local extinctions, and reduced ability to respond to changing environmental conditions.82 In particular, the cumulative impacts of road networks and multiple stream crossings threatened major adverse effects to fish habitat.83

The Roadless Rule responded to the Forest Service's concern that its deferred maintenance backlog (which included culvert replacement) was increasing along with rising repair costs and declining funding.84 At the time, deferred maintenance backlog was $8 billion and the agency could only fund 20 percent of its existing road system.85 The Tongass National Forest

75 Roadless Rule FEIS at 3-303; 2016 TLMP FEIS at 3-441.

76 Alaska Roadless Rulemaking Cost-Benefit Analysis at 3-29-30; Exh. 10 (Taxpayers for Common Sense 2019).

77 Roadless Rule FEIS at 3-325, Table 3-73.

78 Exh. 10 (Taxpayers for Common Sense 2019).

79 2016 TLMP FEIS at 3-493, Table 3.22-9.

80 Exh. 10.

81 Roadless Area Conservation FEIS at 3-160.

82 Id. at 3-166.

83 Id.

84 Id. at 1-5.

85 Id.

alone accounted for a deferred maintenance backlog was nearly $1 billion (in 2002 dollars).86 In 2019, the Forest Service estimates its funding/repair ratio is even worse, with a total maintenance backlog of $5.2 billion and a budget of $450 million.87 These costs and harm to fish and commercial fishing communities dependent on the productivity of Forest Service lands were a primary policy purpose underlying the Roadless Rule.

The DEIS violates NEPA because it fails to take a hard look at the value of inventoried roadless areas in light of the serious fish passage problems throughout areas managed for the timber companies.88 It also fails to provide a reasoned explanation for reversing a policy protecting fish, and disregards the fish facts, violating the APA.89

Roughly two decades ago - at the same time the Forest Service promulgated the Roadless Rule - ADF&G surveyed 60 percent of the Forest Service's roads to assess fish passage problems in the region.90 This survey showed that 66 percent of the culverts on Class I streams (179) and 85 percent of the culverts on Class II streams (531) were inadequate for fish passage.91 The Forest Service made an effort to address some of these problems between 1998 and 2006, spending between $1.5 million and $2 million annually to fix roughly 50 sites per year.92 The culvert repair program ended in 2006 due to funding reductions.93 Now there are 1,100 culverts blocking over 260 stream miles of fish habitat, with most of them concentrated in the Petersburg and Prince of Wales (Thorne Bay and Craig) Ranger Districts.94

The DEIS provides a brief discussion of fish passage obstruction that fails to disclose the current number of blocked culverts, number of stream miles impacted or the average number of blocked culverts addressed each year.95 It does admit that funding for fixing fish passage problems is "uncertain" and that the lack of funding may harm fish.96

Roadless Rule repeal alternatives would add numerous stream crossings within the Prince of Wales and Central Tongass Project inventoried roadless areas, where nearly 800 red culverts already block at least 170 miles of spawning habitat.97 There are currently 1,100 red

culverts across the Tongass National Forest blocking 270 miles of salmon habitat.98 Taxpayers will need to fund 1,000 miles of road construction to meet Tongass Advisory Committee timber targets which would require at least another 200 culverts.99 Conservative

86 Exh. 13. Taxpayers for Common Sense. 2003.

87 https://naturalresources.house.gov/download/hanna-autumn-written-testimony.

88 See Natural Resources Defense Council v. Forest Service, 421 F.3d 797, 811 (9th Cir. 2005).

89 See Organized Village of Kake v. U.S. Dept. of Agriculture, 795 F.3d 956, 967 (9th Cir. 2015).

90 Exh. 15. Flanders, L.S. & J. Cariello. Tongass Road Condition Report. ADF&G Habitat Restoration Division Tech. Rpt. No. 00-7. June 2000

91 Id.

92 2008 TLMP FEIS at 3-73.

93 Id.

94 2016 TLMP FEIS at 3-117; USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact Statement at at 3-135 - 3-143; Central Tongass Project DEIS at 3-160.

95 DEIS at 3-112-113.

96 Id. at 3-148.

97 Central Tongass Project DEIS at 3-160; Prince of Wales Landscape Level Analysis FEIS.

98 2016 TLMP FEIS at 3-117.

99 DEIS at 3-144; Exh. 15 (there is one culvert per 5 miles of road along Class I streams and one culvert per 2.25 miles of road along Class II streams); https://naturalresources.house.gov/download/hanna-autumn-written-testimony.

estimates indicate that each salmon spawning stream mile is worth $10,000, red culverts cost commercial fishermen $2.7 annually, $27 million over the past decade, and $27 million next decade.100

In the Central Tongass Project area, there are 432 existing red crossing blocking 99 miles of habitat.101 The Forest Service may repair three of those barrier culverts in 2020.102 On Prince of Wales Island alone there are 447 red pipes.103 The Forest Service plans to fix fourteen of them in 2020, but only has funding for three (see photo).

Roadless Rule exemption alternatives will result in planned and costly road construction in inventoried roadless areas, further increasing the agency's maintenance backlog. The DEIS does not confront the existing maintenance problems. Further, the Forest Service's refusal to fix existing barrier culverts reduces salmon productivity with real costs to commercial fishermen that recur each year. The DEIS and Regulatory Impact Assessment/Cost-Benefit Analysis arbitrarily ignore these real costs to commercial fishermen and never balances them

100 Foley, et al. 2012. A review of bioeconomic modelling of habitat-fisheries interactions. In: International Journal of Ecology, Vol. 2012. Doi:10.1155/2012/861635; Exh. 46, Knowler, D. et al. 2001. Valuing the quality of freshwater salmon habitat - a pilot project. Simon Fraser University. Burnaby, B.C.: January 2001; Knowler, D.J., B.W. MacGregor, M.J. Bradford, and R.M. Peterman. 2003. Valuing freshwater salmon habitat on the west coast of Canada. In: Journal of Environmental Management, 69: 261-273 (Nov. 2003). Available at: www.sciencedirect.com/science/article/pii/S0301479703001543.

101 Id. Central Tongass Project DEIS at 3-169.

102 Exh. 21, 2020 Central Tongass Project Activity List.

103 USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact

Statement at 3-131, 137, 154.

against the project purpose of a one-time savings of $1 or 2 million for Alcan/Transpac or Viking Lumber.104

C. Local Forest managers will sacrifice roadless values

The 2000 Roadless Area Conservation Rule FEIS identifies a concern that "local forest managers will sacrifice roadless values to influential, local commercial interests."105 This rulemaking would rely on local forest managers to maintain roadless values.106 The DEIS fails to disclose serious issues regarding the Tongass National Forest's ability to competently manage a timber sale program. The Tongass National Forest (the agency) has a serious bias that is in part an institutional attachment to the timber industry and in part an appetite aimed appropriating taxpayer funds for its money losing timber sale program. These problems create "a substantial financial interest in the harvesting of timber" that causes the agency "to be more interested in harvesting timber than in complying with our environmental laws."107

A major part of the agency's financial interest is that its own funds depend on timber program outputs.108 The desperation to reduce deficit timber sales has motivated decisions to reduce scenic integrity objectives.109 There are serious questions about whether local officials can make unbiased decisions about conserving roadless values during the timber sale process due to the Forest Service's strong financial interest in the outcome.110

Because of these problems, Defenders' scoping comments requested that the Forest Service cease this rulemaking process because of (for example) the Petersburg Ranger District's and Prince of Wales ranger districts' inabilities to administer timber sales, as demonstrated by chronic problems related to timber sale oversight, contractual and appraisal issues. As reported in 1996 by the Public Employees for Environmental Responsibility (PEER), the Tongass National Forest has a long history of permitting timber operators such as Viking Lumber Company to operate in a lawless manner in Southeast Alaska, ignoring timber export violations, scaling fraud, and outright timber theft.111 For example, ground-truthing the recent Tonka Timber project showed that Viking would clearcut deer winter range prescribed for selective cutting, and expand cutting units beyond the prescribed acreage to whatever size Viking deemed fit.

In 2016, the Washington Office reviewed the Alaska Region's timber sale and administration processes for two Viking Lumber timber sales - the Tonka Timber Sale on Lindenberg Peninsula and recent Big Thorne Project on Prince of Wales Island. The review showed that: (1) instead of improving "forest ecosystem health," the Tongass National Forest allowed Viking to high-grade the most ecologically valuable trees rather than the trees intended for removal to achieve the desired "forest ecosystem health" effects; (2) the Forest Service failed to conduct timber-theft prevention inspections and (3) all monitoring and reports of timber

104 Alaska Roadless Rulemaking Cost-Benefit Analysis at 35, Table 6 (claiming that Roadless Rule repeal alternatives will have zero costs to commercial fishermen).

105 Roadless Rule FEIS at 1-4.

106 84 Fed. Reg. at 55524.

107 See, e.g. Earth Island Institute v. U.S. Forest Service, 442 F.3d 1147, 1177 (9th Cir. 2006).

108 Exh. 2 (Stewart 2017).

109 DEIS at 3-69-70, 3-295; Exh. 1 (Heithecker 2018).

110 See, e.g. Sierra Forest Legacy v. Rey, 577 F.3d 1015, 1022-23 (9th Cir. 2009)(Noonan, J. concurring)(explaining that "[i]n the instant case the decision-makers are influenced by the monetary award to their agency, a reward to be paid by the successful bidder as part of the agency's plan."

111 Exh. 3. PEER. 1996. Stealing the Tongass.

removals, etc. were self-reporting by Viking Lumber Company.112 These problems are a particular concern given that a major purpose of this project is to "improve forest ecosystem health" through timber removal prescriptions implemented by Viking.

PEER's review showed that the Petersburg Ranger District's failure to inspect Viking's activities and require adherence to the timber sale contract for the Tonka sale cost taxpayers $2 million alone - more than twice the amount Viking paid for the timber.113 On-the-ground operators admit that harvest prescriptions or contract terms were irrelevant to what happened on the ground - they cut only according to Viking Lumber's instructions.114 Appraisal methods resulted in artificially low appraisal rates for higher value species such as Alaska Yellow Cedar and Sitka Spruce.115 The Big Thorne Project caused similar taxpayer losses in addition to the usual costs of Tongass National Forest timber sales.116 And the logging and haul costs were much lower than estimated by the Forest Service, resulting additional windfalls to Viking Lumber.117 Similar issues have arisen with regard to the Forest Service's second growth timber projects purchased by Alcan/Transpac.118

Ironically, after receiving these windfalls, Viking Lumber wants the Forest Service to give it more taxpayer money from the Big Thorne contract because it says the Forest Service economic analysis undercut its profits through poorly estimated tow and haul costs.119 How can this be? Didn't Viking enter the contract at its own risk after reviewing the cost estimates both during the NEPA and contract process? Even if there was a legitimate problem, the proper procedure is for Viking Lumber is to file a claim and have it reviewed by the Federal Court of Claims which has expertise in settling such claims. But even though the long history of timber theft and maladministration on the Tongass National Forest is disturbing, there is nothing more shocking than Regional Forester Becky Nourse's response to the Washington Office's review of the timber sale program: we should directly give Viking more taxpayer money because they didn't earn as much on the Big Thorne timber sale as anticipated.120 Wasn't the review aimed at requiring the Forest Service to take steps to eliminate windfalls to Viking, rather than increase them? Given the accountability problems,

112 Exh. 5. Washington Office Timber Sale Review; Exh. 6 PEER. 2017. Inspector General Audit Request; See, e.g. https://www.peer.org/assets/docs/fs/4_3_17_Timber_Sale_Review.pdf and

https://www.peer.org/news/news-releases/forest-service-scalped-on-tongass-timber-sales.html

113 Exh. 4. Tonka Timber Sale DXPRE Post-Harvest Monitoring Results.

114 Id.

115 USDA Forest Service Washington Office Activity Review of timber sale administration. sale preparation, stewardship contracting, NEPA, and timber theft prevention. Region 10. June 2016. https://www.peer.org/assets/docs/fs/4_3_17_Timber_Sale_Review.pdf

116 Id.

117 Id.

118 Exh. 9 (PEER).

119 Exh. 8. Pendleton 2018.

120 Exh. 7. Nourse, R. 2017. Memo to Forest Service Chief Tom Tidwell re: Results of the Big Thorne IRTC Supplemental Review. Defenders adds that the Washington Office's review of the Alaska Region's problems included a significant critique of the Forest Service's NEPA contractor, Tetra Tech - the company that refused to analyze the cumulative effects of timber sales in this DEIS in addition to making false statements about the agency maintaining scenic integrity objectives and other errors. The Big Thorne Project planning record, for example, showed that Tetra Tech billed the Forest Service and received compensation for work it did not do, raising further questions about agency and contractor accountability. If there was an error in the analysis, why

do taxpayers have to pay? Doesn't Tetra Tech indemnify the Forest Service for its screw-ups? If not, why not? And shouldn't Tetra Tech be responsible for covering Viking's $2 million windfall from the Tonka contract?

how do we know Viking didn't already receive a significant windfall because it got stewardship credits for projects it never completed or only partially completed?

Now, after adding to the taxpayer costs of the program through poor oversight and erroneous cost analyses, the Forest Service would expand this lawless activity into inventoried roadless areas.

In sum, the Tongass National Forest and Alaska Region of the Forest Service lack the institutional capacity and will to administer a large timber sale for a lawless timber operator like Viking. There is no evidence that the agency has taken any steps to correct this

problem. Defenders submits that these issues also bear significantly on the agency's ability to conserve roadless values. How can the Forest Service rely on Viking Lumber to apply Forest Plan Standards and Guidelines for other forest values such as den, nest or riparian in the absence of responsible oversight? The DEIS failed to disclose and discuss the Forest Service's present ability and capacity to ensure the accountability of its timber sale program.

III. Comments on Climate Change and affected resourcesOur scoping comments requested that the DEIS evaluate this project in terms of how logging impacts climate change and consider and disclose threats posed by climate change to project area forest resources.121 We also requested that the DEIS consider recent and alarming climate patterns. Old-growth logging (in particular) and also second-growth logging contribute to global carbon emissions and climate change has significant ramifications for forests and biodiversity. The DEIS failed to fairly discuss real threats to fish, wildlife and vegetation resources that resulting from a measurably and dramatically warming climate or consider the value of intact roadless areas as buffers against changing environmental conditions. The DEIS acknowledges that the climate is warming in general and that climate models project future warmer, wetter conditions.122 It is clear that in general the state is warming.

121 We added, for example, that rapidly changing environmental conditions in the region necessitated a discussion of the effect of new clearings and additional roads on abnormal heating and drying of the forest.

122 DEIS at 3-122.

The DEIS identifies the 2018 National Climate Assessment as the most recent synthesis of climate impacts in Alaska.123 That document reviewed statewide climate change effects known through 2016.124 The discussion of the cumulative effects of climate change on forest resources then relies on the analysis in the 2016 Forest Plan FEIS and repeats its conclusions:

Climate change could impact the resources currently managed by the Forest Service as well as how the Forest Service manages the Tongass in the future. While there is general agreement among scientists that the climate of Southeast Alaska is

warming, there is considerable uncertainty concerning the scope of the effects of climate change on the forests of Southeast Alaska and how best to deal with

possible changes to the many resources managed on the Tongass.125

The Forest Service reaches this conclusion without considering or identifying obvious recent changes specific to the southeast Alaska environment. NEPA imposes "a continuing duty to gather and evaluate new information" relevant to environmental impacts.126 The Forest Service cannot rely on the analysis in the 2016

Forest Plan FEIS and must consider recent and ongoing changing environmental conditions in a supplemental EIS.

When new information comes to light, the agency must consider it, evaluate it and make a reasoned determination whether it is of such significance as to requireimplementation of formal NEPA filing requirements. Reasonableness depends on the environmental significance of the new information, the probable accuracy of the information, the degree of care with which the agency considered the information and evaluated its impact....127

A 2019 update on climate change effects in the state explains that over the past four years southeast Alaska has experienced record temperatures and a prolonged drought.128 Alaska's record heat wave in 2019 was newsworthy throughout the state and nation, and should have been obvious even to the out of state preparers of this DEIS.129

2019 started off as a hot year in southeast Alaska.130 Alaska Hit With a Hot March (see map at right).

123 Id.

124 See, e.g. Markon et al. 2018.

125 DEIS at 3-128.

126 Warm Springs Dam Task Force v. Gribble, 621 F.2d 1017, 1023-24 (9th Cir. 1980)

127 Id.

128 Exh. 14. Thoman, R. & J.E. Walsh. 2019. Alaska's changing environment: documenting Alaska's physical and biological changes through observations H.R. McFarland, ed. International Arctic Research Center, University of Alaska Fairbanks.

129 https://www.nbcnews.com/news/weather/record-heat-alaska-melts-glaciers-hints-bigger-problems-may-be-n1034766; https://www.alaskapublic.org/2019/08/15/alaskas-summer-heatwave/.

130 https://earthobservatory.nasa.gov/images/144796/alaska-hit-with-a-hot-march

By July, temperatures reached record levels, as shown here:

These changes are occurring at a rapid rate. It is unreasonable for the Forest Service (and Tetra Tech) to continue to regurgitate analysis that dates back to the 2008 TLMP FEIS. The following sections describe specific resource concerns.

A. Cedar decline; high-grading of large trees and cedar

Our scoping comments requested that you consider cedar and large-tree old-growth high-grading, cedar decline and provide information about regeneration in logged areas. Our scoping comments requested that the DEIS also discuss the Alaska Region's developing strategy for cedar conservation and how it is relevant to this rulemaking. Because of the forest-wide significance and because of the extent of cedar decline, the analysis needed to identify cedar composition and condition in the roadless areas, and consider whether leaving them intact would contribute to the persistence of the species.

The DEIS should have provided enough information to assess the impacts of removing high levels of yellow cedar and how this project fits in with biome-wide red cedar removals. An important purpose of the Roadless

Rule was to protect large, undisturbed blocks of habitat for native vegetation.131 Climate change is "altering conditions for tree recruitment, growth and survival and impacting forest community composition."132

The Forest Service has also disproportionately removed high volume and large-tree old-growth, particularly from islands where the agency is planning large timber sales: Etolin Island, Kupreanof Island, Mitkof Island North Central Prince of Wales Island, Wrangell

131 Roadless Rule FEIS at 1-4.

132 Exh. 24. Bisbing et al. 2019. From canopy to seed, loss of snow drives directional changes in

forest composition.

Island, and Zarembo Island.133 This rulemaking will exacerbate high-grading of both cedar species and large-tree old-growth forest which have the highest importance for biodiversity.134 The Roadless Rule exemption would remove protections for165,000 acres of old-growth and 59,000 acres of high-volume old-growth." 135

In NRDC v. U.S. Forest Service, the court identified an agency failure to provide an analysis regarding the disproportionate harvest of high-volume old-growth.136 The court noted the special ecological value of these forest types for wildlife and instructed the Forest Service to assess reasonably foreseeable continued high-grading.137 Importantly, the court directed the agency to consider these issues in programmatic analyses.138 The DEIS needed to disclose the effect of continued high-grading old-growth forests, whether or how to lessen the cumulative impact of the practice and assess potential impacts of reasonably foreseeable future high-grading both high-volume old-growth and both cedar species.

Cedar high-grading is a significant issue in part because it results in clearcutting large forested areas with ecological effects to old-growth dependent wildlife that range from bear denning habitat to nesting habitat for avian species.139 As explained in a recent review of British Columbia's logging practices, "the treatment of cedar is the very definition of high-grading: logging one species to the exclusion of another."140 Throughout British Columbia and southeast Alaska, cedar is one of the few species that generates profits for timber companies.141It is also a significant issue because yellow cedar decline is the most severe tree die-off ever recorded in North America, spanning half a million acres by 2013.142 Yellow cedar does not regenerate after logging, meaning that lifting Roadless Rule protections will eliminate the species from those areas.143

Climate change - particularly a reduced snowpack - caused cedar decline through shifts in the frequency of freezing and thawing events in late winter and reduced snow cover.144 The Forest Service projects further future reductions in the regional snowpack (see map at right).

133 DEIS at 3-58; 3-67; 3-105.

134 Id. at 3-55.

135 Roadless Rulemaking Cost-Benefit Analysis at 38.

136 NRDC v. U.S. Forest Service, 421 F.3d at 815.

137 Id.

138 Id.

139 Exh.21. Nelson, J. Vanishing Heritage: the loss of ancient red cedar from Canada's rainforests.

140 Id.

141 Id.

142 Hennon, P.E. 2012.; Hennon, P.E. & D. Wittwer. 2013.

143 See Prince of Wales Landscape Level Analysis FEIS at 3-337 (yellow cedar comprises less than 1

percent of second growth forests); Central Tongass Project DEIS at 3-62.

144 Exh. 13.

Yellow and red cedar comprise 9.7 and 5.9% of the Tongass National Forest's growing stock, respectively but timber companies have removed these species disproportionately.145 Their 2007 respective values - $140/MBF and $116/MBF vastly exceeded the $4/MBF value of the Forest's most prevalent species, western hemlock.146 Both cedar species are more prevalent in southern and central southeast Alaska where the agency implements its timber sale program.

The recent Big Thorne and Logjam sales on Prince of Wales Island, for example, targeted the two cedar species as 34 percent and 28% of the sale - at least double or more those species' actual presence on the Forest. The Prince of Wales Landscape Level Analysis timber sales target cedar, which comprises 29% of project's timber volume.147 Timber companies have already removed old-growth from 380,950 acres on the island, including 192,275 non-federal acres and 80,445 acres over the last 30 years.148 Sealaska Corporation and the Alaska Mental Health Trust are major landowners there, and will likely log another 93,980 acres of old-growth on the island, under State of Alaska regulations which do not limit clearcut size.149

Fresh non-federal cut on Prince of Wales. Credit: Colin Arisman.

145 Wilson, B. 2002. Cedar harvest on the Tongass National Forest. (Unpublished). Alaska Region Forest Management.

146 Housely, R., K. Vaughn & S. Alexander. 2007. Timber market analysis of the effects of export and interstate commerce on timber sale value and volume. Forest Service, Region 10.

147 Prince of Wales Landscape Level Analysis FEIS at 3-111.

148 Id. at 3-361.

149 Id.

The DEIS mostly ignores cedar decline except for a few scattered paragraphs, even though the Forest Service has mapped and projected current and future levels of cedar decline and could provide a meaningful analysis. There is available data to show where yellow cedar on central southeast Alaska islands has the highest likelihood of persisting over the next 80 years, and where there is high risk of further decline.150

Western Kupreanof Island, for example, contains 6.6 percent of the yellow cedar acreage in southeast Alaska, and 12.1 percent of the acreage in decline. (See maps at right)

Will there be any yellow cedar left of Zarembo Island if the Forest Service proceeds to add inventoried roadless areas to the Central Tongass Project Timber Analysis Areas?

This rulemaking would worsen high-grading of cedars and of large-tree and high-volume oldgrowth forest. Climate change is threatening successful tree regeneration by causing unprecedented climatic and disturbance conditions and changes in forest community composition.151 The DEIS fails to inform the public whether the agency expects the species to persist in one portion of an area or another or consider cedar decline with an analysis

150 Central Tongass Project PR 832_0539.

151 Exh. 24 (Bisbing et al. 2019).

describing the impact in a way that informs whether or not to remove Roadless Rule protections from areas where the species persists. This broad level of analysis is not acceptable under NEPA.

B. Climate Change Impacts and Fisheries

Southeast Alaska communities are heavily dependent on the salmon fishery, which supports 1 in 10 jobs in the region.152 In 2017, 1,784 gillnet, seine and troll salmon permit holders harvested 50.1 million salmon in southeast Alaska, generating an ex-vessel value of $169 million.153 The Tongass National Forest produces 95% or more of southeast Alaska's pink salmon harvest taken mostly by seine fisheries and roughly two-thirds of the coho harvest taken mostly by troll fisheries.154 The troller fleet is the second largest fleet in the state, with over 1,000 active permit holders, 80 percent of whom are Alaska residents.155 These earnings employ thousands of processing workers and support nearly every business in every community, with a total economic impact estimated at $700 million annually.156

Defenders' scoping comments requested that the DEIS candidly discuss and disclose the current status of southeast Alaska's salmon populations and the risks presented by the proposed action such as the cumulative impacts of climate change and logging. For example, a 2009 study, "Global climate change and potential effects on Pacific salmonids in freshwater ecosystems of southeast Alaska" identified numerous climate change effects, including likely risks of pre-spawner and egg and embryo mortality events for pink and chum and degraded sockeye lake habitat and juvenile coho rearing habitat.157 The article noted that the "most pervasive anthropogenic effect" on salmon habitat is timber extraction.158

Habitat conservation - such as maintaining intact roadless areas - will be important to the survival of sustainable fishery populations as changes in climatic conditions "will impose greater stress on many stocks that are adapted to present climatic conditions."159 In particular, there are risks to freshwater habitat associated with changes in disturbance events, thermal regimes, precipitation changes and lower summer stream flows and experts believe "[i]mpacts to salmon populations in specific streams and rivers are likely" and thus recommend "considering thermal refugia for salmonids where possible."160 Bryant's conclusions are consistent with expert findings that anticipate major hydrological changes, with significant consequences for ecosystem productivity.161

The discussion of impacts to fish in the DEIS provided the boilerplate language that the Forest Service has utilized since 2008 to avoid confronting climate change impacts on fish:162

152 http://www.thealaskatrust.org/seabank-annual-report-web

153 Id.

154 See Exh. 18 Johnson, A.C., J.R. Bellmore, S. Haught, and R. Medel. 2019. Quantifying the monetary value of Alaskan National Forests to commercial Pacific salmon fisheries.

155 Id.

156 Id.

157 Bryant 2009. Global climate change and potential effects on Pacific salmonids in freshwater ecosystems of southeast Alaska.

158 Id.

159 Haufler, J. 2010.

160 Id.

161 Id.

162 DEIS at 3-119; 2008 TLMP FEIS at 3-93.

... there is general agreement that the climate is warming, precipitation will increase in the fall and winter but decrease in summer in snow- and rain-dominated watersheds. However, there is uncertainty surrounding specific predictions and even more uncertainty regarding the effect of these changes on resources including fish. The cumulative effects of climate change are not clear....

It is unreasonable to continue ignoring current environmental changes in NEPA analyses. Southeast Alaska - particularly areas of planned timber sales, has just experienced a prolonged drought with record low rainfall.

The Forest Service either has quit monitoring stream temperatures in southeast Alaska or is failing disclose the results. But 2019 stream temperatures elsewhere in Alaska far exceeded the 13[deg] Celsius (56[deg] Fahrenheit) threshold for fish, in some cases reaching 80[deg].163 (See chart and first panel, next page.)

It is unreasonable to ignore the cumulative effects of logging, road density and climate change on salmon. There are strong negative correlations between logging road density, timber extraction and salmon productivity.165 For example, NMFS has found that logging degrades salmon habitat by ...

"... removal and disturbance of natural vegetation, disturbance and compaction of soils, construction of roads and installation of culverts. Timber harvest activities can result in sediment delivered to streams through mass wasting and surface erosion that can elevate the level of fine sediments in spawning gravels and fill the substrate interstices inhabited by invertebrates. The most pervasive cumulative effect of past forest practices on habitats for anadromous salmonids has been an overall reduction of habitat complexity from loss of multiple habitat components. Habitat complexity has declined principally because of reduced size and frequency of pools due to filling with sediment and loss of LWD (large woody debris).... As previously mentioned, sedimentation of stream beds has been implicated as a principal cause of declining salmonid populations throughout their range."166Forest Service planned timber sales will occur in areas most at risk to these cumulative effects. There is substantial deferred maintenance and chronic sedimentation affecting fish habitat throughout Prince of Wales Island.167 The Forest Service would add 122 miles of new road construction within 300 feet of fish habitat, cause peak flow rate increases in nearly a quarter of the project area watersheds, increase risks of sedimentation and low summer stream flows, and add 436 stream crossings.168 In the Central Tongass Project area, there are 432 existing red crossing blocking 99 miles of habitat, and the Forest Service proposes 700 new stream crossings, including 128 on anadromous streams.169 For some watersheds, the agency proposes to remove between 20 and 40 percent of existing forested habitat.170 As with the Prince of Wales timber project, there are a number of watersheds already in poor condition, with existing high risks of peak flows.171 And these are just the issues on federal land. Non-federal logging by Sealaska or for the purpose of improving mental health in Alaska may have even more cumulative impacts on freshwater bodies, estuaries, sedimentation and microclimates, as suggested by this photo.

165 Halupka et al 2000.

166 Endangered and Threatened Species: Threatened status for Southern Oregon/Northern California Evolutionarily Significant Unit (ESU) of coho salmon. 62 Fed. Reg. 24588 at 24593 and 24599. May 6, 1997.

167 2003 Tongass Roads Analysis; Big Thorne FEIS at 3-285-286.

168 USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact Statement at 3-135 - 3-143.

169 Id. Central Tongass Project DEIS at 3-160.

170 Id. at 3-160.

171 Id. at 3-171-176.

It is unreasonable to assume that allowing timber entries into remaining roadless refugia would be harmless to salmon fisheries in light of rapidly changing environmental conditions. 2016 was a pink salmon fishery disaster for southeast Alaska.172 Across southeast Alaska the 2018 pink salmon run failed to meet even low expectations, with a 7.3 million fish harvest - the lowest since 1976 and over ten million fewer fish than fishermen caught during the 2016 disaster year.173 In 2017, pink salmon harvests in some of the traditionally most productive areas around eastern Prince of Wales Island 5 percent of the average harvest for that area.174 These numbers are alarming. Now, ADF&G's 2020 pink salmon forecast notes drought conditions and marine heat waves as likely causes of low juvenile pink salmon abundance indices and its 2020 forecast for a 12 million fish harvest - a third of the recent decadal average:175

The Forest Service's 1995 Anadromous Fish Habitat Assessment made numerous findings and recommendations related to reducing the impacts of industrial clearcut logging on salmon habitat in southeast Alaska. The Assessment explained that:

172 https://www.kfsk.org/2018/08/29/southeast-pink-salmon-catch-lowest-in-over-four-decades/

173 https://www.kfsk.org/2018/08/29/southeast-pink-salmon-catch-lowest-in-over-four-decades/

174 Exh. 27. ADF&G 2018.

175 Exh. 28, ADF&G 2019.

The cumulative effects of frequent disturbances in the Pacific Northwest have been shown to substantially reduce the quality of freshwater fish habitats resulting in negative consequences for species, stocks, and populations of fish that depend on them, even if coniferous cover is left in buffer strips along the fish-bearing streams. Fish-bearing streams represent only a small portion of stream mileage in any watershed. Because recovery of fish habitat from the effects of extensive logging in a watershed may take a century or more, recovery may never be complete if forests are clearcut harvested and watersheds are disturbed extensively on rotation cycles of about 100 years. Few refuges remain in a watershed that fish can use during such widespread, intense, and recurrent disturbances.

...Should freshwater habitats be degraded for long periods, salmon and steelhead stocks will eventually be confronted simultaneously with low marine productivity and degraded freshwater habitat. The likely result of such double jeopardy could be high, long-term risk of extinction. 176

Given current trends in pink salmon production, the proposed Rule exemption would present the "double jeopardy" situation described above. It would be reckless to proceed with this rulemaking because of likely long-term adverse impacts on the salmon themselves and salmon dependent species such as bears and commercial fishermen.

The Forest Service needs to produce a revised DEIS that considers climate change impacts on all roadless values and inventoried roadless area resources.

IV. Wildlife habitat impacts

Defenders' scoping comments requested that the Forest Service analyze roadless values for wildlife, consider population trends and provide a reasonable level of location specific information. This analysis needed to provide more than a quantitative approach to measuring productive old growth losses at various scales. Instead, there needs to be consideration of specific inventoried roadless area habitat features that contribute to wildlife viability and abundance, particularly in light of the high degree of natural fragmentation combined with fragmentation in roaded portions of the Tongass.

The DEIS instead provided a generalized analysis admitting that timber extraction in newly opened areas and associated road construction or reconstruction could decrease the value of these roadless areas to wildlife through increased habitat fragmentation and reduced landscape connectivity, with additive effects on species vulnerable to overharvest and wide ranging species that require large expanses of roadless refugia. But then the Forest Service deferred analysis of the magnitude of the effects to project level analyses. There are multiple problems with this approach. There is a heightened need for roadless refugia in the areas where the agency plans landscape-scale clearcut logging.

A. The Forest Service must analyze the cumulative impacts of Roadless Rule exemption alternatives and planned logging on wildlife

The Forest Service has completed or initiated the three timber projects it intends to use over the next fifteen years to meet the Tongass Advisory Committee's (TAC) timber targets pursuant to the 2016 Forest Plan: the Prince of Wales Landscape Level Analysis, Central Tongass Project and South Revilla Integrated Resource Project. Together, these three

massive timber sales will remove nearly a billion board feet of timber from over 60,000 acres.

Under any of the Roadless Rule repeal action alternatives, the Forest Service would increase the scale of clearcutting and road construction under the Prince of Wales Landscape Level

176 U.S. Forest Service. 1995. Report to Congress: Anadromous fish habitat assessment. Pacific

Northwest Research Station, Alaska Region. R10-MB-279.

Analysis.177 The Prince of Wales Island project alone would remove nearly two-thirds of a billion board feet of timber over the next fifteen years.178 The Prince of Wales Island project is monstrous compared to the recent Big Thorne Project, which was until now the largest Forest Service timber sale in decades and authorized Viking Lumber to eliminate the last remaining stands and travel corridors in the central part of the island.179

Timber companies have already logged 380,950 acres on the island, including 80,445 acres over the last 30 years, with another 93,980 acres of non-federal old-growth at risk in the near future.180 The Forest Service has already considered timber entries into Prince of Wales Island inventoried roadless areas, but deferred those entries pending this rulemaking.181 The Forest Service has also initiated planning road construction activities in the islands inventoried roadless areas.182 The island's deer population supports substantial and increasing hunting effort, causing concerns among subsistence users.183 The 2017 deer season was the worst in memory for local hunters, causing increased concern about the impacts of clearcuts and wolves. Some residents are now questioning Forest Service plans to sacrifice the island to keep Viking Lumber in operation,

and believe "there's a limit on how much you can donate to the cause."184 The DEIS needed to fully analyze implications of removing Roadless Rule prohibitions on this island by providing information about deer population trends, hunting effort, and the importance of island deer for both island residents and residents of other islands who harvest Prince of Wales Island deer due to deer deficits elsewhere.

For the pending Central Tongass Project, the Forest Service has also already planned to maximize the acreage available for clearcutting and road construction by authorizing entries into inventoried roadless areas.185 Again, the agency deferred action on these entries pending the completion of this rulemaking.186 The DEIS fails to mention the planned Forest Plan amendment to reduce scenic integrity objectives as part of this project, and instead assumes those objectives would provide extensive habitat that provides connectivity and contributes to the Conservation Strategy. But the Central Tongass Project would authorize the timber companies to clearcut in an undisclosed portion of 12,084 acres of formerly protected low elevation important habitat near the beach fringe.187 The failure to consider this project-specific dismantling of the Conservation Strategy and similar efforts illustrates why this DEIS needed to provide more location specific analysis.

177 USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact Statement at 2-36. R10-MB-833e. U.S. Forest Service, Alaska Region. October 2018. P. 3-66 - 24 IRAs.

178 Id. at 2-23, 27.

179 Id.

180 Id. at 3-361.

181 Id. at 2-36.

182 https://naturalresources.house.gov/download/hanna-autumn-written-testimony.

183 Exh. 31 (ADF&G 2015).

184 https://www.alaskapublic.org/2017/12/18/wolves-and-logging-both-cut-into-prince-of-wales-deer/.

185 USDA Forest Service. 2019. Central Tongass Project Draft Environmental Impact Statement Vol. 1 at 3-26. R10-MB-832a. U.S. Forest Service, Alaska Region. July 2019. There are 43 IRAs in the CTP project area (p. 3-51).

186 Id. at 3-26.

187 Id. at 3-69-3-70.

The only other old-growth timber sale project proposed over the next decade is the South Revilla Integrated Resource Project, which also includes plans to reduce scenic integrity objectives.188 Roadless Rule repeal alternatives would vastly expand the acreage available for clearcutting and road construction associated with that project.189

A major flaw with the DEIS is the failure to consider cumulative impacts to wildlife caused by Roadless Rule exemption alternatives combined with these projects, which represent planned logging for the next decade. NEPA requires that agencies consider cumulative actions in determining the scope of environmental impact statements, meaning actions "which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement."190 As explained by the Supreme Court, under NEPA, "proposals for ... actions that will have cumulative or synergistic environmental impact upon a region ... pending concurrently before an agency ... must be considered together."191

In general, the 9th Circuit has explained that:

[P]rojects need not be finalized before they are reasonably foreseeable. NEPA requires that an EIS engage in reasonable forecasting. Because speculation is implicit in NEPA, we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as a crystal ball inquiry.192

In the specific context of requirements to evaluate pending plans for timber extraction, in Blue Mountains Biodiversity Project v. Blackwood, the 9th Circuit explored the Forest Service's refusal to evaluate the cumulative impact of multiple logging projects occurring in the same watershed in the NEPA analysis for a salvage logging project.193 The logging projects would have logged 40 - 55 MMBF of timber from the same watershed, involve steep slope logging and entail 20 miles of road construction.194 The court found that the projects were reasonably foreseeable and required a cumulative impacts analysis based on prior development of the projects as part of a forest recovery strategy and prior disclosure of sale names, quantities and timelines prior to the release of the NEPA analysis for the project.195 The 9th Circuit also reviewed a similar case in 2015, and determined that the pending timber project was reasonably foreseeable based on BLM's "focus on details" so that "many elements of the Cottonwood project were already firmly established."196 As explained in Natural Resources Defense Council v. U.S. Forest Service, "where several foreseeable projects in a geographical region have a cumulative impact, they must be evaluated in a single EIS.197 The

188 https://www.fs.fed.us/sopa/components/reports/sopa-111005-2019-10.pdf; https://www.fs.usda.gov/nfs/11558/www/nepa/108739_FSPLT3_4403638.pdf.

189 https://www.fs.usda.gov/nfs/11558/www/nepa/108739_FSPLT3_4403638.pdf.

190 40 C.F.R. [sect] 1508.25

191 Kleppe v. Sierra Club, 427 U.S. 390, 410 (1976); see also Natural Resources Defense Council v. Forest Service, 421 F.3d 797, 815 (9th Cir. 2005).

192 N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067 (9th Cir. 2011)(citations and internal quotation marks omitted).

193 Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1215 (9th Cir. 1998).

194 Id.

195 Id.

196 Soda Mt. Wilderness Council v. U.S. BLM, 607 Fed. Appx. 670, 672 (9th Cir. 2015).

197 Natural Resources Defense Council v. Forest Service, 421 F.3d 797, 815 (9th Cir. 2005)("where several foreseeable projects in a geographical region have a cumulative impact, they must be evaluated in a single EIS").

Forest Service must prepare a revised DEIS that provides more location-specific information about wildlife species.

B. The DEIS failed to provide a detailed analysis of impacts to Sitka black-tailed deer and deer winter range.

We have significant concerns about the lack of high value winter deer range remaining on the Tongass, particularly in central and southern southeast Alaska and consequently the impacts of this Rulemaking on remaining deer habitat. Many of the inventoried roadless areas opened up to clearcutting abut past clearcuts where canopy closures are now or will soon be occurring. Logging in inventoried roadless areas may also further fragment or directly remove the little remaining winter deer habitat. Many southeast Alaska islands and mainland are already heavily fragmented and contain large portions of what is currently, or soon to be, unsuitable deer habitat due to canopy closure in the extensive created openings and second-growth stands.

In the Alaska National Interest Lands Conservation Act (ANILCA), Congress announced the following policy: "[c]onsistent with sound management principles, and the conservation of healthy populations of fish and wildlife, the utilization of public lands in Alaska is to cause the least adverse impact possible on rural residents who depend on subsistence uses of the lands."198 Congress intended for federal agencies to incorporate a factor of safety into resource management decisions:

The committee intends the phrase "the conservation of healthy populations of fish and wildlife" to mean the maintenance of fish and wildlife resources and their habitats in a condition which assures stable and continuing natural populations and species mix of plants and animals in relation to their ecosystems, including recognition that rural residents engaged in subsistence uses may be a natural part of that ecosystem; minimize the likelihood of irreversible or long-term effects of such populations and species; and ensures maximum practicable diversity of options for the future. The greater the ignorance of resource parameters, particularly of the ability of a population or species to respond to changes in its ecosystem, the greater the safety factor must be.199

The Forest Service has failed to meet this standard for decades by disproportionately removing deer winter range. Most of the logging in southeast Alaska occurred on low-elevation, south facing slopes favored by deer. The DEIS identifies declines in deer habitat capability and admits that there will be long-term reductions in carrying capacity and long[shy]term population declines.200 These disclosures alone warrant maintain intact inventoried roadless areas to provide for rural subsistence uses. And the analysis needed to take the extra step of analyzing those reductions in areas with planned timber sales, and consider actual population trends.

There is a lack of high value winter deer range in the Petersburg and Wrangell Ranger Districts - whether on Mitkof, Kupreanof or Wrangell Island. Many of the proposed timber analysis areas abut past clearcuts where canopy closures are now or will soon be occurring. Most central southeast Alaska islands are already heavily fragmented and contain large portions of what is currently, or soon to be, unsuitable deer habitat due to canopy closure in the extensive created openings and second-growth stands.

198 16 U.S.C. [sect] 3112(1).

199 Senate Committee on Energy and Natural Resources, Alaska National Interest Lands Conservation Act, S.Rep. No. 413, 96th Cong., 1st Sess. 233 (1979), reprinted in 1979 U.S.C.C.A.N. 5070, 5177.

200 DEIS at 3-79, 3-95.

The Petersburg and Wrangell Ranger Districts disproportionately removed deer winter range for decades. According to a conservation assessment included in the TLMP planning record, most of the logging in these ranger districts occurred on low-elevation, south facing slopes favored by deer - for example, the southern portion of Mitkof Island.201 Timber companies have already removed half of all the large-tree old growth forest from Kupreanof and Mitkof islands.202 Nearly a quarter of the prime winter deer habitat in those two islands is gone.203 More than half of the winter deer habitat is in areas managed for timber.204 These losses warranted a fuller analysis and disclosure of the habitat features for deer within inventoried roadless areas on these islands. As shown by graphics prepared by the Alaska Department of Fish and Game, the disproportionate effect of past high-grading deer winter habitat and existing habitat loss is staggering in portions of these islands.

Had the Forest Service conducted an adequate location-specific analysis, the agency could have and should have produced a map showing where inventoried roadless areas provide remaining deer habitat on the landscape in its current condition:

201

https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/alaska/seak/era/cfm/Documents/PDFs/4.17_Kupreanof-Mitkof.pdf.

202 Id.

203 Id.

204 Id.

The Forest Service has also removed similarly disproportionate levels of large tree forest/winter deer habitat from Wrangell, Etolin and Zarembo islands.205 The recent Wrangell Island NEPA analysis indicated a loss of more than a third of deer winter habitat below 800 feet in elevation. Previous Forest Service analyses indicated lower deer numbers are lower on Wrangell Island than on surrounding islands based on browse indications, pellet density data and hunter harvest information. These low population numbers may reflect the significant loss of winter deer habitat in many Wrangell Island landscape units. Pending state timber projects have had or will have a significant impact on whatever high value winter deer range remains on the island. Indeed, an older Forest Service analysis, the Shady project EA, noted that "any additional loss of important deer habitat could reduce the ability of an already depressed population to recover."

Despite this historically high habitat loss, declining population trends and predation risks from wolves and black bears, the DEIS improperly minimizes adverse impacts to deer. For example, the Central Tongass Project DEIS acknowledges that the deer model results showing deer density already below the target of 18 deer/square mile in many project area Wildlife Analysis Areas with further reductions expected due to additional timber take.206 Then:

Timber harvest would decrease the estimated carrying capacity for deer over the long-term due to reductions in the amount of winter habitat capability. Within WAAs where timber harvest is planned under Alternatives 2 or 3, current deer habitat capability calculated using the deer model on all WAAs except WAAs 5012 and 5018 are below the 2016 Forest Plan guideline of 18 deer per square mile, and suggests the project would result in higher risk that there could be insufficient numbers of deer for sustainable wolf populations and human harvest.207

In other words, out of 13 Wildlife Analysis Areas recently analyzed, only two would theoretically support enough of deer to maintain wolf populations and human harvest. And because the Forest Service failed to look at local population trends, the DEIS ignores actual deer availability within the two WAAs that would meet the guideline - deer are extinct or nearly extinct on Kuiu Island. ADF&G pellet surveys from north Kuiu Island have historically been the lowest of any surveyed WAA in the project area.208 The status of deer populations on individual islands warrants detailed analysis in order to assess actual availability of the resource and to assess the true significance of inventoried roadless areas on specific islands. For example, northern Kuiu Island became a predator pit, combining high levels of predation with a population decimated by severe winters, accompanied by a period of intensive logging.

The following map, submitted during the administrative appeal process for the 2008 Kuiu Timber Sale, illustrates the level of existing deer winter habitat loss in that project area (seemaps, next page):

205

https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/alaska/seak/era/cfm/Documents/PDFs/4.18_Wrangell_Zarembo_Etolin.pdf.

206 Central Tongass Project DEIS at 3-149.

207 Id. at 3-141.

208 Central Tongass Project PR 832_0602 at 9.

35

Now there are no deer - unquestionably, a major impact.

Another interesting feature shown in the graphic is that there is north-facing deer winter habitat - a habitat quality the agency should have considered had the DEIS provided adequate site-specific analysis. For example, the Zarembo TAA is the entire northeast portion of the island, meaning that deer moving the hillside to the beach fringe necessarily use north facing habitat. But the DEIS restricts its definition of "high and moderately high value winter deer habitat" to only south-facing slopes and fails to distinguish between different forest stand qualities as deer habitat. As explained in wildlife expert Matt Kirchhoff's comments on the recent Prince of Wales Island timber project, the failure to identify habitat qualities for deer and separately consider actual deep snow habitat is a major flaw.

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Even in the absence of adequate habitat measurements and the omission of significant chunks of high value deer habitat, the information the Central Tongass Project DEIS clearly shows that maintaining intact inventoried roadless such as those on north Kupreanof Island are essential to providing some remaining refugia for deer:

High and moderately high value deer winter habitat would be most reduced by Alternative 2 in WAA 5136 (Portage Bay). Under Alternative 2 there would be a 35 percent reduction from the existing condition in this WAA, resulting 49 percent of this habitat remaining compared to the historic (1954) condition in this WAA. Based on professional opinion, a removal 35 percent of the existing amount of high and moderately high deer winter habitat in any particular WAA would be a

substantial change in a WAA's ability to sustain a healthy deer population through a severe winter. The high and moderately high value deer winter habitat remaining from the historic condition would also reach 49 percent in WAA 5132 (West Kupreanof) under Alternative 2.

In WAAs which have experienced long-lasting declines in the deer population in the past, such as WAA 2007 (Mitkof) and WAA 5138 (Tonka) high and moderately high

37

value deer winter habitat would also be further reduced. In WAA 2007, the

percentage remaining (from historic) would go from 70 percent currently remaining to 62 percent under Alternative 2. In WAA 5138, the percentage remaining would go from 71 percent currently remaining to 63 percent under Alternative 2. As noted there are no thresholds for what percentage of important deer winter habitat is required to prevent declines during severe winters, though it is known that the risk of severe winters would be increased....209

Game Management Unit 1B (mainland) populations exist in isolated pockets and have patchy distribution" with "relatively low deer density overall (due to typically high snow accumulation).210 Game Management Unit 3 island populations have fluctuated considerably, with population declines caused by severe winter weather made worse by reduced habitat capability caused by logging and predation by wolves and bears.211 A recent

period of severe winters (2006/2007) caused deer to concentrate on winter range, followed by high mortality due to malnutrition and predation.212 ADF&G has cautioned that population recovery has been slower than anticipated - likely because of predation from bears and wolves.213 Even worse, there are "unfavorable long-term changes in habitat conditions resulting from decades of clearcut logging."214 The DEIS acknowledges that: "... managers are still concerned that existing wolf and bear predation, as well as major habitat alterations in some WAAs are limiting the population from recovery. It is highly believed that a substantial die-off could result again in these GMUs with another severe winter.215

In sum, the Rulemaking DEIS needed to fully account for the effects of a series of above average and record snowfall winters that caused serious impacts to central southeast Alaska deer populations. Specifically, from 2006-2009, the central Alaska panhandle, including Game Management Unit 3, experienced 3 consecutive winters with well above average snowfall. In fact, snow depths in combination with habitat loss at least partly influenced the Alaska Board of Game's January 2013 decision to limit the deer hunting seasons and bag limits in some areas.216 As ADFG personnel explained, "maintaining adequate reserves of old growth will be important for maintaining deer numbers at higher levels once recovery of the deer population has occurred."217 The Forest Service must take reasonable steps to ensure not just viable, but harvestable levels of wildlife populations, in particular - for deer. The DEIS acknowledges periodic severe winter snowfalls anticipated, and that the greatest climate change concern for wildlife was weather extremes, but never takes the step of identifying where these impacts are likely to be most severe and where preserving Roadless Rule prohibitions on timber extraction and road construction would best buffer future risks.

209 Central Tongass Project DEIS at 3-76.

210 Exh. 29 (Lowell 2015).

211 Exh. 30 (Lowell 2015).

212 DEIS at 3-81.

213 Exh. 30 (Lowell 2015).

214 Id.

215 Central Tongass Project DEIS at 3-247.

216 KFSK. Board of Game shortens deer season near Petersburg. Joe Viechnicki. Jan. 15, 2013. https://www.kfsk.org/2013/01/15/board-of-game-shortens-deer-season-near-petersburg/

217 ADF&G. Division of Wildlife Conservation. Feasibility Assessment for Increasing Sustainable Harvest of Sitka Black-Tailed Deer in A Portion of Game Management Unit 3. October 2012.

C. Impacts to Alexander Archipelago Wolves: consider abundance and significance of all Tongass populations

Defenders' scoping comments requested that the Forest Service consider and disclose a reasonable, place-specific population estimates for southeast Alaska wolves. Many areas of Southeast Alaska where wolves historically were abundant have conditions similar to the Prince of Wales Archipelago, where suppression of the population to a very low level has been a critical concern in recent years. Extensive logging and road construction have similarly changed conditions for deer and wolves on Kuiu, Kupreanof, Mitkof, Zarembo, Revillagigedo, and Wrangell Islands. In conjunction with the Prince of Wales Archipelago, those islands sustain most of the wolf population in Southeast Alaska.218 Decline in sustainable predator-prey communities will occur throughout the most productive areas for deer and wolves in Southeast Alaska because those areas are correlated with the most productive forest stands selected for timber harvest.219

The DEIS improperly minimizes adverse impacts to wolves by using an overly broad scale of analysis and ignoring location specific impacts. It states that 38% of the range-wide population inhabits southeast Alaska

and population trends are largely unknown.220 It notes there is some population data available for Prince of Wales and surrounding islands that suggests an apparent decline of potentially 75 percent.221 This decline does not cause concern for the Forest Service, however, because there are lots of wolves in British Columbia, meaning that Prince of Wales Island is a mere 4 percent of the species range and hosts only 6 percent of the range-wide population.222 The Prince of Wales Island population may declined another 8 to 14 percent over the next three decades so that there would be gaps in species distribution on the island.223 The DEIS ignores Game Management Unit 3 (GMU3) wolf populations entirely. This rulemaking is about southeast Alaska, and it is arbitrary to minimize impacts to wolves by relying on populations in another country to minimize impacts.

The combination of lower deer populations and heavily roaded areas in close proximity to population centers can creates scenarios incentivizing and facilitating unsustainable harvests of wolves through pack depletion. The DEIS is deficient in considering impacts to wolves which only briefly mention the increased risks the rulemaking would cause to the population due to reduced deer habitat capability and road density. The discussion fails, for example, to analyze these risks in detail or to include any site-specific analysis of project area wolf population status or critical issues such as the extent to which the project could increase human-caused mortality. The DEIS anticipates localized increases in hunter access would be expected, but then relies on future road closures without ever considering the effectiveness of those mitigating measures, such as agency's record of actually doing decommissioning or storage or approach to enforcement.224

Again the absence of location-specific analysis is a significant flaw - after minimizing the importance of the Prince of Wales Island population, the DEIS then ignores the relevance of impacts to wolves on other islands entirely.

218 Person et al. 1996.

219 David Person Declaration on Big Thorne, 2015, at [para]13e].

220 DEIS at 3-82.

221 Id.

222 Id.

223 Id. at 3-105.

224 Id. at 3-99-100.

The Forest Plan recommends maintaining habitat sufficient to support 18 deer per square mile, and indicates that keeping total road densities between 0.7 to 1.0 miles per square mile may be necessary.226 Most of the Wrangell and Petersburg Ranger District WAAs already fail to meet these criteria, and only two of them would have long-term deer densities exceeding the Forest Plan standard - both on deer-depleted Kuiu Island.227 Road densities in all but two of the analyzed WAAs would exceed the standard, with heavily hunted areas such as Mitkof, Wrangell and Zarembo Islands realizing road densities of 1.38, 1.26 and 1.98 miles per square mile, respectively.228

The DEIS should have considered and disclosed a reasonable population estimates for central southeast Alaska wolves and break them down into the southern and northern GMU 3 islands complexes and then assess risks of pack depletion. ADF&G considers the wolves on the southern GMU 3 island complex (Etolin, Wrangell and Zarembo Islands) and the northern GMU 3 island complex (Kuiu, Kupreanof, Woewodski and Mitkof Islands) to be separate populations for management purposes.229 The agency does have GMU 3 wolf population estimates that rely on Dr. Person's Prince of Wales Island research and reflect average territory and pack size from similar habitat.230 Historical population estimates for the GMU 3 wolf population are between 125 and 235 wolves in 21 packs, based on the amount of suitable habitat below 1,800 feet in elevation.231 These estimates may high based on the actual availability of deer on these islands. In 2012 an ADF&G Division

of Wildlife Conservation white paper indicated that using the results from Dr. Person's Prince of Wales Island research were likely to over-estimate wolf populations in other areas:

225 Source: Person & Larson 2013. Developing a method to estimate abundance of wolves.

226 Forest Plan at 4-91.

227 Central Tongass Project DEIS at 3-143.

228 Id. at 3-141.

229 ADF&G 2012, IM Feasibility Assessment, Unit 3. All documents cited in this discussion about impact to wolves were submitted to repeatedly to multiple Tongass National Forest ranger districts and should be available for agency review in district files.

230 Id. at 5; Lowell, R.E. 2006. Unit 3 wolf management report. Pages 38-44 in P. Harper, editor. Wolf management report of survey and inventory activities 1 July 2002-30 June 2005. Alaska Department of Fish and Game. Dec. 2006; Lowell, R.E. 2009. Unit 3 wolf management report. Pages 41-48 in P. Harper, editor. Wolf management report of survey and inventory activities 1 July 2005-30 June 2008. Alaska Department of Fish and Game. Juneau, Alaska. 2009.

231 Id.

However, Person et al. (1996) derived the region-wide estimate based on a

calibration of wolf density in GMU 2, which represents some of the more productive habitat in Southeast Alaska with respect to deer, a primary prey of wolves. Also, the wolf estimate was based on habitat capability for deer, not actual deer population numbers. Consequently, the region-wide estimate of the 1990s may have been biased high.232

Because "[w]olf populations are closely tied to populations of deer," Dr. Person has stated that "[i]f deer populations decline substantially, wolf populations are very likely to decline eventually because of a reduced prey base."233 For this reason, it is important to recognize that actual deer population numbers are extremely low in portions of GMU 3. Thus, it is unclear how many wolves inhabit the project area, but the numbers may be small enough such that this project could result in local extirpations.

The DEIS oversimplifies a very simple issue by merely quantifying deer densities and road densities. The DEIS needed to identify areas with existing levels of wolf take or disclose quantifiable criteria for unsustainable take levels that may result major impacts to the species such as pack depletion. Many areas in GMU 3 share significant similarities with areas on Prince of Wales Island identified as having high risk of chronic unsustainable harvests - areas with population centers and road connections that facilitate higher take levels.234 The Central Tongass Project will likely incentivize higher wolf take levels by increasing competition between humans for smaller numbers of deer.235

In sum, as with the analysis of deer, the DEIS fails to provide sufficient site-specific discussion of baseline information about project area wolves and impact to them to meet the Forest Service's analytical responsibilities under NEPA and satisfy the wildlife viability provisions under NFMA and the Forest Plan.

D. Comments on analysis of impacts to Queen Charlotte Goshawks

There are significant uncertainties about the current status of goshawk populations and the adequacy of nest protection measures. The Fish and Wildlife Service's 2007 Status Review explained that Queen Charlotte goshawks in southeast Alaska are highly vulnerable to additional stresses - because of the low population level, "low survival or reproductive rates could not be sustained long before viability of the subspecies would be at risk." Population levels are unknown; according to the Status Review, southeast Alaska may support just a

few to several hundred breeding pairs. These findings and other results from risk assessments and scientific studies demonstrate the risks of continued and serious population decline associated with further loss of habitat caused by old-growth logging. Queen Charlotte Goshawks will likely face at the very least additional localized extirpations on Prince of Wales Island. Many of the few remaining active nest sites and foraging areas are in southeast Alaskan old growth forest stands and will be at direct or indirect risk due to any logging in Roadless acres.236

232 ADF&G, Division of Wildlife Conservation. 2012. Status of Wolves in Southeast Alaska. October 2012.

233 Declaration of Dr. Dave Person [para]23.

234 Person & Logan 2012.

235 Person, D. & T. Brinkman. 2013. Succession Debt and Roads.

236 Sources for our discussion of impacts to the Queen Charlotte Goshawk include the 2007 U.S. Fish and Wildlife Status Review, 1996 Forest Service Conservation Assessment, Appendix N to the 1997 Tongass Land Management Plan, and numerous other studies - Smith, W.P. 2013. Spatially explicit analysis of contributions of a regional conservation strategy toward sustaining northern goshawk habitat; Mclaren, E.L. et al. 2005. Northern Goshawk (Accipiter gentilis laingi) post-fledgling areas on

The Forest Service's 1996 conservation assessment found that a "broad scale of analysis fails to consider distribution of habitat throughout southeast Alaska." Subsequent studies also have verified that it is unreasonable to rely on habitat measurements outside of known nests. Based on these findings, we question the approach of measuring impacts in terms of total and high-volume productive old-growth across the Forest.237 This approach masks degradation to specific goshawk foraging habitat caused by logging in the vicinity of the nests. A site-specific analysis is possible and will generate a more accurate evaluation of impacts and viability risks.

The DEIS acknowledges questions about Forest Plan protections for Queen Charlotte goshawks but then relies on them to inform a conclusion that Roadless Rule exemption alternatives would only have localized effects by limiting the availability of nest sites.238

There are a number of historical known goshawk nests in roadless areas in southeast Alaska. The Forest Service needed to review readily available survey data and historical observations to inform the analysis of the value of roadless areas for this species. There are very few Queen Charlotte Goshawks. Individual impacts, such as impact to individual QCGs, can have more significant impacts in relation to other impacts on overall species viability - across the Alexander Archipelago:

Cumulative impacts of multiple projects can be significant in different ways. The most obvious way is that the greater total magnitude of the environmental effects - such as the number of acres affected or the total amount of sediment to be added to streams within a watershed- may demonstrate by itself that the environmental impact may be significant. Sometimes the total impact from a set of actions may be greater than the sum of the parts. For example, the addition of a small amount of sediment to a creek may have only a limited impact on salmon survival, or perhaps no impact at all. But the addition of a small amount here, a small amount here, and still more at another point could add up to something with a much greater impact, until there comes a point where even a marginal increase will mean that no salmon will survive.239

The Ninth Circuit's explanation of sediment impacts to salmon has a direct bearing on how the DEIS should analyze risks to individual Queen Charlotte Goshawks in the project area. The cumulative effects analysis must explain how the proposed Rulemaking exemption, in combination with other past, planned and other ongoing projects threatens QCG viability in light of the low population of the species, and the importance of individual breeding pairs in the project area to the broader persistence of the species.

The DEIS needed to review the Forest Service's 1996 Conservation Assessment which included a risk assessment that identified areas with harvest rates exceeding percent by 1995 or 33% by 2055 as presenting "a higher risk of not providing the amount and distribution of habitat necessary to sustain goshawks." Where do Roadless area VCUs fit within these risk thresholds? NEPA analysis must address and answer these questions. It

Vancouver Island, British Columbia. J. Raptor Res. 39(3): 253-263; Flatten, C., K. Titus, and R. Lowell, 2001. Northern goshawk population monitoring, population ecology and diet on the Tongass National Forest. Alaska Dept. of Fish and Game, Juneau, Alaska; Doyle 2005.

237 See Native Ecosystems Council v. U.S. Forest Serv . 428 F.3d 1233, 1250 (9th Cir. 2005)(the Forest Service may "meet the species viability requirements by preserving habitat, but only where both the Forest Service's knowledge of what quality and quantity of habitat is necessary to support the species and the Forest Service's method for measuring the existing amount of that habitat are reasonably reliable and accurate"). The choice of analysis scale must represent a reasoned decision and cannot be arbitrary. Pac. Coast Fed. Fishermen's Ass'ns v. NMFS, 265 F.3d 1028, 1037-38 (9th Cir. 2001).

238 DEIS at 3-92-93.

239 Klamath-Siskiyou Wildlands Center v. BLM, 387 F.3d 989, 994 (9th Cir. 2004).

also needed to review the locations of any known current or historical nests and any other observations of goshawk habitat use, including information about foraging habitat.

Again, the absence of site-specific analysis (literally, nest-site-specific analysis) is a serious flaw with the DEIS. There only 44 probable nesting territories in the Wrangell and Petersburg Ranger Districts, and yet the Forest Service refuses to analyze whether the nest sites are within or adjacent to inventoried roadless areas. It is a simple task: will exemption alternatives cause clearcutting within a goshawk home range in the vicinity of known historical nest sites?

There are significant uncertainties about the current status of goshawk populations and the adequacy of nest protection measures. The Fish and Wildlife Service's 2007 Status Review explained that Queen Charlotte goshawks in southeast Alaska are highly vulnerable to additional stresses - because of the low population level, "low survival or reproductive rates could not be sustained long before viability of the subspecies would be at risk." Yet this DEIS - without any site-specific analysis whatsoever, concludes that the project is a "no worries" thing for the species as a whole with just a few adverse impacts to individuals and habitat.

Population levels are unknown; according to the Status Review, southeast Alaska may support just a few to several hundred breeding pairs. These findings and other results from risk assessments and scientific studies demonstrate the risks of continued and serious population decline associated with further loss of habitat caused by old-growth logging. Queen Charlotte Goshawks will likely face at the very least additional localized extirpations on Prince of Wales Island pending implementation of the Prince of Wales project.

The DEIS must review the Forest Service's 1996 Conservation Assessment which included a risk assessment that identified areas with harvest rates exceeding 13 percent by 1995 or 33% by 2055 as presenting "a higher risk of not providing the amount and distribution of habitat necessary to sustain goshawks." Where do inventoried roadless areas provide habitat within VCUs meeting these risk thresholds? The DEIS fails to address and answer these questions.

Survey efforts during the 1990s identified only 62 known nest areas, concentrated in significant part (27/62, or 44%) in the central portion of the Alexander Archipelago (Stikine District) - in other words, nearly half of the historical Queen Charlotte Goshawk nest sites are within the jurisdiction of the Petersburg and Wrangell Ranger Districts. By 2005, experts had identified only 72 unique nest areas, with most of them reportedly inactive, and new nests were not being found. The DEIS provides no information about the locations of any

known current or historical nests or any other observations of goshawk habitat use, including information about foraging habitat.

There have been six historic known QCG nests on Mitkof Island. All but one of the Mitkof Island watersheds (VCUs) exceed the 1996 Conservation Assessment risk threshold, particularly VCUs 4500, 4520 and 4530, which contain or are immediately adjacent to the few remaining goshawk nests on the island. The Forest Service's most recent (2014) survey identified nests or activity in only three areas. This means that the only information available shows that there is a substantial risk that the logging in managed lands is having the effect predicted by scientific experts as other historic nests may have been abandoned. There are substantial questions about impacts to the few remaining breeding pairs, particularly in terms of their home ranges. The Forest Service's most recent effort to degrade Mitkof Island with additional old-growth logging would have all prescribed additional clearcuts in the immediate vicinity of Queen Charlotte Goshawk nest sites. There has been a historical scientific concern regarding significant risks associated with further logging in this and other watersheds on the island:

43

The [Overlook] project is well within the home range of the Queen Charlotte goshawk nest site known as the "Dry Straights" nesting area. The lack of a nest within the boundaries of this project area does not preclude this project from impacts to the existing adult pair by the potential alteration of important alternate nesting sites and existing highly suitable foraging habitat in the project area. Nesting home ranges for adult goshawks on this Forest range from 9,600 to 10,500 acres, winter home ranges averaging over 29,000 acres making the home range of this goshawk pair well within the boundaries of the project area.

The Dry Straights nesting area is one of two know active goshawk nesting areas located on Mitkof Island this year. Impacts to important habitat should be considered in depth because many of the units are located in highly suitable goshawk habitat, located in low elevation high volume POG.

VCU 450 is one of five VCUs where risk analysis conducted as part of the Forest Plan FEIS suggests the reduction of POG may present an elevated risk of not maintain habitat in this VCU to sustain goshawks. (Appendix to "Appendix N" of the FEIS TLMP REVISION, 1997). This predicted elevated risk conducted as part of the analysis of the Forest Plan and specific to this VCU should be disclosed ....

Similarly, previous Forest Service analyses such as the 1998 Wrangell Island Report indicated that there were Queen Charlotte Goshawk observations on Wrangell Island. Our review of Wrangell Ranger District EAs and other analyses raise serious concerns about breeding and nesting failures on the island. The DEIS ignored our request for a discussion of possible reasons for these failures. It does not specify how many surveys have been conducted or describe the survey methodologies. For example, there was an active nest found in the Shady project area, with a failed nesting attempt in 2001, and no successful nesting activity since that time despite goshawk observations in the project area (surveys done 2000 - 2003).

The Navy Timber Sale Project FEIS identified 7 known goshawk nests in WAA 1901 on Etolin Island. Expert comments in the record have indicated significant risks associated with further logging in the vicinity of the nests. The 2008 TLMP planning record shows that by 2005 the total harvest of productive old-growth in VCUs 4640 (the Anita Bay pinch-point) and 4670 - exceeded Forest Service risk thresholds. Only two other biogeographic provinces considered in the risk assessment had higher short-term levels of old-growth removals and higher long-term old-growth removals than the central Tongass biogeographic provinces.

In sum, the DEIS cannot provide an adequate NEPA analysis of impacts to Queen Charlotte goshawks in the absence of location specific information showing where inventoried roadless areas provide habitat features in areas of known Queen Charlotte goshawk nest sites and foraging habitat.

V. In Conclusion

Roadless Rule exemption alternatives would do irreparable harm to Tongass wildlands including their fish and wildlife populations, Alaskans who depend on intact Tongass ecosystems for their livelihoods, the tourism and recreation sectors, and all American taxpayers. Nearly two decades ago, the Forest Service determined that

"the long-term ecological benefits to the nation of conserving [Tongass National Forest] inventoried roadless areas outweigh the potential economic loss to [southeast Alaska] communities."240

Now the agency would reverse course on the importance of long-term ecological benefits at a time of significant local deer deficits and plummeting pink populations, among other

240 66 Fed. Reg. at 3255.

resource concerns. Changing environmental conditions heighten the significance of the region's inventoried roadless areas.

Another major change occurring over the past two decades is that the region has fully transitioned to an economy dependent on fish, wildlife, scenery and recreation rather than timber. The no-action alternative is the only alternative that will prevent economic loss to the region and respond to the overwhelming opposition to exemption alternatives from hundreds of local economic experts - regional business owners. We urge you to drop this reckless rulemaking and this insufficient NEPA process, and instead direct the Alaska Region and Tongass National Forest to cease planning on all pending timber sales pending a full audit of agency costs and timber maladministration and to request that Congress redirect all timber program funding to fixing fish passage problems.

Sincerely,

[signature]

Larry Edwards, president
Alaska Rainforest Defenders

907-752-7557

Mailed separately: The cited exhibits, on a thumb drive.

[Position]

[Exhibit 1 attachment contains a contact record for June 13th, 2018]

[Exhibit 2 attachment contains meeting notes from Mitkof Island Timber Sale EIS Petersburg Ranger District Conference Room October 10, 2017]

[Exhibit 3 attachment contains a report titled "Stealing the Tongass: Playing by Alaska Rules in the U.S. Forest Service"]

[Exhibit 4 attachment contains Tonka Timber Sale DXPRE Post Harvest Monitoring Results]

[Exhibit 5 attachment contains Washington Office Activity Review of Timber Sale Administration, Sale Preparation, Stewardship Contracting, NEPA and Timber Theft Prevention Region 10]

[Exhibit 6 attachment contains a letter from Public Employees for Environmental Responsibility to Inspector General Phyllis Fong to request the office's review of recent timbers sales from the Tongass]

[Exhibit 7 attachment contains a memo from the USFS titled "Results of the Big Thorne IRTC Supplemental Review"]

[Exhibit 8 attachment contains a memo from the USFS titled "Correction of Material Error in Big Thorne Stewardship Contract Haul Cost Appraisal"]

[Exhibit 9 attachment contains a letter from Public Employees for Environmental Responsibility to the Inspector General requesting the USDA to investigate illegal actions, fraud, and abuse occurring in the timber program of the Tongass.]

[Exhibit 10 attachment contains a report titled "Cutting Our Losses: 20 Years of Money-Losing Timber Sales in the Tongass"]

[Exhibit 11 attachment contains a research paper titled "The Tongass National Forest and the Transition Framework: A New Path Forward?"]

[Exhibit 12 attachment contains a declaration of Joseph R. Mehrkens to the USDA]

[Exhibit 13 attachment contains a report titled "Road Wrecked: Why the $10 Billion Forest Service Road Maintenance Backlog is Bad for Taxpayers"]

[Exhibit 14 attachment contains a report titled "Alaska's Changing Environment: Documenting Alaska's physical and biological changes through observations"]

[Exhibit 15 attachment contains a report titled "Tongass Road Condition Survey Report"]

[Exhibit 16 attachment contains a prepared testimony of Autumn Hanna, Vice President of Taxpayers for Common Sense]

[Exhibit 17 attachment contains a presentation titled "Wild Salmon in a Warming World: Do we have the tools we need to manage our fisheries during rapid climate change?"]

[Exhibit 18 attachment contains a report titled "Quantifying the Monetary Value of Alaska National Forests to Commercial Pacific Salmon Fisheries"]

[Exhibit 19 attachment contains a map titled "Planned Replacements"]

[Exhibit 20 attachment contains a report titled "Climate Change and Alaska Fisheries"]

[Exhibit 21 attachment contains a report titled "A Vanishing Heritage: The Loss of Ancient Red Cedar from Canada's Rainforests"]

[Exhibit 22 attachment contains a preliminary list of activities for proposal and review in 2020 for the Central Tongass Project]

[Exhibit 23 attachment contains a petition titled "Petition to List Yellow-Cedar Callitropsis Nootkatensis, under the Endangered Species Act"]

[Exhibit 24 attachment contains a journal article titled "From canopy to seed: Loss of snow drives directional changes in forest composition"]

[Exhibit 25 attachment contains preliminary data on 2019 Alaska Commercial Salmon Harvest - Ex-vessel Values]

[Exhibit 27 attachment contains a report titled "Tongass Fish and Wildlife Resource Assessment 1998"]

[Exhibit 28 attachment contains an advisory announcement by the Alaska Department of Fish and Game titled "2020 NOAA Fisheries-Alaska Department of Fish and Game Southeast Alaska Pink Salmon Harvest Forecast"]

[Exhibit 29 attachment contains a species management report by Alaska Department of Fish and Game titled "Chapter 2: Deer Management Report"]

[Exhibit 30 attachment contains a species management report by Alaska Department of Fish and Game titled "Chapter 5: Deer Management Report"]

[Exhibit 31 attachment contains a species management report by Alaska Department of Fish and Game titled "Chapter 4: Deer Management Report"]

[Exhibit 32 attachment (same attachment as Exhibit 31) contains a species management report by Alaska Department of Fish and Game titled "Chapter 4: Deer Management Report]

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Larry
Last name: Edwards
Organization: LEEC
Title:
Comments:
From: Larry Edwards (Sitka, Ak)

To:

Ken Tu, Interdisciplinary Team Leader

Alaska Roadless Rule

USDA Forest Service, Alaska Region

Ecosystem Planning and Budget Staff

Juneau, Alaska

Dear Mr. Tu;

My personal comments on the "Rulemaking for Alaska Roadless Areas" are attached.

Sincerely,

Larry Edwards

The following text was copy/pasted from an attached letter. The system cannot display the formatting, graphics, or tables from the attached original.

Larry T. Edwards

Sitka, Ak, 99835

Ken Tu, Interdisciplinary Team Leader

Alaska Roadless Rule

USDA Forest Service, Alaska Region

Ecosystem Planning and Budget Staff

P.O. Box 21628

Juneau, Alaska 99802-1628

Via: https://cara.ecosystem-management.org/Public//CommentInput?Project=54511

Subj: Comments on the "Rulemaking for Alaska Roadless Areas" DEIS, and proposed Rule Dear Mr. Tu;

I am a forty-three year resident of Sitka, and these are my personal comments. To be clear, I request that the No Action alternative be selected, or - better yet - that this rulemaking process be summarily terminated without a decision being made. I request this for reasons that follow, as well as for more detailed reasons given in two other comment submissions, by Alaska Rainforest Defenders and Earthjustice.

Concerning Analysis and Disclosure of Impacts

Forest Service officials at recent public meetings around Southeast and the DEIS both suggest that the action alternatives will merely shift where logging will occur, but will not change the impact of the Tongass timber program. That is false; the action alternatives will shift logging to areas of old-growth instead of second-growth. The roadless forests are primarily old-growth. The additional loss of old-growth forest will diminish forest ecosystem integrity and populations of oldgrowth-dependent mammals, and will harm subsistence hunters. None of this was adequately covered in the DEIS.

Focusing logging in whole or in part on roadless areas will result in more miles of road being built than otherwise, per amount of timber volume. Additional road mileage is detrimental to aquatic systems' water quality and habitat, and all that depends on the productivity of those systems ? the fish, as well as subsistence-, commercial- and sport-fishing activities. None of this was adequately covered in the DEIS.

Logging in roadless areas, beyond what is already allowed by the Roadless Rule, will also impact the region's tourism industry. Tourism and commercial fishing are the region's economic engines, yet the action alternatives' economic impacts on them were not adequately covered in the DEIS.

The region's timber industry, which collectively operates on both federal and non-federal lands, is now almost entirely focused on the southern end of the region, below Frederick Sound. The cumulative impacts from nearly seven decades of logging in this part of the region and of the Tongass National Forest are immense. The DEIS did not adequately disclose those impacts or the additions to them that the action alternatives would cause.

Concerning the Rulemaking Process

Beyond the harm any of the action alternatives will cause to ecosystem integrity, to resources, and to recreational and non-timber resource uses, this entire rulemaking process - from its very beginning with the State's petition - is fundamentally baseless and corrupt. For details on corruption, see sections I thru III of Alaska Rainforest Defenders (23 Oct 2019) scoping comments.

But briefly, false pretenses underlaid Governor Walker's petition for rulemaking, which initiated this rulemaking process. The petition was every bit about logging, not the other reasons given instead. If those other (non-timber) reasons were true, the Chugach National Forest (which has no timber industry) would also have been fully included. Radical industrialists from the region's timber industry have been openly agitating at every opportunity for excluding the Tongass from the Roadless Rule, ever since the rule was adopted. Other reasons given by Roadless Rule opponents (access for mines, hydropower, community inter-connections, etc.) are fabrications - all 58 requests for building access across roadless areas have been timely granted.

Because Walker listened only to proponents (including timber- and other development-interests, including the Alaska congressional delegation) of eliminating the Roadless Rule, the State of Alaska did not conduct public scoping before submitting its petition for rulemaking. Public opinion and the spirit of democracy were irrelevant to Gov. Walker. Public scoping was done (jointly with the Forest Service) only after the petition was submitted and the rulemaking process had commenced.

The blowback from the State's ill-founded move that was immense - even in the timber industry's strongholds, Ketchikan and on Prince of Wales Island - during the region-wide public scoping meetings last year. And the blowback was just as immense at the DEIS openhouses and subsistence hearings conducted by the Forest Service this fall.

Conclusion and Requests

My above personal comments are general and concise. Speaking for me on the details and specifics are the comments being submitted by Alaska Rainforest Defenders and by Earthjustice.

Please stop wasting your time and the public's funds on this senseless and destructive move toward any of the action alternatives. Please --- end this rulemaking travesty, right now! Just end it, with no decision issued. The Forest Service's work-time and the funds that would be used to complete this rulemaking are most needed to plan, manage and accomplish the repair of red pipes on our streams in logged-off areas throughout the Tongass, and for fighting wildfires in the Lower 48. But if you do proceed, I ask the Decisionmaker to select the No-Action alternative.

Sincerely,

[signature]

Larry Edwards

[Position]

TAXPAYERS for COMMON SENSE

TIMBER REPORT

October 2019

Cutting Our Losses: 20 Years of Money-Losing Timber Sales in the Tongass

Clearcut timber harvest in the Tongass National Forest on Prince of Wales Island, AK. Photo used with permission.

The U.S. Forest Service (USFS) within the Department of Agriculture manages 193 million acres of public forests and grasslands collectively known as the National Forest System. The Tongass National Forest (Tongass) in southeast Alaska is the largest national forest at 16.8 million acres, roughly the size of West Virginia. Every year, the USFS prepares and conducts sales for the rights to harvest millions of board feet of timber from the Tongass. These sales have historically generated less revenue than the USFS spends to administer them, resulting in large net losses for U.S. taxpayers. New budget data reveal that the USFS has continued to lose millions of dollars on Tongass timber sales in recent years.

- **In total, the USFS has lost approximately $600 million over the last twenty years or $30 million per year on average.**
- **USFS could end up losing more than $180 million in the Tongass over the next four years.**

USFS Timber Sales—Background

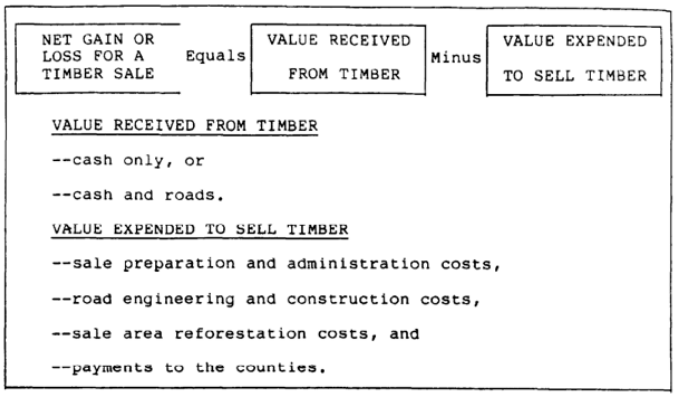
Commercial logging accounts for the vast majority of timber harvest in the Tongass National Forest. To provide for commercial logging consistent with the Tongass Land Management Plan, the USFS prepares and administers commercial timber sales through a complicated process known as the "**Gate System**." As part of this process, the USFS spends years selecting suitable timber stands, thinning them when necessary, analyzing the environmental effects of various harvest options, calculating the sale's financial efficiency, advertising the sale, and evaluating bids from private logging companies. For some sales, the USFS also pays to construct or reconstruct roads to facilitate harvest of the chosen timber stands.

After a successful sale, the winning logging company will harvest the timber and transport it to a sawmill, or when allowed, prepare it

for export. When the value of the cut timber is determined at the sawmill, the logging company pays the USFS the set amount per board foot based on the determined value agreed to during the timber sale. The USFS deposits these receipts and then manages the reforestation and recovery of the affected areas in the Tongass.

Sizing Up Tongass Timber Sales

Whether a timber sale generates a net gain or loss to taxpayers depends on the how much the USFS spent to prepare and administer it, and the amount of revenue collected when the timber is harvested. For decades, the USFS has conducted timber sales in the Tongass that consistently generate huge losses for taxpayers. Various independent analyses have attempted to quantify these losses, but no such evaluation has been conducted in recent years. Newly released budget data indicate that the USFS continues to lose millions of dollars every year on Tongass timber sales.



Source: Government Accountability Office **RCED-84-96**

Net Losses

Over the last 20 fiscal years (FY1999-2018), the USFS spent $632 million in connection with its timber sale program in the Tongass and collected $33.8 million in timber sale receipts, resulting in a net loss of **$598.2 million**, in 2018 dollars. That is, the USFS lost $29.9 million per year, on average from FY1999 to FY2018. Or put another way, Tongass timber sale revenues covered just 5.4 percent of timber sale costs. (See table "Tongass Timber Program: Receipts, Expenses, Losses (FY1999-2018)" for detail.)

Timber sale expenses and revenues fluctuate significantly from one year to the next. A comparison of the three-year moving averages of timber sale losses indicates that losses have decreased substantially over the 20-year period. The inflation-adjusted average loss for FY16-18 of $17.9 million is less than half the average for FY99-01, $38.2 million. Rather than some gain in efficiency, the decrease in losses reflects the lower volume of timber being sold in recent years.

The rate of losses per amount of timber sold has not decreased. During the 20-year period from FY 1999 to 2018, the USFS **reported selling** 977 million board feet of timber in the Tongass. Overall, the USFS lost approximately $612 for every thousand board feet (mbf) of timber it sold. Further, the three-year moving average for losses per mbf more than doubled within the last decade, indicating that the financial efficiency of Tongass timber sales has declined in recent years.

Under **current plans**, the USFS will offer more than 290 million board feet in several timber sales in the Tongass over the next four years. If spending to prepare those sales and the revenue generated from them match the long-run average, the USFS could end up losing more than $180 million.

Receipts Analysis

The USFS reports its "**All Service Receipts**" by national forest, region, and fiscal year to provide transparency into the distribution of receipts to states and localities directed by Congress. Total revenue generated by the USFS timber program includes receipts from commercial timber sales, salvage sales, and amounts deposited into certain trust funds.

Over 20 fiscal years (1999-2018), the USFS has collected a total of $33.8 million from timber sales in the Tongass, after adjusting for inflation. On average, the USFS collected $1.7 million per year in that period, though over the last ten years, the average has dropped to $1.2 million per year.

The timber sales receipts included in the above total are deposited and reported in three separate accounts: National Forest Fund, Knutson-Vandenberg Fund, and Salvage Sales Fund. In short, the Knutson-Vandenberg Fund receives a percentage of timber receipts and uses them to fund timber sale area improvement (reforestation) and some regional cooperative work. The Salvage Sales Fund receives the receipts from sales of

Tongass trees. Source: Joseph, via Flickr Creative Commons

"salvage" timber—timber that is dead, damaged, downed by other natural means, or otherwise in need of clearing—and uses its funds to prepare and administer future salvage sales.

Outlays Analysis

Over the 20 fiscal years (1999-2018), the USFS spent $632 million, adjusted for inflation, in association with timber sales in the Tongass. On average, the USFS spent $31.6 million per year, but annual expenses have declined steadily over the two decades. In that period, the inflation-adjusted, three-year moving average of Tongass timber expenses dropped by more than half from $45.1 million to $18.6 million.

Of the $632 million, $334 million was spent from the "Forest Products" account, the primary fund for preparing and administering timber sales. For road construction and maintenance, the USFS spent $221 million. Expenditures from the Knutson-Vandenberg Fund, Salvage Sales Fund, and Reforestation Trust Fund make up the remaining $38 million.

Methodology Note — The USFS does not report how much it spends to prepare and administer timber sales individually or collectively. As a result, estimates of USFS timber sale losses often vary due to different determinations of which expenses are appropriately categorized as timber sale outlays.

In this analysis, outlays associated with timber sales represent the total of six budget line items. These six budget accounts fund three types of USFS activity: timber sale preparation, reforestation, and road building. The latter is included because the vast majority of roads in the Tongass have been built and maintained to facilitate timber harvest.[1] Other expenses that are necessary for timber sales but primarily serve other Forest Service missions, such as forest inventory and monitoring activities, were not included.

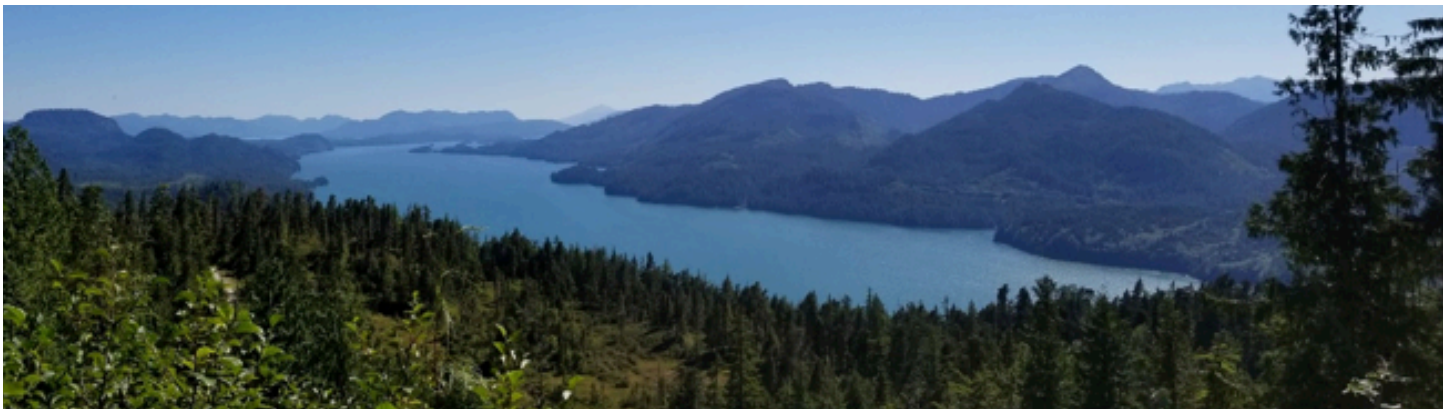
Information on USFS budget allocations and expenses in the Tongass is generally unavailable to the public. The USFS provided Tongass budget data to Taxpayers for Common Sense in response to several formal and informal information requests dating back to 2004.

Comparison and Discussion

The USFS' administration of timber sales throughout the National Forest System, and in the Tongass specifically, has been scrutinized for decades. The Government Accountability Office (GAO), an independent congressional watchdog, has published dozens of reports assessing various aspects of the USFS timber program including harvest levels, contract bidding, road construction, cost accounting systems, receipt distribution, reforestation, data deficiencies, and below-cost sales, among others.

In one of its first reports on the economics of USFS timber sales in 1984, the GAO found that 27 percent of sales in fiscal year (FY) 1981 and 42 percent of sales in FY 1982 were below-cost.[2] After increased Congressional scrutiny in the 1980s, GAO helped the USFS design a new accounting system to address severe deficiencies in the agency's collection and reporting of timber sale data—the Timber Sale Program Information Reporting System (TSPIRS).[3]

[1] U.S. Forest Service, *Tongass National Forest—Land and Resource Management Plan Amendment*. Final Environmental Impact Statement, Vol. II—Appendix C, Table C-1.
[2] U.S. General Accounting Office (now, Government Accountability Office) - GAO. RCED-84-96, "Congress Needs Better Information on Forest Service's Below-Cost Timber Sales." June 28, 1984. **https://www.gao.gov/products/RCED-84-96**
[3] U.S. GAO. AFMD-87-33, "TIMBER PROGRAM: A Cost Accounting System Design for Timber Sales in National Forests." April 21, 1987. **https://www.gao.gov/products/AFMD-87-33**



Carroll Inlet in the Tongass National Forest. Source: Wikimedia Commons

In 1988, the GAO reported that USFS timber sales had lost $22.1 million in FY1986,[4] roughly equivalent to $50.6 million in 2018 dollars. As its most recent estimate, the GAO reported in 2016 that Tongass timber sales had lost $11.4 million per year on average during the period FY2005-2014. The agency was careful to note, however, that its estimate excluded USFS roadbuilding costs.[5]

Like the GAO calculations in previous reports, this analysis represents a basic accounting of the Tongass timber program on a *cash* basis—reflecting what outlays are paid and receipts are collected in a given year. The profitability of a specific timber sale is more appropriately measured on an *accrual* basis—where the amounts spent to prepare and administer a timber sale over many years are matched against the receipts collected when the sold timber is eventually harvested. However, the USFS does not publicly release its financial data for each timber sale, making such analysis impossible.

Conducting a cash-flow analysis of the timber program instead can have significant limitations. Comparing the receipts collected from previous timber sales and spending for future sales in any one year can provide a skewed indication of timber sale profitability. Over a longer period, however, discrepancies between when expenses and receipts are tallied diminish, and a cash-basis accounting more accurately estimates the overall financial return from timber sales. By looking at timber receipts and program expenses over 20 years, the approach adopted in this report not only mirrors most previous attempts to quantify Tongass timber losses, but also provides a more accurate assessment of overall timber sale performance.

Lastly, given current efforts to exempt the Tongass National Forest from the 2001 National Roadless Area Conservation Rule ("Roadless Rule"),[6] roadbuilding costs will likely increase. The USFS constructs or reconditions roads to provide harvesters access to timber stands it sells. Covering roadbuilding costs improves the economics of a timber sale for logging companies, but also significantly increases the total costs of the USFS timber program. In fact, USFS spending on roads in the Tongass made up more than 40 percent of all timber sale expenses from FY1999 to FY2018.

The 2001 Roadless Rule prohibits new road construction and reconstruction in inventoried roadless areas with national forests, including 9.2 million acres in the Tongass. Exempting those acres from the rule in the future would allow the USFS to expand timber sales to new areas, which would require comparatively more road construction for timber access. This would only drive up USFS expenses and deepen taxpayer losses from Tongass timber sales.

[4] U.S. GAO. RCED-88-54, "TONGASS NATIONAL FOREST: Timber Provision of the Alaska Lands Act Needs Clarification." April 11, 1988. **https://www.gao.gov/products/RCED-88-54**

[5] U.S. GAO. GAO-16-456, "TONGASS NATIONAL FOREST: Forest Service's Actions Related to Its Planned Timber Program Transition." April 25, 2016. **https://www.gao.gov/products/GAO-16-456**
By excluding roadbuilding costs in its 2016 estimate, the GAO significantly understated the losses associated with Tongass timber sales.

[6] See TCS Comments to the USFS during the Roadless Rule Scoping Period. Available at: **https://www.taxpayer.net/energy-natural-resources/tcs-submits-comments-to-the-us-forest-service-on-its-roadless-rule-scoping/**

Tongass Timber Program: Receipts, Expenses, Losses (FY1999-2018)

($ in millions)

FISCAL YEAR	TIMBER VOLUME SOLD (MBF)	TIMBER RECEIPTS	TIMBER EXPENSES	NET RECEIPTS	TIMBER RECEIPTS: ($2018)	TIMBER EXPENSES ($2018)	NET RECEIPTS ($2018)
2018	9,211	$0.4	$18.1	**-$17.7**	$0.42	$19.07	**-$17.65**
2017	20,808	$1.0	$17.8	**-$16.7**	$1.04	$18.20	**-$17.16**
2016	13,535	$0.5	$18.5	**-$18.1**	$0.47	$19.40	**-$18.92**
2015	22,625	$0.3	$19.7	**-$19.5**	$0.29	$20.91	**-$20.62**
2014	105,523	$0.6	$22.4	**-$21.8**	$0.6	$23.8	**-$23.1**
2013	15,866	$0.6	$19.7	**-$19.1**	$0.6	$21.2	**-$20.6**
2012	52,483	$1.9	$21.5	**-$19.6**	$2.0	$23.5	**-$21.5**
2011	44,190	$3.3	$18.0	**-$14.8**	$3.7	$20.1	**-$16.5**
2010	45,632	$1.9	$22.3	**-$20.4**	$2.2	$25.7	**-$23.5**
2009	22,670	$0.6	$26.4	**-$25.7**	$0.7	$30.8	**-$30.1**
2008	5,351	$0.4	$23.5	**-$23.1**	$0.5	$27.4	**-$27.0**
2007	30,392	$0.3	$25.1	**-$24.8**	$0.3	$30.4	**-$30.1**
2006	85,007	$0.8	$27.9	**-$27.1**	$1.0	$34.8	**-$33.8**
2005	65,075	$0.4	$34.4	**-$34.0**	$0.5	$44.2	**-$43.7**
2004	87,072	**-$4.3**	$36.9	**-$41.2**	**-$5.7**	$49.1	**-$54.8**
2003	36,489	$2.0	$31.0	**-$29.0**	$2.7	$42.3	**-$39.6**
2002	24,372	$1.3	$33.4	**-$32.2**	$1.8	$46.7	**-$44.9**
2001	49,592	$1.8	$35.0	**-$33.2**	$2.6	$49.6	**-$47.1**
2000	170,329	$6.9	$23.8	**-$16.9**	$10.0	$34.7	**-$24.7**
1999	61,426	$5.3	$33.8	**-$28.5**	$8.0	$51.0	**-$42.9**
2009-2018 TOTAL	**362,544**	**$11.0**	**$204.4**	**-$193.4**	**$12.1**	**$221.8**	**-$209.7**
1999-2018 TOTAL	**977,649**	**$25.9**	**$509.4**	**-$483.5**	**$33.8**	**$632.0**	**-$598.2**

Forest Service

Alaska Region

P.O. Box 21628
Juneau, AK 99802-1628

File Code: 1410; 2430; 2450 **Date:** May 31, 2017
Route To:

Subject: Results of the Big Thorne IRTC Supplemental Review

To: Chief

In June 2016, the Washington Office conducted an Activity Review of the Region 10 Forest Management Program. On October 6, 2016, I received the Final Report from that review. On November 21, 2016, you approved my request to conduct a more specific sale preparation and administration review of the Big Thorne IRTC.

A team was organized and chartered by the WO Forest Management Director to review all cruise and volume determination activities for the sale to assess whether the volume calculation followed established policy and procedure and the derived estimate could be consistently replicated. Additionally, the team was tasked with reviewing the appraisal process to ensure compliance with policy and procedure and to produce an updated appraisal based upon the results of the volume determination review. Lastly, the team was instructed to review all sale administration activities.

A final report from the team has been received and issues related to the sale preparation and appraisal activities were identified. The team utilized all of the original Big Thorne cruise data, ran it through processors using handbook prescribed factors, and generated a cruise that was 12,100 MBF less than the R10 cruise run used to appraise and offer the sale in 2014. The team then used the revised cruise volume and replicated the 2014 appraisal after correcting for two appraisal factors where policy was not followed in 2014. The net result of all corrections by the review team is a sale that was 12,100 MBF less of green saw timber volume, 229 MBF less Utility volume and an indicated advertised rate that was significantly less than originally advertised and subsequently awarded.

While Viking Lumber (Purchaser) does not know the specific numbers and results of the review, they have communicated a similar lower volume harvested and the same is expected in the future. This is based on the harvest to date and projections across the remaining acres. Purchaser has also communicated a similar reduction in indicated advertised rate based on his own review of the original appraisal for policy departures.

There is no contractual mechanism to correct these errors and inequities, which we think will cost the Purchaser money under the contract. Wishing to avoid a long and costly process in the Court of Federal Claims or the Board of Contract Appeals, the Purchaser has indicated a preference not to file a claim. Purchaser has limited volume under contract, yet is firm in the belief that some adjustments need to be made. The independent review shows unexplained departures from policy, which puts the Forest Service (FS) at risk of significant damages should

the Purchaser pursue a claim. The FS, in its discretion, will be well served to negotiate with the Purchaser to settle this matter administratively.

The following options are potential approaches to resolve this situation:

1) Mutual Contract Cancellation, re-package and re-offer:
    a. Purchaser is not likely to agree as it has no other FS Timber under contract. This is problematic because of a lack of FS capacity to issue a re-package and re-offer in a timely manner.

2) Unilateral Contract Cancellation by FS, re-package and re-offer:
    a. Probable Claim for significant damages by Purchaser, which the FS wishes to avoid.
    b. Same volume and capacity issues as listed in 1.

3) No Action: No change in volumes or values from what was originally contracted.
    a. Purchaser will log at an approximate loss of $85/mbf to supply customer orders.
    b. Purchaser will pursue a claim.

4) PREFERRED:
    a. Modify the Big Thorne IRTC contract to reflect the Validation Cruise volumes and Validation Appraisal advertised rates derived by the review team, plus the established Bid Premium. Modify the contract in the accounting system (ATSA) and make the revised rates retroactive to the beginning of harvest activities.
        i. Corrects contract volume and value to what should have initially been offered in accordance with policy.
        ii. Mandatory stewardship items are still covered.
        iii. Equitable to both parties.

I am requesting you assign an individual to enter into negotiations with Purchaser to determine a fair and equitable settlement for all parties. The R10 Director of Forest Management will provide the necessary staff work and documentation to the selected individual. I believe Option 4 above provides the most equitable solution for both parties. Final approval for any negotiated solution will reside within the Deputy Chief for NFS area. In this situation, it may be appropriate that any contract modifications necessary to implement the solution be executed by the appropriate Associate Deputy Chief or a letter of direction with specific modification actions be issued to the Contracting Officer. The anticipated solutions will certainly fall outside the scope of authority for the Contracting Officer for the Big Thorne IRTC unless directed.

Correcting the situation on Big Thorne IRTC is a high priority. Equally important is correcting the underlying causes for the errors locally. Corrective actions are planned and will be implemented.

Your prompt consideration of our request is appreciated.

Please contact Director, R10, RO, Forest Management, Dave Harris at (907) 586-7875 or dpharris@fs.fed.us for any further information.

Rebecca S. Nourse

REBECCA S. NOURSE
Acting Regional Forester

Enclosures: (2)

cc: Allen Rowley, John Crockett, Dave P. Harris

PETITION TO LIST YELLOW-CEDAR, *CALLITROPSIS NOOTKATENSIS*, UNDER THE ENDANGERED SPECIES ACT

Photo Credit: Walter Siegmund

CENTER FOR BIOLOGICAL DIVERSITY, PETITIONER
THE BOAT COMPANY, PETITIONER
GREATER SOUTHEAST ALASKA CONSERVTION COMMUNITY, PETITIONER
GREENPEACE, PETITIONER

JUNE 24, 2014

NOTICE OF PETITION

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Pursuant to Section 4(b) of the Endangered Species Act (ESA), 16 U.S.C. §1533(b), Section 553(3) of the Administrative Procedures Act, 5 U.S.C. § 553(e), and 50 C.F.R. § 424.14(a), the Center for Biological Diversity, the Boat Company, Greater Southeast Alaska Conservation Community (GSACC), and Greenpeace (collectively "Petitioners") hereby petition the Secretary of the Interior, through the United States Fish and Wildlife Service ("USFWS"), to list the Yellow-cedar tree, *Callitropsis nootkatensis*, as a threatened or endangered species.

The Center for Biological Diversity works through science, law, and policy to secure a future for all species, great or small, hovering on the brink of extinction. The Center has 775,000 members throughout Alaska and the United States. The Center and its members are concerned with the conservation of imperiled species, including the yellow-cedar tree, and the effective implementation of the ESA.

The Boat Company is a nonprofit educational and charitable organization with a 35-year history of offering wilderness cruises in southeast Alaska, helping to build a strong constituency for wildlife and wildlands conservation through personal experience.

GSACC's mission is to defend and promote the biological integrity of Southeast Alaska's terrestrial, freshwater, and marine ecosystems for the benefit of current and future generations.

Greenpeace is the leading independent campaigning organization that uses peaceful protest and creative communication to expose global environmental problems and to promote solutions that are essential to a green and peaceful future.

USFWS has jurisdiction over this petition. This petition sets in motion a specific process, placing definite response requirements on USFWS. Specifically, USFWS must issue an initial finding as to whether the petition "presents substantial scientific or commercial information indicating that the petitioned action may be warranted." 16 U.S.C. § 1533(b)(3)(A). USFWS must make this initial finding "[t]o the maximum extent practicable, within 90 days after receiving the petition." *Id.* Petitioners need not demonstrate that a listing *is* warranted; rather, Petitioners must only present information demonstrating that such listing *may* be warranted. While Petitioners believe that the best available science demonstrates that listing the yellow-cedar tree as endangered *is* in fact warranted, there can be no reasonable dispute that the available information indicates that listing the species as either threatened or endangered *may* be warranted. As such, USFWS must promptly make a positive initial finding on the petition and commence a status review as required by 16 U.S.C. § 1533(b)(3)(B).

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EXECUTIVE SUMMARY

Yellow-cedar is suffering massive and unprecedented decline as the climate changes and warms with increasing anthropogenic greenhouse gas emissions. Across over 500,000 acres in southeast Alaska, over 70% of yellow-cedar trees are dead because of climate-change-induced root freezing injury. By the middle of this century, yellow-cedar will only exist in scattered fragments of its former range, and is likely to be extinct in 100 years. Unsustainable old-growth logging practices that target healthy yellow-cedar in southeast Alaska and British Columbia contribute to yellow-cedar's rapid slide toward extinction.

Absent both drastic reductions in greenhouse gas emissions and a ban on all live-logging removals, yellow-cedar will continue to suffer widespread decline. Current regulatory mechanisms are inadequate to address the rising greenhouse gas emissions that threaten yellow-cedar. Regulatory mechanisms governing old-growth logging are similarly inadequate to protect this vulnerable tree species, and are often focused on commercial exploitation of the species rather than protection. Given its precarious status and the uncertainty surrounding future impacts of climate change throughout its range, yellow-cedar cannot withstand any level of live-tree logging, and is need of immediate protection under the Endangered Species Act.

Yellow-cedar plays an important ecological, economic and cultural role in southeast Alaska and coastal British Columbia. As physically massive, long-lived components of the ecosystem, the trees define forest structure, alter microclimates, affect soil chemistry, and, through respiration, mass, and chemical composition, greatly influence ecosystem processes, such as carbon cycling and decomposition. The native people of the region have long valued yellow-cedar's honey-colored, aromatic wood for its strength, straight grain, and decay resistance, and use it in cultural and medicinal applications. The timber industry places high economic value on yellow-cedar, which has long been the most commercially valuable wood in Alaska. Yellow-cedar is important to wildlife, as a browse species for brown bears and Sitka deer, and as habitat for a wide range of forest species, including flying squirrels, bats, and nesting birds. Downed yellow-cedars and snags provide important structural habitat along waterways for anadromous and freshwater fish species, including salmon.

Yellow-cedar distribution is climate dependent. During the snowy, cool and wet period of the Little Ice Age, from about 1500 to 1850 AD, yellow-cedar at lower elevations and at wet, cool sites thrived, due to the tree's unique ability to access nitrates early in spring with a network of fine roots. Unfortunately, this shallow root system also makes the tree more vulnerable to reduced snow pack as the climate rapidly warms with anthropogenic greenhouse gas emissions. This causes a loss of soil-insulating snow pack, earlier springs, and spring freezing events during the vulnerable period after the snow is gone and when the soil has thawed, resulting in root-freezing injury. As a result, yellow-cedar at lower elevations in southeast Alaska, continue to suffer drastic decline due to inadequate snowpack, and early spring freeze-thaw events. In addition to the 600,000 acres of trees already affected in the United States and Canada, decline is likely to spread to higher elevation sites, and to more southerly latitudes as the climate continues to warm. Migration to more suitable sites at higher elevation is limited by the tree's specific habitat needs and extremely low rate of regeneration, and the lack of suitable areas for long-term

growth, especially if climate change continues to accelerate at its current pace. Researchers have recorded next no natural regeneration at sites with yellow-cedar decline.

Despite their decline, yellow-cedar trees are one of the primary targets of the old-growth logging industry in southeast Alaska. The timber industry is putting a great deal of pressure on remaining yellow-cedars because the wood has a high value in foreign markets. In fact, red cedar and yellow-cedar trees drive the layout of most major timber sales in the Tongass National Forest. Without cedars present, most timber sales are economically unviable.

As a long-lived tree that reproduces very slowly, with poor competitive ability, and with a nutrient acquisition strategy (shallow fine roots, and early de-hardening) that results in deadly root-freezing injury as the climate warms, yellow-cedar is unable to naturally adapt to a rapidly changing climate. There is no evidence that enough genetic variability exists within the species to allow a percentage of trees resistant to climate change to survive and repopulate. The devastating effects of climate change on this species, combined with unsustainable logging that directly targets yellow-cedar, will lead to its extinction. Yellow-cedar is unlikely to survive this century unless the species is protected under the Endangered Species Act.

I. NATURAL HISTORY, CULTURAL IMPORTANCE, AND ECONOMICS OF THE YELLOW-CEDAR

A. TAXONOMY AND NAMING

Although there is controversy among scientists as to what to call this species, this petition uses the most updated and widely accepted scientific (*Callitropsis nootkatensis*) and common names (yellow-cedar), as described in more detail below.

1. Taxonomic Nomenclature

When first described in 1824, yellow-cedar was placed in the *Cupressus* genus, and then transferred to *Chamaecyparis* in 1842 (Little et al. 2004). In 1865 botanist Orsted created the monotypic genus *Callitropsis* specifically for the tree then known as *Chamaecyaparis nootkatensis*, based on unique cone structure, but at the time this did not gain approval in the scientific community (Russell 2012).

Thus, the species remained solidly in the *Chamaecyaparis* genus until the discovery of a species of related conifer in Vietnam, *Xanthocyparis vietnamensis* (Farjon and Hiep), which indicated that yellow-cedar is more closely related to the cypress family, Cupressoideae, than the cedar family (Gadek et al. 2000, Little et al. 2004, Little 2006, Harrington 2010, Russell 2012). Further evidence, including information from molecular markers, coupled with the taxonomic rules for assigning scientific names, all give compelling support for using the scientific nomenclature *Callitropsis nootkatensis* (Russell 2012). We will use the scientific name *Callitropsis nootkatensis* in this petition.

2. Common Name

Like the scientific name, the common name for yellow-cedar is also variable, but subject to less vigorous debate. Yellow-cedar is the most frequently used common name for this species, and is widely accepted in both Canada and the United States (Harrington 2010). We have retained the hyphen in the common name, despite its somewhat outdated usage to denote a false cedar (Russell 2012). Although recent scientific information places the yellow-cedar in the cypress family, meaning yellow cypress may be the most appropriate common name, this has not been widely adopted. Other common names include Nootka cedar, Sitka cedar, Sitka cypress, Nootka false cypress, and Alaska cedar or Alaska yellow-cedar (Harrington 2010, Russell 2012).

B. CULTURAL AND ECONOMIC IMPORTANCE

1. Cultural Importance

Yellow-cedar is of immense cultural importance to the native peoples of Alaska and Canada (Stewart 1995), who value its honey-colored, aromatic wood for its strength, straight grain, and decay resistance (Hennon et al. 2007). Alaska Native and First Nations people carved yellow-cedar trunks into totem poles (Figure 1), and used the wood for canoe paddles, dishes, masks and bows, while the fibrous inner bark was woven into baskets, hats, mats, blankets and clothing (Turner et al. 2007, Turner *in* Harrington 2010). Yellow-cedar was also used in a variety of medicinal applications, and played a central role in native peoples' culture, ceremonies, and spiritual belief systems (Stewart 1995). Historically, native people often partially harvested yellow-cedar wood or bark, which was accomplished without killing the tree. These culturally modified trees are found in many parts of the yellow-cedar's range, and are useful for dating and anthropogenic studies (Turner *in* Harrington 2010). Commercial logging and decline has limited the availability of yellow-cedar for cultural purposes in many areas (Turner *in* Harrington 2010).

Figure 1: Yellow-cedar totem pole in front of a Haida longhouse. Image Source: http://www.csindy.com/blogs/IndyBlog/

2. Economic Importance

With natural durability and superior wood characteristics, yellow-cedar is commercially prized, and on a per-unit-volume basis, the most valuable tree species in Alaska (Hennon et al. 2007). From 2005 to 2010, the value of yellow-cedar was nearly three times that of the next most valuable tree species in southeastern Alaska, Sitka spruce (Beier 2011). Currently, Western redcedar is the second most valuable tree species to yellow-cedar, and timber sales are driven by the economics of cedar sales. Yellow-cedar comprises a relatively small percent of harvest, but brings high prices at market, primarily as an export. There is great pressure on this tree resource, especially as many stands are now composed of dead and dying trees.

Most yellow-cedar wood is exported to Asian markets, primarily in Japan, where it is used for home construction, ceremonial boxes, and restoration of temples and shrines (Kelsey et al. 2005, Gaston and Eastin *in* Harrington 2010). The wood is popular decking material in the United States, where it is also used for boat building, saunas, musical instruments, carving, window frames and greenhouse construction (Gaston and Eastin *in* Harrington 2010).
In addition to the harvest of live trees, salvaging of dead standing yellow-cedar also provides wood for these markets, as wood from yellow-cedar snags remains viable for up to a century (Kelsey et al. 2005, Hennon et al. 2007).

Yellow-cedar's slow rate of growth and poor reproductive success has limited its use in tree plantations (Ritland et al. 2001). Recent evidence suggests that the species may be a suitable candidate for commercial plantations or reforestation in areas when ecological conditions are carefully chosen, although long-term studies on commercial plantation viability are not available (Kooistra et al. *in* Harrington 2010). Because yellow-cedar is not naturally competitive at many sites, young replanted trees would have to be carefully nurtured to viability, with deer-exclusion, addition of needed nutrients to the soil, and elimination of competing tree species. Yellow-cedar growth can also be encouraged through planting and thinning in areas determined suitable for long-term survival as the climate warms. Generally, these sites are at high elevation with adequate spring snowpack and well drained soils (Lamb and Wurtz 2009).

C. BIOLOGY, LIFECYCLE, AND ECOLOGICAL ROLE

1. Lifecycle

Yellow-cedar is one of the longest-lived and slowest growing trees in the western United States and Canada, routinely living over 1,000 years, with very narrow annual growth rings compared to other species of trees (Ritland et al. 2001). The amount of yearly growth is tightly linked to climatic conditions (Laroque and Smith 1999). Reaching over 44 meters in height, with a trunk diameter of up to one meter, the yellow-cedar is covered in shaggy, gray, fibrous bark, with drooping soft-green foliage that sheds snow (Figure 2). The largest yellow-cedar was recorded in Mount Rainier National Park, with a diameter at breast height of 2.43 m and a height of 40.2 m (Harris 1970). Some researchers have reported that yellow-cedar may live as long as 3,500 years,

while others indicate a maximum age of 1,824 years (Harris 1990, Pojar and MacKinnon 1994). The longevity of yellow-cedar is related to its ecological strategy of defense, and the production of antifungal and antibacterial nootkatin and chamic acids, which together provide the tree with resistance to both disease and insect infestation (Barton 1976, Harris 1990, Hennon et al. 1990b). As a result, yellow-cedar has a low mortality and long life span once mature, but less energy is devoted to reproduction and growth.

Figure 2: Largest living yellow-cedar on Vancouver Island. Photo credit: B. DeBaie.

Yellow-cedar's unique heartwood chemistry with natural anti-fungal and bacterial agents delays decay or rotting of the wood, leaving snags of dead trees standing for up to a century (Barton 1976). This allows for large-scale mapping of areas of yellow-cedar decline, because stands of dead trees are relatively easy to find via remote sensing, especially via aircraft overflights (Hennon and Wittweb 2013). Dead standing trees also provide incentive for the salvage of viable and lucrative wood for market. Issues with permitting and types of harvest have limited such activities to date (Harrington et al. 2010).

2. Reproduction and Genetics

a. Sexual Reproduction

Yellow-cedar has low reproductive potential, due to low pollen viability, poor recruitment rate, and a long natural reproductive cycle (Harris 1990, Hak and Russell 2004, Massah et al. 2010). Yellow-cedar has an extended, three-year natural reproductive cycle, meaning there are often at least four years between good seed crops (Harris 1990, Ritland et al. 2001, Hennon et al. 2006). Some researchers suggest that yellow-cedar cones take two years to develop as an adaptation to the short growing season at high elevations (El-Kassaby et al. 1991).

During year one of yellow-cedar's three-year reproductive cycle, yellow-cedar forms pollen and seed cone buds. Pollination and fertilization occurs in the spring or early summer of the second year of cone development (El-Kassaby et al. 1991). Yellow-cedar seeds mature and disperse in autumn of the third year (Ritland et al. 2001). The tree is monecious, with male and female reproductive organs in the same plant, and appears to utilize outcrossing (Ritland et al. 2001). Seeds have limited dispersal, of less than 120 m, and wind is critical for pollen and seed dispersal (Thompson et al. 2008). Mature yellow cedars produce hundreds of pollen and seed cones, increasing the incidence of self-fertilization, and inbreeding is relatively high within the species. As a result of the above factors, successful sexual reproduction is limited, as indicated by few young seedlings at many sites, and poor regeneration capacity (Hak and Russell 2004). The abundance of young seedlings at a site is directly correlated with the live basal area of yellow-cedar trees, with older trees critical to successful reproduction (Hennon and Shaw 1997).

b. Asexual Reproduction

At marginal sites, yellow-cedar utilizes a form of vegetative reproduction called "layering," where low-lying branches produce adventitious roots. This type of reproduction mainly occurs at boggy sites and in rocky soils at high elevations (Zobel and Antos 1986). Layering may also occur at avalanche and landslide sites. Seedlings produced by layering often form dense, genetically similar thickets at the edges of poor habitat (Zobel and Antos 1986, Ritland et al. 2001). Layering is relatively uncommon in closed-canopy forests and well-drained sites where trees grow to massive heights and thus lower limbs are farther from the ground (West Coast Region Ministry of Natural Resource Operations 2011).

c. Genetic Structure and Diversity

Yellow-cedar is able to survive in a wide range of ecological conditions, which promotes genetic plasticity (Harris 1990, Russell 1993), resulting in a high level of genetic diversity among yellow-cedar populations, with significant genetic differences among populations of yellow-cedar (Ritland et al. 2001). This genetic structure is based on several factors (Harrington 2010, Russell and Krakowski 2012). First, the species has a core range covering over 20 degrees latitude or 1,000 km of coastal North America, and occupies different ecological niches across this range, from bogs at sea level in southeast Alaska, to rocky high elevation peaks in Oregon and Washington, to dry montane areas in the Siskiyou Mountains of Northern California and Southern Oregon. The wide variety of environments puts diverse selective pressures on different

populations, resulting in genetic variation. Second, as discussed in greater detail in the two sections above, low rates of natural regeneration and frequent use of layering mean there is reduced gene flow among disjunct populations of yellow-cedar. Finally, the range of yellow-cedar is not continuous, due to yellow-cedar's adaptations to specific niche environments. Yellow-cedar is especially fragmented in the southern half of its range (see distribution map in Section I.D, Figure 6). These geographic isolations contribute to among-population variation in yellow-cedar (Ritland et al. 2001). While populations of yellow-cedars are genetically distinct, they do not appear to have different levels of inbreeding or to be more homozygous.

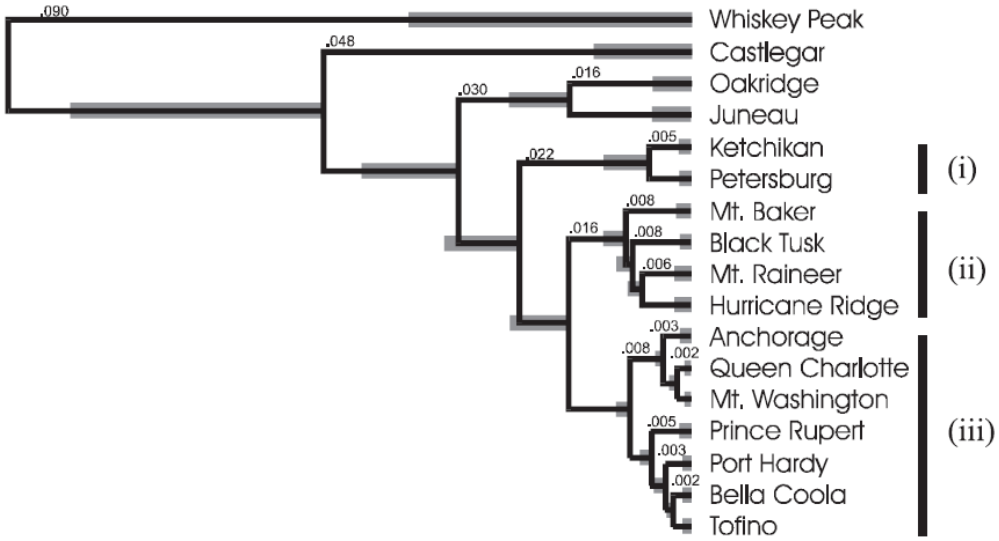

Figure 3: Dendrogram showing genetic distances among the yellow-cedar populations. Distances between clusters indicate relatedness. Source: Ritland et al. 2001.

The genetic structure of yellow-cedar is still poorly understood. Yellow-cedar appears to be divided into three major genetic groups: (i) Ketchikan and Petersburg; (ii) Mount Baker, Black Tusk, Mount Rainier, and Hurricane Ridge; and (iii) Anchorage, Queen Charlotte, Mount Washington, Prince Rupert, Port Hardy, Bella Coola, and Tofino (Figure 3; Ritland et al. 2001). Ritland (2001) believes that the geographic structure of populations reflects separate glacial refugia, with the biotic refugia of the Queen Charlotte Islands during the last ice age accounting for group (c). Group (b) is accounted for as the refugia south of glaciated areas. Each group had varying levels of inbreeding and heterozygosity.

3. Ecological Value of Yellow-cedar

a. Introduction

Trees are a foundation species in forested ecosystems and play an important role in many ecological processes. Trees define forest structure, alter microclimates, and through respiration, mass and chemical composition, greatly influence ecosystem processes, such as carbon cycling and decomposition. Long-lived trees like yellow-cedar play an important role in many aspects of forest ecology.

Yellow-cedar occupies harsh sites with poorly drained soils, often on the edges of bogs, where nutrient supplies are low. In these very wet, rocky or acidic areas, few other tree species are able to survive, and there is little competition (Figure 4). Thus, by channeling relatively few resources into growth and reproduction, yellow-cedar outlives competitors (Hennon and Shaw 1997). Yellow-cedar is also adapted to survive in avalanche zones, due to the snow-shedding properties of its needles (Zobel and Antos 1986, Harris 1990).

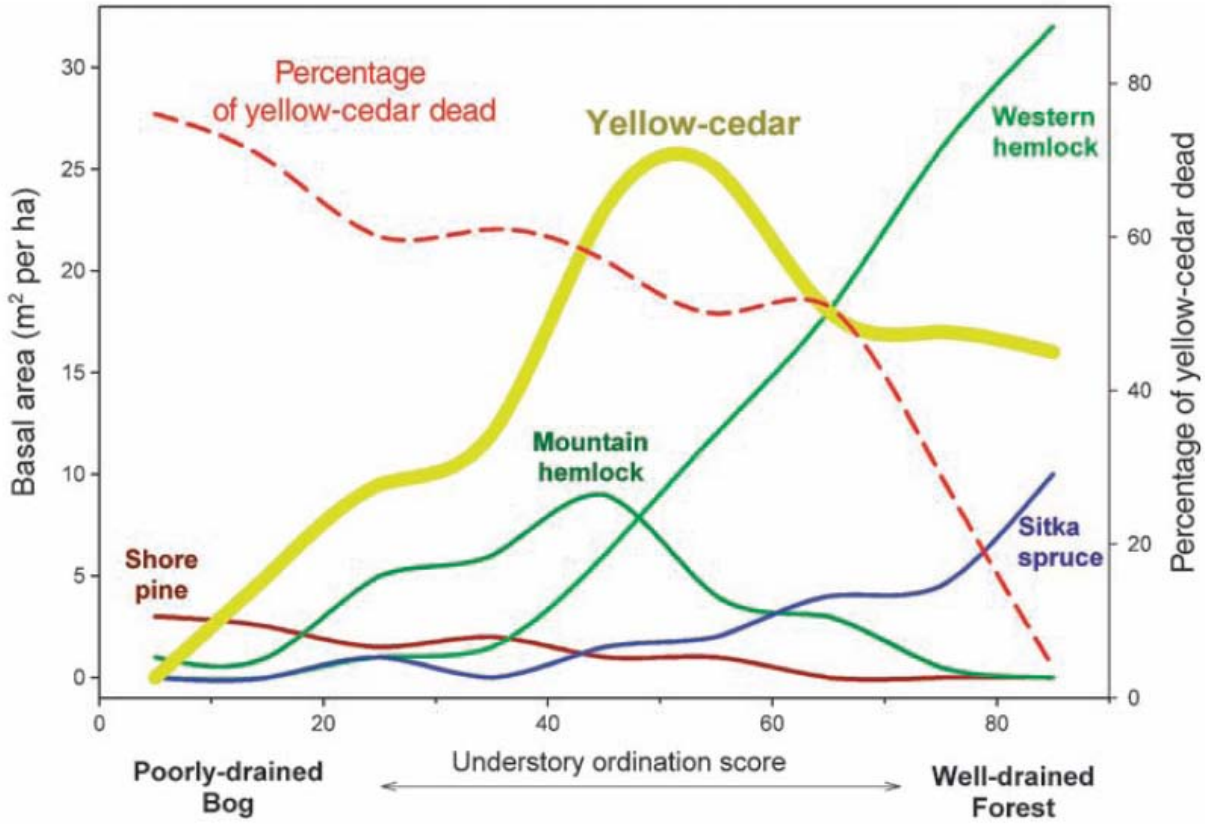

Figure 4: Yellow-cedar's optimum niche and yellow-cedar mortality along the soil-drainage gradient. The percentage of dead yellow-cedar reveals a threshold of drainage beyond which yellow-cedar is healthy but outcompeted by faster-growing tree species. Source: Hennon et al. 2012.

Based on its ecological strategy, yellow-cedar is primarily found in moist, nutrient-poor soils, where biotic competition is low, inhabiting boggy settings with more acidic soil toward the northern edge of its range in southeast Alaska and northern British Columbia. Yellow-cedar can be found in mixed-species forests at low elevation along with western redcedar (*Thuja plicata*), western hemlock (*Tsuga heterophylla*) and other species including lodgepole pine (*Pinus contorta*), mountain hemlock (*Tsuga mertensiana*), Pacific silver fir (*Abies amabilis*), and Sitka spruce (*Picea sitchensis*).

b. Wildlife Interactions: Sitka Deer and Brown Bear

Yellow-cedar is an important browse species for Sitka black-tailed deer or Sitka deer (*Odocoileus hemionus sitkensis*) and Alaska brown bears (*Ursus arctos*) (Hennon et al. 2012). Alaska brown bears gnaw on yellow-cedar trunks in the spring in order to access the soft under-bark layer, the phloem, which is high in fructose. Basal scars from either brown bears or native Alaskans were evident on over 49% of the yellow-cedars on Chichagof and Baranof Islands (Hennon et al. 1990a), and in some stands the majority of yellow-cedar have basal scars from bear feeding (ADNR 2000).

Yellow-cedar provides critical thermal and refuge cover for Sitka deer, other large ungulates, and small mammals (Walters 1991). In a study of 34 Queen Charlotte goshawk (*Accipiter gentilis laing*) nest trees, four percent were yellow-cedar (Flatten et al. 2002). Keen's myotis (*Myotis keenii*) females, preferred cedar (redcedar and yellow-cedar combined) for roosting trees, which comprised 87% of roosts used by the bats in one study (Boland et al. 2009). Female bats roosted in cedars significantly more than expected, based on their availability (Boland et al. 2009). Yellow-cedar comprise important habitat for Keen's myotis, which is a poorly known species with limited range.

Hennon et al. (2012) hypothesize that yellow-cedar trees were able to regenerate prolifically during the Little Ice Age, in part because heavy snow kept populations of Sitka deer in check (White et al. 2009). Snow may reduce winter browsing by deer. The extirpation or decline of natural predators, including the Alexander Archipelago wolf (*Canis lupus ligoni*), may result in rapid population growth of Sitka deer. Deer may exert cascading effects on small mammals, birds and invertebrates, both by competing directly with them for the same resources, and by indirectly modifying the composition and physical nature of habitats (Baltzinger et al. 2009). Habitat protection is the most important aspect of deer management in southeastern Alaska (Hanley et al. 1989). Thus, yellow-cedar, Sitka deer, and large predators such as the Alexander Archipelago wolf, form an important community, vital to the forests of southeast Alaska. A loss of yellow-cedar has cascading negative impacts on this important ecosystem.

c. Carbon Balance

In southeast Alaska and British Columbia, tree mortality along the Gulf of Alaska, where forests contain a significant source of carbon, can potentially impact the climatic balance of the region (McKinley et al. 2011). Loss of forest habitat will accelerate the climate changes that are already imperiling the habitat of yellow-cedar, possibly shifting the balance from forests as a net carbon sink to forest as a source of atmospheric carbon, further accelerating climate change (Figure 5). The net contribution of a forest to the atmospheric greenhouse gas balance is the result of a combination of factors including uptake of CO_2 by photosynthesis, release of CO_2 by respiration, release of CO_2, CH_4 and N_20 by disturbance, and transfer of carbon to forest products (e.g., the timber industry) (Houghton et al. 1997). A loss of living trees also exerts strong feedbacks on the local and regional climate by altering surface albedo and thus energy exchange between land surface and the atmosphere. Even small increases in albedo due to tree loss could result in increasing climate warming because of the high amount of energy available in these systems (Rotenberg and Yakir 2011). Changes in hydrology are also likely, as a loss of trees may

increase surface evaporation, but decrease the amount of water released through the leaves and needles of a tree (transpiration; Adams et al. 2010)

Currently, forests of the United States absorb and store about 16% of the CO_2 emitted by fossil fuel burning in the country each year (Joyce et al. 2014). The carbon stored in United States' forests right now is equal to about 25 years of the country's anthropogenic greenhouse gas emissions, under current rates. This amount of carbon storage is likely to drop drastically with tree die-offs and with changing habitat caused by climate change.

Because of their important role in the carbon cycle, it is important that forest management practices and policy decisions consider the importance of forests as carbon sinks when making decisions. Forest management strategies that increase the average carbon storage and uptake by forests and reduce disturbance to tree species may include: altering tree planting and harvest strategies through species-specific selection and timing; considering genetic variation; managing for reduced stand densities (reduced wildfire risk); reducing other stressors such as poor air quality; using forest management practices to minimize stress from drought; and developing regional-focused strategies to mitigate impacts to ecosystem functions (Joyce et al. 2014).

Large-scale die-backs of the forest, such as those occurring with yellow-cedar decline, reduce carbon sequestration and contribute to warming in the Pacific Northwest and entire subarctic region (Lamb and Wurtz 2009). Forests play an important role in the United States and global carbon cycle, and carbon sequestered in forests and timber products offsets 12-19% of fossil fuel emissions in the United States (Ryan et al. 2010), with long-lived, old-growth trees especially important for carbon sequestration (Stephenson et al. 2014).

In Canada, climate related die-offs of pine forests resulted in carbon emissions of an estimated 990 megatons of CO_2 over a 20-year period, reducing carbon sinks by 270 megatons. This die-off was equivalent to 5 years of Canada's annual emissions from the transportation sector (Anderegg et al. 2011), and influenced Canada climate change policy.

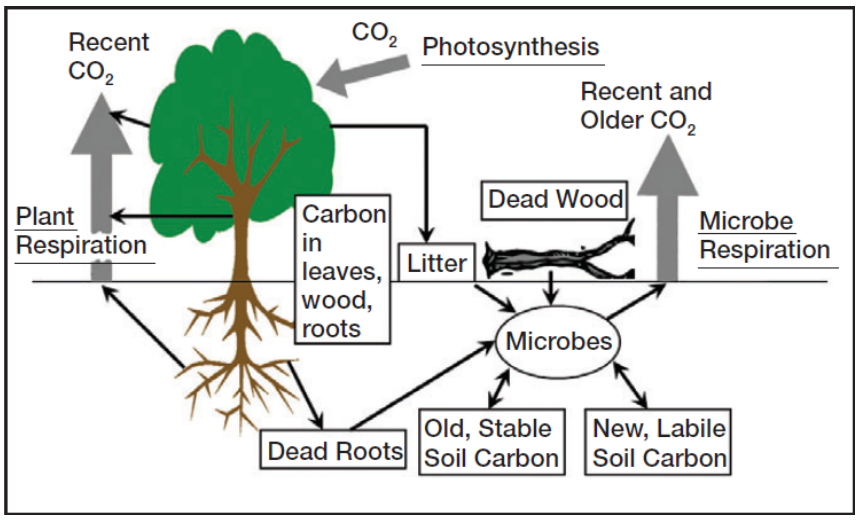

Figure 5: Flows of carbon from the atmosphere to the soils and back. Carbon is stored mostly in live and dead wood as forests grow. Source: Ryan et al. 2010.

Loss of these large, old-growth trees continues to radically transform the landscape, which will alter biodiversity, soil chemistry, undercover growth, ecosystem function and services, and land-atmosphere interactions such as carbon sequestration (Anderegg et al. 2011). Thus, the loss of yellow-cedar could exacerbate (or already is exacerbating) impacts of climate change and warming on the species by disrupting the carbon balance. Long-lived trees take up an especially significant amount of carbon dioxide, increasing the importance of yellow-cedar as a thriving part of the ecosystem (Stephenson et al. 2014). Future forest management may significantly contribute to reducing future greenhouse gas concentrations in the atmosphere, as recognized in the Kyoto Protocol for 2008- 2012. It is important that living yellow-cedar be protected, to preserve their role in the carbon cycle.

d. Landslides

Yellow-cedars also reduce landslide risk and increase productivity of the landslides that do occur. Both cedar decline and timber harvest increase landslide activity, with timber harvest resulting in a 2-fold to 10-fold increase, while in areas with cedar decline landslide risk increases by 3.8 times (Johnson 2013). Following tree death, either by decline or forest harvest, there is a loss of soil cohesion and decreased root strength. Decreased tree canopy interception and reduced transpiration reduces the shear strength of soil, which is associated with increased soil saturation (Johnson 2013). Most landslides occur after the majority of yellow-cedars at a site have been dead for more than 50 years, while landslides typically occur less than 5 years after timber harvest, with 50% of landslides occurring within a year at clearcut sites (Johnson 2013).

Landslides at sites with old-growth, where yellow-cedar snags remain standing, are more ecologically beneficial. Ecological benefits are especially important for anadromous fish habitat, because landslides from areas with standing dead yellow-cedar contain more woody debris that provides structure to streams, and are an important part of fish habitat. Thus, while site conditions that result in landslides are similar at both harvested sites and sites with yellow-cedar decline, the timing and ecological consequences are very different. (Johnson 2013).

D. DISTRIBUTION AND PREFERRED HABITAT

Yellow-cedar is primarily a coastal species, and occurs from the Siskiyou Mountains of northern California to Prince William Sound, Alaska, with isolated interior stands in southeastern British Columbia and central Oregon (Figure 6; Harris 1990). While primarily found in areas with a wet maritime climate, yellow-cedar also occurs on dry locations in the southern parts of its range, and can survive under a wide range of marginal conditions due to a combination of slow growth, a unique fine-root system, reproduction by layering, and an inherent biotic resistance to natural stressors. On a small scale, the yellow-cedar niche is mostly controlled by an affinity for wet or acidic soils at sites where most other tree species are not competitive (Krajina 1969).

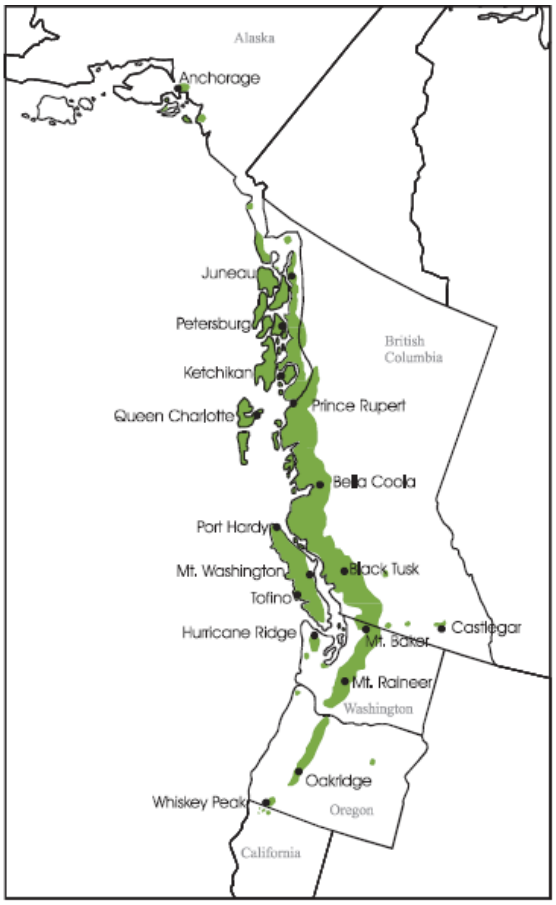

Figure 6: Distribution of yellow-cedar in green. Source: Ritland et al. 2001.

Yellow-cedar is widely distributed and locally abundant in the coastal mountains of southeastern Alaska and British Columbia. Southeast Alaska has a cool, moist climate, with annual precipitation of 150 to 500 cm. Winters are moderate, with occasional brief cold snaps. Summers have few prolonged dry periods, and lightning is rare. Thus, fire does not currently play a role in forest structure and succession (Harris 1990). Common disturbances include windfall and landslides, with disease and insects also playing a relatively small role in mortality. The poorly drained soils preferred by yellow-cedar are highly organic and shallow to deep. These soils are found on sites with gentle slopes.

Old-growth forests of western hemlock (*Tsuga meterophylla*) and Sitka spruce (*Picea sitchensis*) dominate the region, accounting for 89% of commercial timber volume (Deal 2009). Yellow-cedar, western redcedar (*Tsuga plicata*), mountain hemlock (*Tsuga mertensiana*), and shore pine (*Pinus contorta* var *contorta*) are relatively minor forest components, with yellow-cedar accounting for just 4-9% of the commercial timber volume (Hutchinson and LaBau 1975, Wilson 2002). As discussed in this petition, the high market value and special wood qualities of yellow-cedar makes it a sought-after and commercially important tree species, despite its relative scarceness.

In southeast Alaska and northern British Columbia and Washington, yellow-cedar is found in bogs or rocky ridges, where it can form dense thickets through layering. Yellow-cedar is found at

middle to higher elevations in the southern portions of southeast Alaska, extending to treeline, where it can form krummholz and tree islands. North of a latitude of 55 degrees, the tree is restricted to a more limited elevation range from sea level to just 150 m in some locations (Hennon et al. 2005, Lesher and Henderson *in* Harrington 2010). The 55 degree latitude line also marks the northern extent of western redcedar, a species often found in association with yellow-cedar (D'Amore et al. 2009).

In the western United States, yellow-cedar is common on the slopes of Mount Rainier, but occurs infrequently south of the mountain, and is locally common to the mountain peaks of the central Oregon Cascades (Figure 7; Zobel and Antos 1986). South of Mount Jefferson, the species is absent from the high Cascades, with a few disjunct locations in the Siskiyou Mountains of northern California and southern Oregon, and one occurrence in the Aldrich Mountains, east of the Oregon Cascades (Ritland et al. 2001).

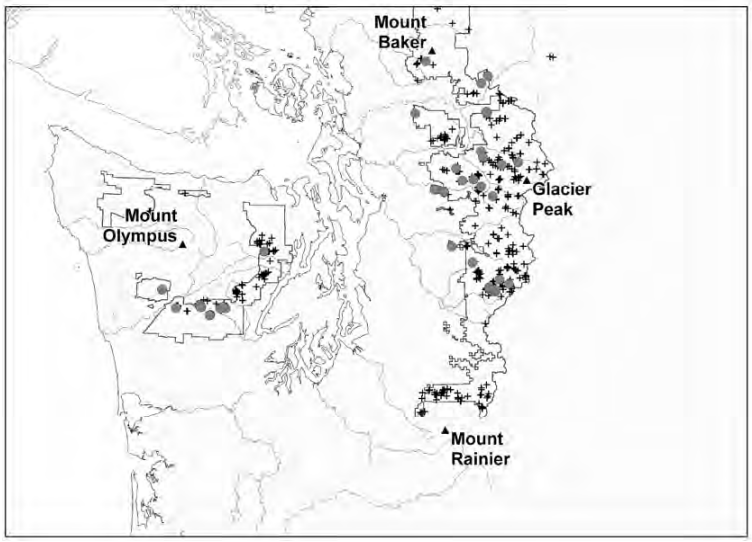

Figure 7: Yellow-cedar distribution in Washington Source: (Lesher and Handerson *in* Harrington 2010).

South of Mount Rainier, yellow-cedar occupies a variety of sites, including boggy and wet areas, and dry rocky ridges (Lesher and Handerson *in* Harrington 2010). In the Siskiyou Mountains, yellow-cedar forms shrubby thickets on marginal sites that are rocky or very wet. In the Aldrich Mountains, yellow-cedar occurs in one isolated location at the head of a sheltered, north-facing drainage (Zobel and Antos 1986).

II. CONSERVATION STATUS: YELLOW-CEDAR DECLINE

A. INTRODUCTION

For the past three decades yellow-cedar has precipitously declined. This population collapse, called "yellow-cedar decline" is caused by a warming and changing climate. Specifically, shifts in the timing and frequency of freeze-thaw events during February and March, and reduced snow cover, causes freezing injury to the tree's shallow fine roots, resulting in death (Figure 7).

Over the past decade, widespread tree die-offs due to climate change have been reported globally (Allen 2009). These mortality events drastically transform the landscape, affecting biodiversity, ecosystem functions and services, and land-atmosphere interaction, and lead to increased fire risk (Anderegg et al. 2011). Over the past thirty years, tree mortality rates in the western United States have more than doubled (Adams et al. 2010). Rising temperatures drive elevation shifts, increasing mortality at lower altitudes and latitudes, and pushing tree species uphill into smaller geographic ranges (Lenoir et al. 2008, Allen 2009). Because trees do not easily migrate or shift distribution to more suitable habitats when conditions in their environment change and become deadly or suboptimal, many tree species will be pushed to extinction as climate change progresses (Bunnell and Kremsater 2012).

Yellow-cedar decline is the most severe forest die-off ever recorded in North America (Ostry et al. 2011, Hennon et al. 2012), and has greatly altered forest dynamics in southeast Alaska. Because yellow-cedar is extremely decay-resistant, snags remain standing for 80 to 100 years, which allows for long-term study and reconstruction of cedar population dynamics (Figure 8). Mapping to date indicates that yellow-cedar decline occurs across more than 500,000 acres in southeast Alaska, primarily on sites from sea level up to 300 m in elevation (Lamb and Wurtz 2009, Hennon and Wittweb 2013). Decline extends 150 km south from the Alaska border into British Columbia onto an additional 124,000 acres at elevations up to 1,000 m (Westfall and Ebata 2012, Hennon et al. 2012). Yellow-cedar decline is concentrated at lower elevations in the northern parts of the tree's range, but extends to higher elevations and to warmer, southerly slope aspects at southern latitudes (Wooton and Klinkenberg 2011).

In stands affected by yellow-cedar decline in southeast Alaska, over 70% of yellow-cedar trees are dead (D'Amore and Hennon 2006, pers. comm. Lauren Oakes 2014), with complete mortality recorded at some sites. Mortality is more severe at locations with relatively wet soils, decreasing or loss of snow cover, southerly slope aspect, and gentle gradient (Snyder and Lundquist 2007). The number of trees suffering from active mortality continues to increase at many locations, indicating that the yellow-cedar decline is expanding in area and intensity at sites where many trees have already died (Snyder and Lundquist 2007). This also indicates that the rapid pace of human-caused climate change may be exacerbating an already serious dieback.

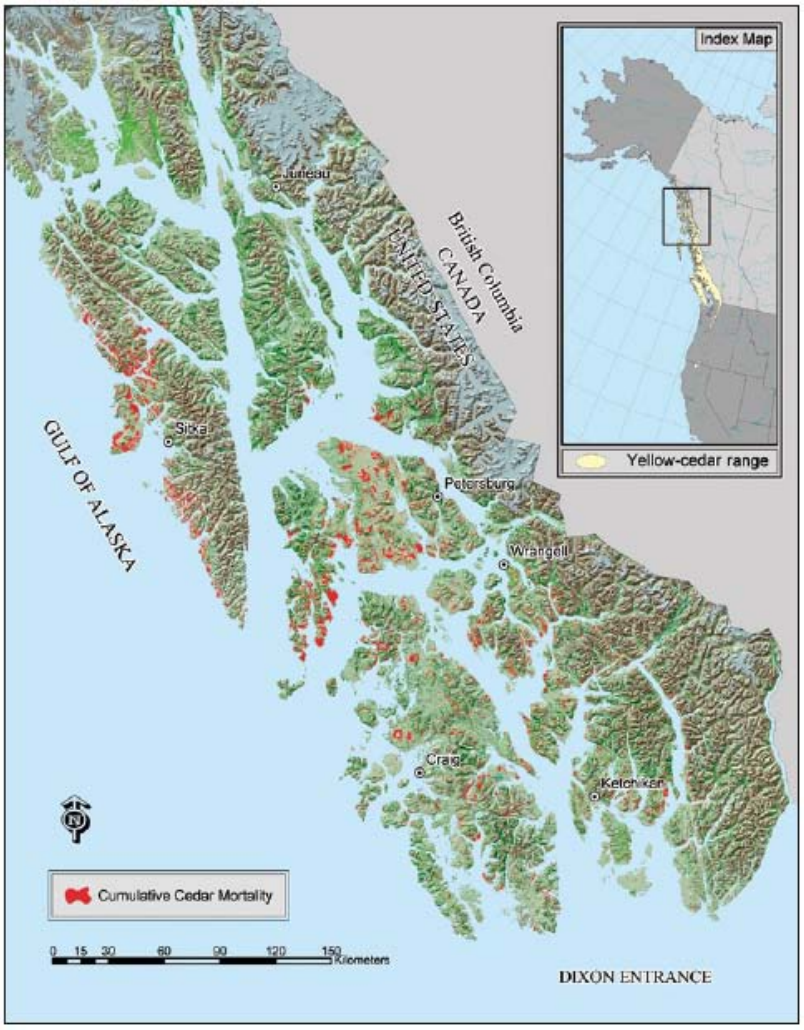

Figure 8: Distribution of yellow-cedar decline in southeast Alaska and inset map of the natural range of yellow-cedar. Figure from Hennon et al. 2005.

Yellow-cedar decline has been intensively studied for over 30 years. After all likely biotic factors were researched and rejected, researchers focused their attention on abiotic reasons for decline by investigating two primary questions: (1) what change in the environment triggered decline, and (2) what physiological features or other factors make yellow-cedar uniquely vulnerable to decline. To date, the best scientific information indicates that yellow-cedar decline is due to a unique combination of physiological features and environmental change—namely a warming climate due to anthropogenic greenhouse gases—which is discussed in more detail in Part II of this petition.

Researchers have determined that the warming climate, which leads to slight shifts in freeze-thaw patterns, is the root-cause of freezing injury and yellow-cedar decline. Decreasing snow cover is a key factor linked to decline, and provides for a fairly simple mapping tool to predict and model future decline patterns (Hennon et al. 1990a, 2008, 2012). Affected trees exhibit dieback symptoms that progress from initial root injury to subsequent crown death, and eventually to tree death (Hennon and Shaw 1997).

Yellow-cedar's unique physiology, which makes it well adapted to cool, snowy habitats, and to marginal habitats, also makes is susceptible to root freezing injury as the climate warms. Yellow-cedar has a shallow fine root system, early dehardening, and extensive uptake of nitrogen and calcium in early spring, along with a propensity for growth in saturated soils. These traits make the tree more prone to freezing injury with shifts in the freeze-thaw cycle, especially when freezing temperatures penetrate the soil surface layer, where the trees' shallow fine-roots grow.

Based on over 30 years of research, scientists have developed an interactive causation pathway that includes the physiological and abiotic factors for decline, the basis of which is fine-root death (Figure 9). Separate studies, as detailed in the upper right corner of Figure 9, contributed to this figure, by investigating the many interactions along the causation pathway that leads to yellow-cedar decline, including hydrology, canopy cover, air and soil temperatures, snowpack, yellow-cedar phenology, and freezing injury to seedlings and mature trees (Hennon et al. 2012).

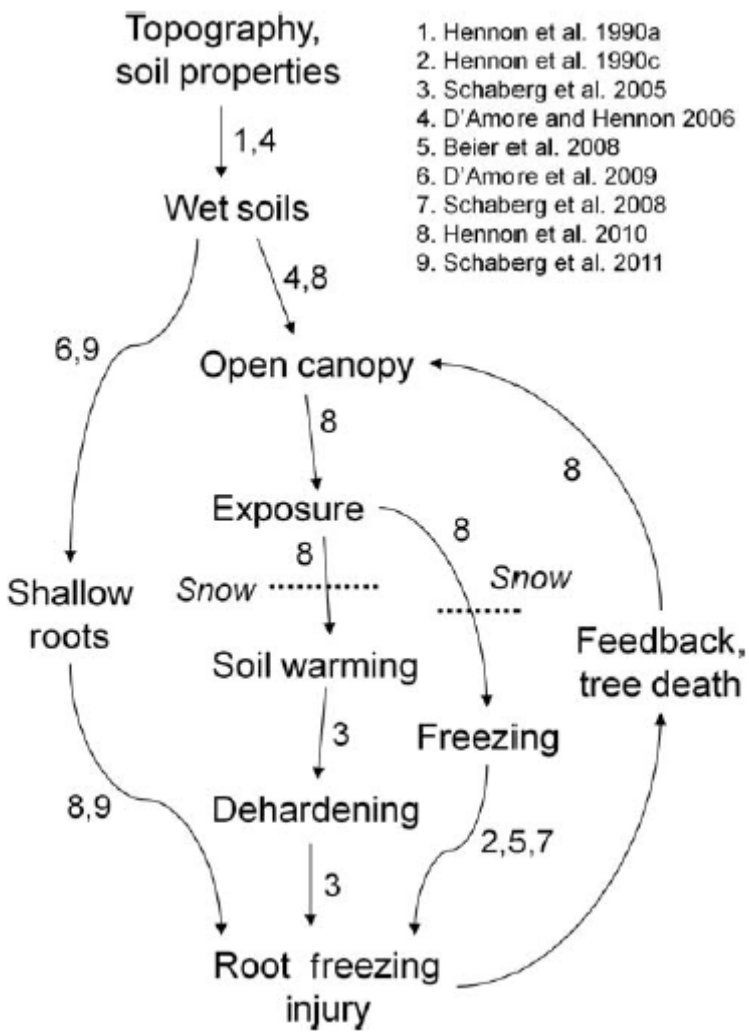

Figure 9: Cascading factors that contribute to yellow-cedar decline, culminating the fine-root mortality and tree death. The mitigating role of snow cover is shown. Tree death is a feedback that can expose adjacent trees to great fluctuation in microclimate, thereby creating conditions for local spread of this

forest decline. In the original document, numbers refer to the studies on interacting factors. Source: Hennon et al. 2012.

Tree death primarily occurs in areas where yellow-cedar was formerly well adapted with a competitive advantage over other tree species due to marginal site conditions, such as bogs. The spreading mortality of yellow-cedar indicates that the tree has been pushed beyond a critical level of biological tolerance over a large area (D'Amore and Hennon 2006). Climate change-caused warming soil and air temperatures and decreasing snow cover are strongly linked to yellow-cedar decline.

Researchers have mapped yellow-cedar decline across an extensive portion of southeast Alaska, especially from the western Chichagof and Baranof Islands to the Ketchikan area. Starting with broad aerial surveys that mapped areas with dead trees, researchers used finer-scale mapping to identify landscape features and other factors such as snow cover, slope, elevation, and aspect that together play a role in yellow-cedar decline. Recent mortality has been most dramatic on the outer and southern coast of Chichagof Island, indicating a northward spread of mortality, which is consistent with the climatic patterns that trigger mortality, especially decreasing snowpack and warmer spring temperatures, combined with intermittent freezing events (Mulvey and Lamb 2012).

B. PHYSIOLOGICAL FACTORS RELATED TO DECLINE: ROOT-FREEZING OF YELLOW-CEDAR

Yellow-cedar's fine roots are relatively shallow and have certain properties that make them more vulnerable to cold temperatures and freezing injury than other conifers. This is due to adaptations that allow yellow-cedar trees to better access nutrients such as nitrogen and calcium, especially at marginal sites such as bogs (Daniels et al. 2011, Schaberg et al. 2011). The high proportion of yellow-cedar's fine roots found in the upper soil levels (less than 7.5 cm) is an important factor predisposing the tree to freezing injury (Schaberg et al. 2011). Yellow-cedar roots near the soil surface are vulnerable to injury when temperatures drop just below freezing (-5 degrees C). Soils commonly drop to temperatures below the threshold for fine-root injury at depths less than 7.5 cm, but such conditions are less common at depths of 15 cm (Schaberg et al. 2011).

The combination of limited cold tolerance, early dehardening and shallow rooting contributes to the unique sensitivity of yellow-cedar trees to freezing injury and decline (Hennon et al. 2012).

1. Spring and Winter Dehardening

Yellow-cedar roots are fully dehardened in March, while other conifer species' roots continue to deharden into May (Hennon et al. 2012). Researchers believe the spring dehardening of yellow-cedar roots is thermoregulated to track microbial activity in late winter, associated with the surge in available nitrogen that occurs during freeze-thaw periods at this time (Schaberg et al. 2005). Tree species that co-occur with yellow-cedar regulate dehardening and growth by photoperiod, and also maintain fewer shallow roots, making them less vulnerable to spring freezes (Hennon & Shaw, 1994).

A study comparing cold hardiness of yellow-cedar and western hemlock at various elevations found that yellow-cedar was much more sensitive to cold temperatures in spring. From winter to spring, yellow-cedar trees dehardened almost 13 °C more than western hemlock (Schaberg et al. 2005, Hennon et al. 2012). This study found that low- and mid-elevation stands of yellow-cedar were less cold hardy than trees growing above 130 m in elevation, consistent with observed trends in yellow-cedar decline.

A study comparing cold hardiness of yellow-cedar with four other coniferous species growing near Ketchikan had similar findings. The roots of all conifer species showed a typical pattern of increasing cold hardiness from November to January, decreasing hardiness from January to March, and a continued reduction in cold hardiness from March to May (Figure 10). Compared to the other species, yellow-cedar developed minimal winter hardiness, and was fully dehardened by March. Particularly notable was the yellow-cedars trees' reduced mid-winter cold hardiness, at a time when air temperatures were lowest, and prior to consistent spring warming (Schaberg et al. 2011). In January, the difference in cold hardiness between yellow-cedar and other cedar species was just 1.6 degrees C, but this small difference may be important. This is because the threshold in freezing tolerance is close to the temperature of -5 degrees C reached in soils in southeast Alaska when there is no insulating snow cover (D'Amore and Hennon 2006, Hennon et al. 2010). Thus, just a small difference in cold hardiness may mean the difference between fine-root death due to freezing injury, and no cold damage.

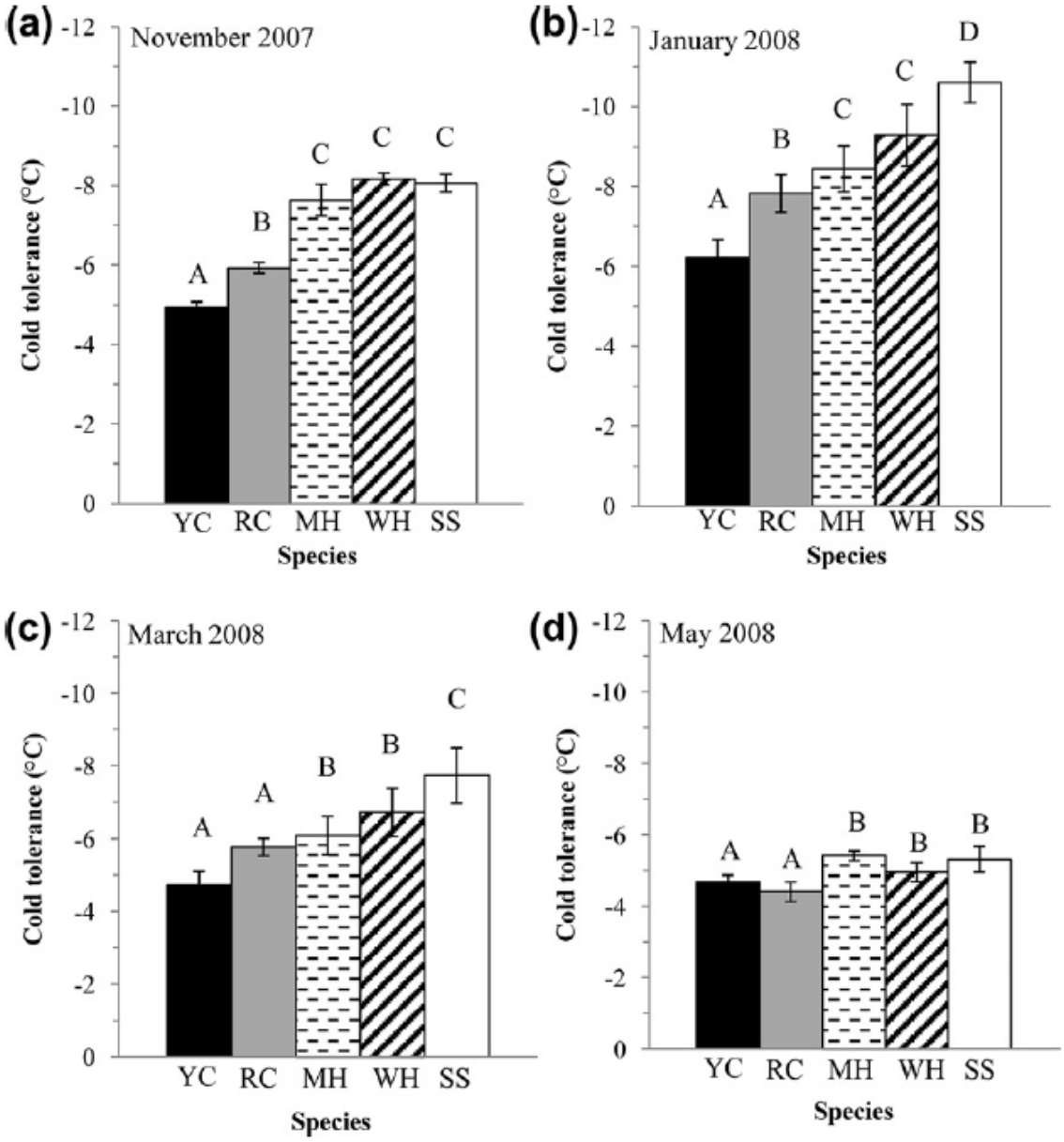

Figure 10: Difference in mean cold tolerance of fine roots of yellow-cedar (YC), western redcedar (RC), mountain hemlock (MH), western hemlock (WH), and Sitka spruce (SS) growing together in Ketchikan, Alaska, and assessed on four dates: (a) November 2007, (b) January 2008, (c) March 2008, and (d) May 2008. Per sampling date, treatment means with different letters are significantly different. Source Schaberg 2011.

These results indicate that freezing damage to yellow-cedar trees is influenced by early dehardening which, for yellow-cedar starts as early as January, and continues through late winter and early spring.

2. Nutrient Acquisition Strategies

Yellow-cedar root systems are especially vulnerable to changes in climate because they are shallow—a characteristic that is essential for the trees to take up nutrients. Yellow-cedar trees rely on the linked uptake of nitrate anions with calcium cations to exploit shallow, rich sources of nitrogen (D'Amore et al. 2009). In order to accommodate this nutrient uptake, yellow-cedar trees have a high proportion of shallow fine roots, early spring dehardening and root activation, and exceptionally high levels of calcium in their tissues (Oliver and Hennon 2013). Scientists theorize that this method of calcium-nitrate cycle from soil to tree, and the resulting interactions with yellow-cedar physiology, plays a crucial role in yellow-cedar decline (Figure 11).

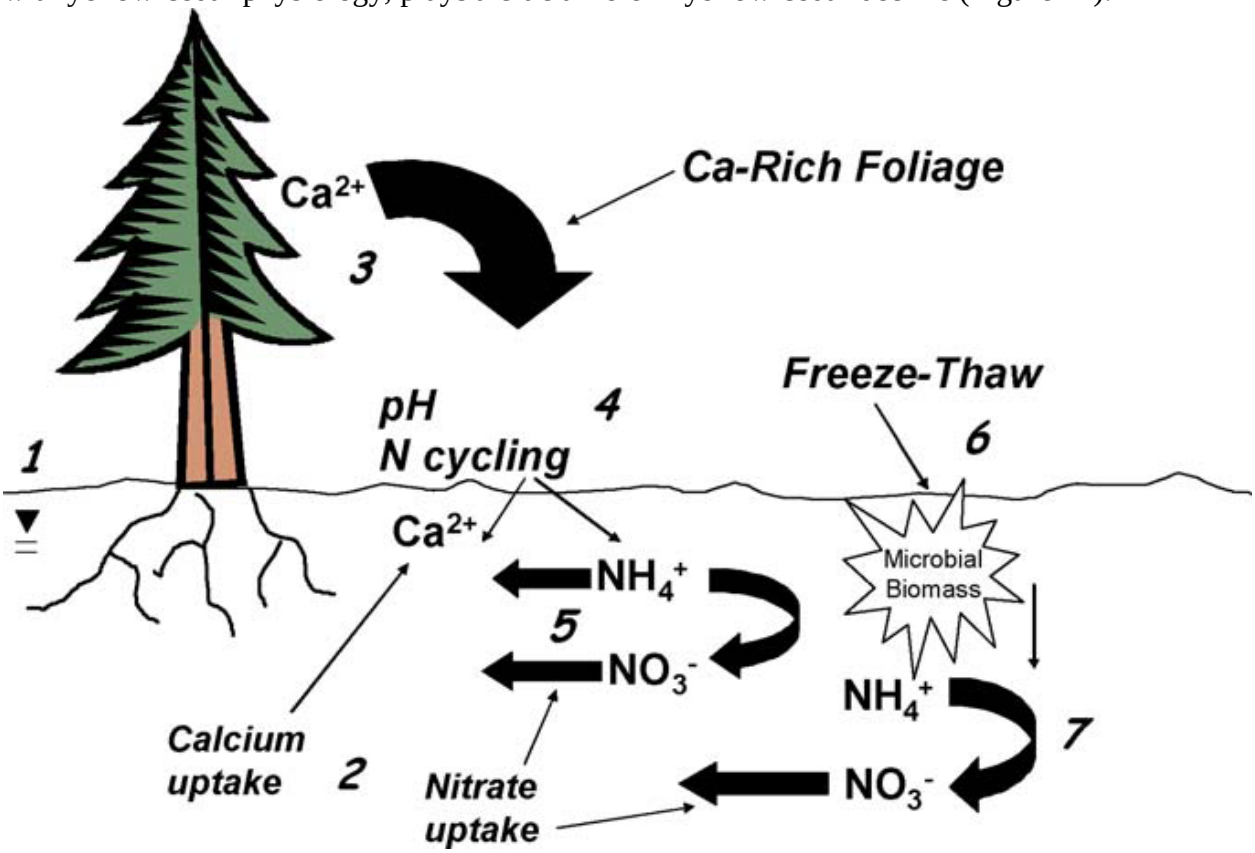

Figure 11: Model for the hypothesis of cedar calcium (Ca) and nitrogen (N) cycling in forests of the Pacific Northwest. (1) Cedars grow in wet soils with low N; (2) cedars assimilate NO3- as a nitrogen source, but must also assimilate Ca as a counter ion to balance cellular pH and osmotic pressure; (3) Ca-enriched foliage falls to the forest floor during senescence, and decomposition consumes H+; (4) increased pH enhances N turnover including nitrification in the forest floor; (5) mineralization and nitrification provide a low, but persistent supply of N to the plant along with Ca available near the soil surface; (6) spring freeze-thaw leads to the release of microbial biomass N that is nitrified; and (7) early spring dehardening and fine-root activity of cedars coincides with the N released by freeze-thaw events.

The shallow-rooting system utilized by yellow-cedar may allow the trees to be more competitive by utilizing nitrate as a source of nitrogen for growth. The acquisition of nitrogen is difficult in saturated soils where yellow-cedar often grows, due to lower mineralization rates and competition from microbial communities and bryophytes. In such areas, nitrogen availability is

regulated by the ability of a tree to acquire nitrogen that has been mineralized through organic matter decomposition or microbial biomass turnover (D'Amore et al. 2009). This type of nitrogen is often available during spring freeze-thaw events in bogs and forested wetlands, and can be utilized by the tree if cedar roots are active at the time, through early dehardening and an extensive fine root system.

High concentrations of calcium also play a role in yellow-cedar's ability to uptake nitrogen. Yellow-cedar accumulates a high level of calcium in its tissues. This high level of calcium, an ion which contains two positive charges, allows yellow-cedar roots to associate with negatively charged ions in the soil, especially nitrate (D'Amore et al. 2009).

When the roots remain insulated by snow, early dehardening allows the tree to immediately utilize the spring flush of nitrogen for growth. However, this strategy comes at a cost. Adaptations to increase tolerance of marginal habitats, and allow for increased uptake of nitrogen and calcium from soils, especially during early spring, make yellow-cedar uniquely vulnerable to root freezing and decline (D'Amore and Hennon 2006, Daniels et al. 2011).

C. MAPPING AND EVALUATING RISK FACTORS FOR YELLOW-CEDAR DECLINE

Researchers first determined the onset and trends of yellow-cedar decline based on aerial photographs, historical written observations, and various methods of dating time of death for standing snags (Hennon et al. 1990a). Although yellow-cedars began declining in the 1880s, at the end of the Little Ice Age, studies indicate that the decline accelerated at most sites during the second half of the 20th century, peaking during the 1980s. Progressive mortality continues in declining forests, with the oldest snags found in the wettest soils, and dying trees typically found around the perimeter of recently dead trees, or in better drained soils (for illustration of this, see Figure 12, below). The slow spread of tree death occurs along a hydrologic gradient, with trees in wetter soils affected first (D'Amore and Hennon 2006).

In order to investigate the climate-related causation behind yellow-cedar decline, and to determine future suitability of sites for yellow-cedar regeneration or planting, researchers have investigated the link between various landscape and climatic features and yellow-cedar decline, and also mapped yellow-cedar decline and different abiotic factors at three different spatial scales. The species' highly rot-resistant wood provides a unique opportunity to map and investigate long-term trends in yellow-cedar decline. Site-specific details were obtained from on-ground studies or more detailed mapping of landscape features.

1. Yellow-cedar Decline and Climate: Regional Snow-Cover and Temperature

Researchers used aerial photographs to develop a complete distribution map of yellow-cedar decline in Alaska (see Figure 12 and Figure 8, above). The resulting map depicts more than 500,000 acres of dead and dying yellow-cedar forest at a total of over 2,500 locations (Wittwer 2004), and is useful for determining broad trends connecting yellow-cedar decline to climate change, or for targeting areas to conduct more detailed site-studies. Early on, when biotic causes

for decline were still being explored, Hennon and Shaw (1994) used a similar regional-scale map to demonstrate that forest decline aligned with warmer average winter temperatures, an early indication that climate change was linked to yellow-cedar decline.

Regional-scale maps are also used to link snow depth to yellow-cedar decline. Dave Albert of The Nature Conservancy developed the snow accumulation model, derived from PRISM data estimates of monthly temperature and precipitation. The model found close association between the occurrence of yellow-cedar decline and the lowest snow accumulation zone (Figure 12; Hennon et al. 2006). Further discussion of this snow-accumulation model is found in Part III of this petition.

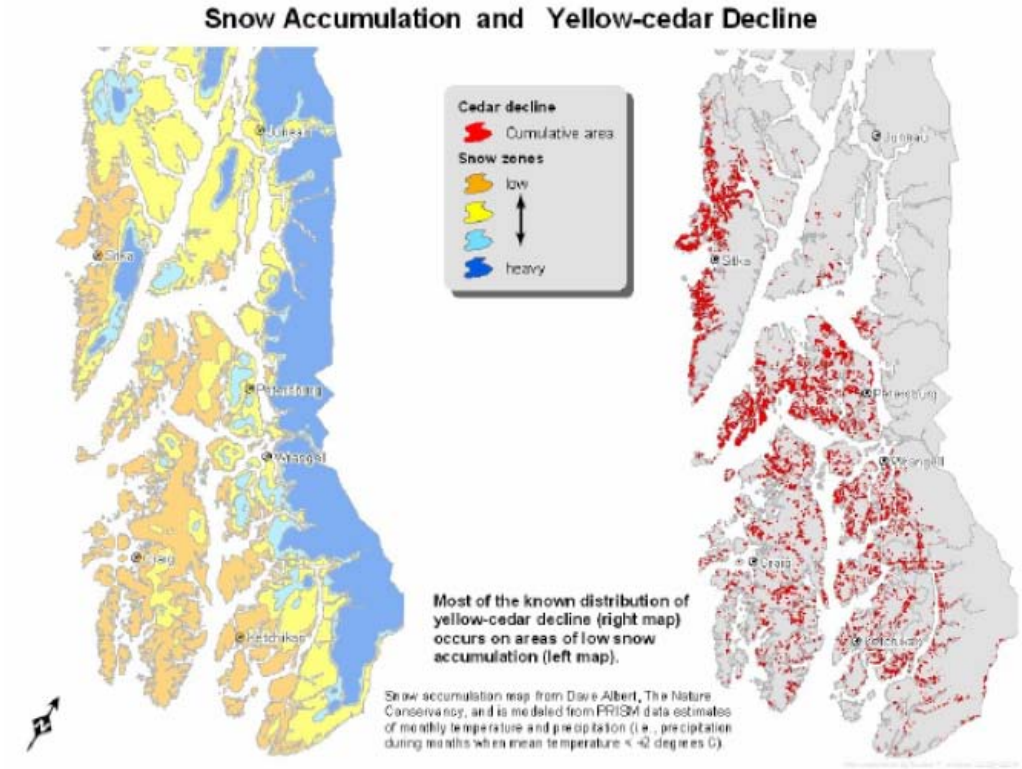

Figure 12: Map depicting snow levels (left) and the occurrence of yellow-cedar decline (right). Note the close association between decline and low snow accumulation. Snow fall amount ranges from heavy (dark blue- light blue) to low (yellow-orange). Map at right depicts areas of yellow-cedar decline in red. Snow zone map was developed by Dave Albert of the Nature Conservancy using PRISM data estimates of temperature and precipitation. Cedar decline map based on Forest Service aerial surveys. Source Hennon et al. 2006.

Currently, the there are no broad-scale regional maps of yellow-cedar decline in British Columbia, where tree death typically occurs in bands from 300 to 400 m in elevation (Hennon et al. 2005). The British Columbia Forest Service is working toward mapping the southern extent of yellow-cedar mortality, and is cooperating with the United States Forest Service to compile a map of yellow-cedar decline throughout its range (Hennon et al. 2005).

2. Yellow-cedar Decline and Landscape Features: Slope, Aspect, Elevation

Researchers associated yellow-cedar decline with various landscape features, including slope, aspect and elevation, using infrared photographs to delineate polygons of yellow-cedar decline. Maps completed to date include those of Peril Strait and adjacent areas of Baranof and Chichagof Islands, and southern Kruzof Island (Figure 13). These maps can be overlayed with climate features such as snow cover or soil saturation. Very few maps have been compiled from areas above 300 m (Hennon et al. 2008). While yellow-cedar decline occurs at all slope aspects across elevation zones, decline is more prevalent at lower elevations and at warm, southerly aspects (D'Amore and Hennon, 2006).

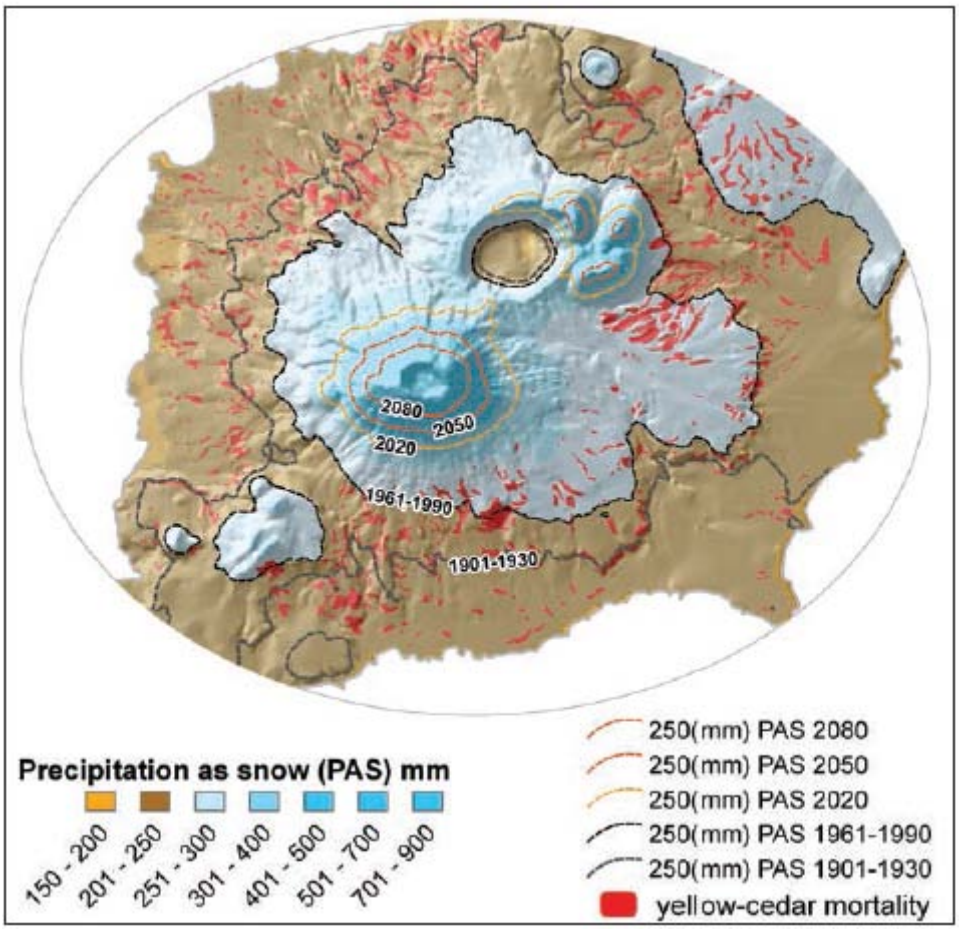

Figure 13: The distribution of yellow-cedar decline on Mount Edgecumbe near Sitka, Alaska, mapped from 1998 color photography. The annual precipitation of snow between 1961 and 1990 is shown with colors indicating the values above (gray, protects yellow-cedar) or below (dark gray, inadequate) the threshold of 250 mm of annual precipitation as snow. Forecasts for this modeled snow threshold are indicated by dashed lines.

Mount Edgecumbe on Kruzof Island near Sitka is a dormant volcano with radial symmetry and even slope gradients, and is the site of extensive mapping (Figure 13). Open-canopy forests with abundant yellow-cedar extend from sea level close to timberline. These features control

confounding factors, and have allowed researchers to isolate the influence of elevation and aspect on yellow-cedar decline. Results from Mount Edgecumbe studies are discussed in more detail in Section III, because they show that a lack of spring snow is one of the most important factors leading to yellow-cedar decline.

3. Yellow-cedar Decline and Site-specific Conditions: Canopy Cover, Snow Cover, Air and Soil Temperature, Hydrology, and Soil Chemistry

Detailed site-specific, small-scale studies, and resulting maps were designed to increase researchers' understanding of how forest conditions vary among areas with and without yellow-cedar decline. Researchers created maps based on 100 m grids of vegetation plots at two small watersheds, Goose Cove on Baranof Island, and Poison Cove on Chichagof Island (Hennon et al. 2008). On-ground studies investigated the association between live and dead trees and different environmental variables, including hydrology (Figures 14 and 15), soil chemistry, canopy cover, air and soil temperature, and snow (D'Amore and Hennon 2006).

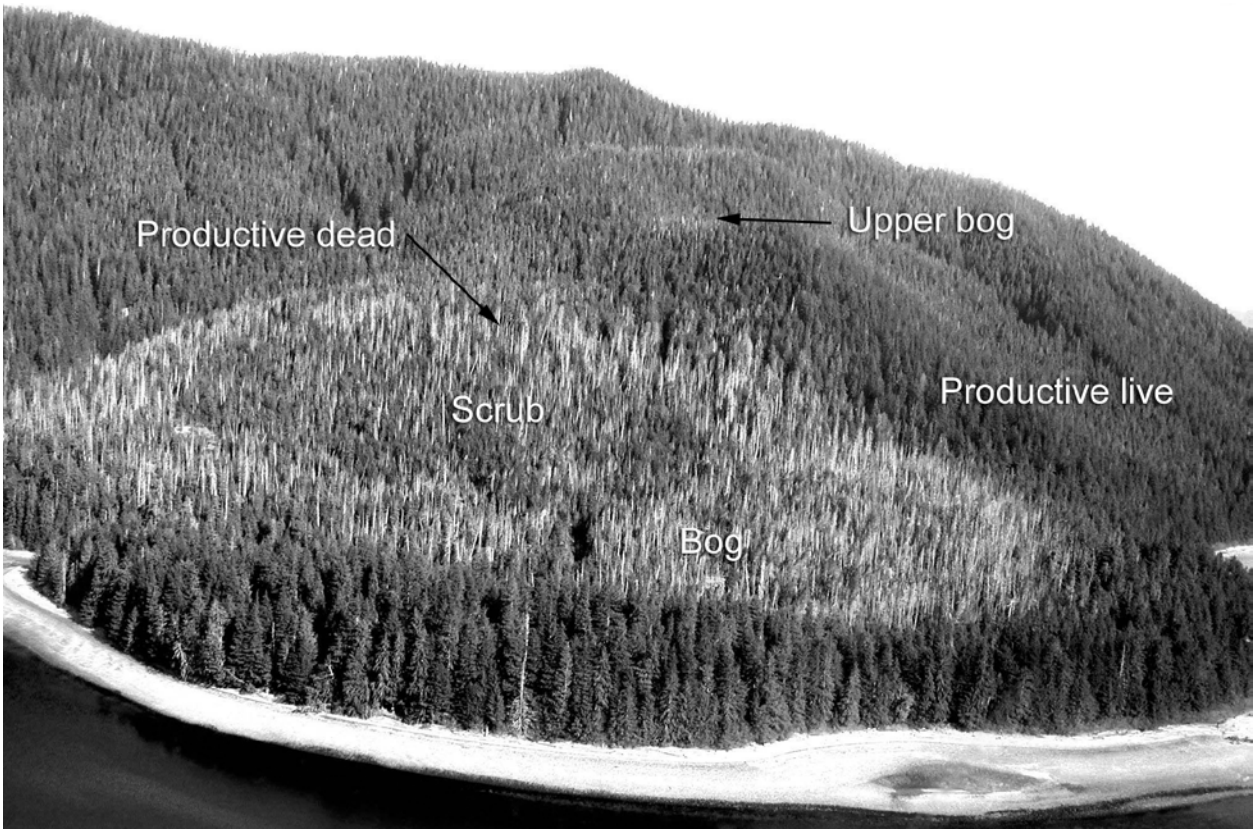

Figure 14: The Poison Cove study site illustrating an area of intense yellow-cedar decline. Note the circular area of decline, with dead trees on the inside and dead and dying trees on the perimeter. This inside-out trend in decline is related to a hydrologic gradient, where cedar in wetter soils suffer decline first, followed by those on the outer edges. Source: D'Amore and Hennon 2006.

In order to collect accurate, targeted, site-specific data, researchers used automated snow cameras to record daily snow measurements. Soil temperature monitors were also included at some sites in order to map the association between soil temperature and snow depth.

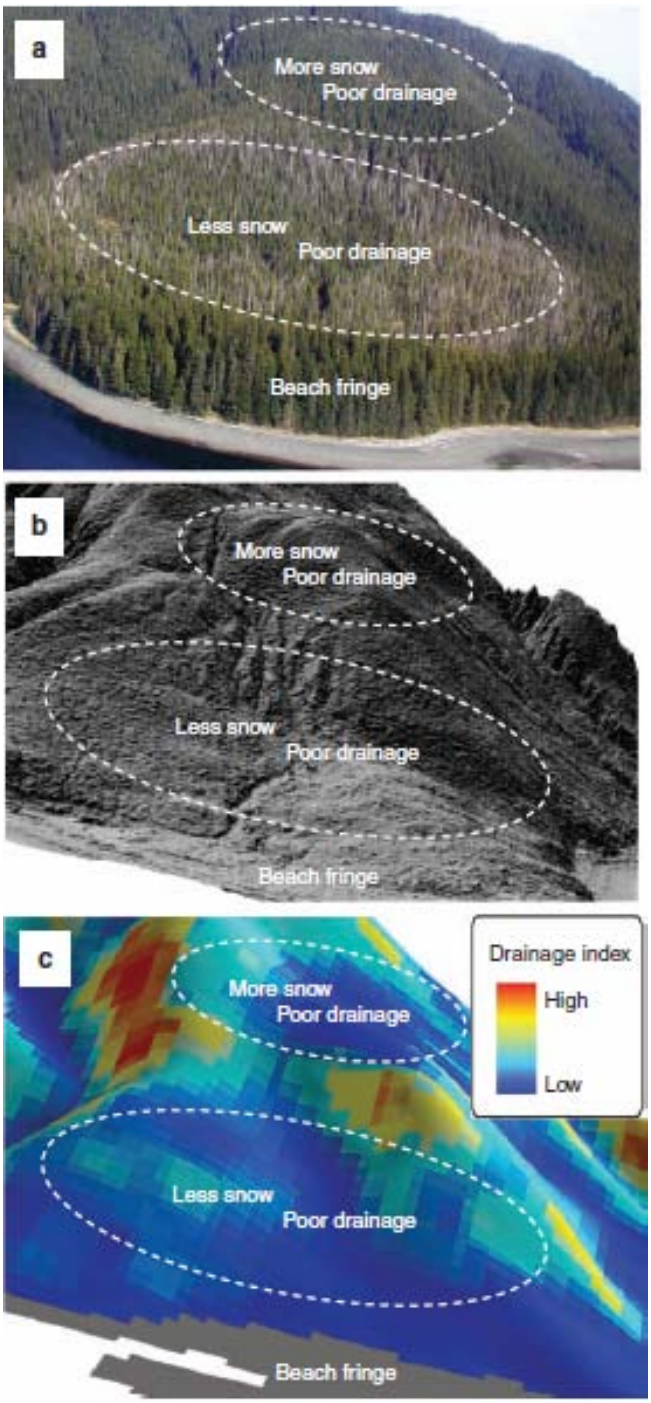

Figure 15: (a) Patch of dead and dying yellow-cedar and the surrounding forest. (b) LIDAR (light detection and ranging)- derived high-resolution digital elevation terrain model. (c) Drainage classes at Poison Cove watershed, Chichagof Island, Alaska. Yellow-cedar has died in the less-snow, poor-drainage areas, but trees remain alive in the more-snow, poor-drainage area at slightly higher elevation that has

evidence of snowpack persisting later in the spring, which protects shallow roots from freezing injury. Source: Hennon et al. 2012.

When the maps of dead/dying and live cedar are overlayed with site-specific landscape variables, the results clearly indicate once again the determining role of snow in protecting yellow-cedar from freezing injury. For example, measurements of snow pack at the Poison Cove study site find that live, non-declining yellow-cedar are protected by a thick layer of snow through April and occasionally into May (Figure 15), while yellow-cedar at a similar site where snow cover was no longer present were suffering decline.

This research was useful for associating yellow-cedar decline with environmental factors, but has also proven useful for predicting future trends in yellow-cedar decline, and determining where active-management might be most effective. Further discussion occurs in Part III and Part IV of this petition.

III. YELLOW-CEDAR MUST BE LISTED AS THREATENED OR ENDANGERED UNDER THE ESA

Under the ESA, a species is "endangered" if it is "in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1531(6). A species is "threatened" if it is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C. § 1531(20). In determining whether a species is threatened or endangered, USFWS must consider these five listing factors:

> (A) the present or threatened destruction, modification, or curtailment of its habitat or range;
>
> (B) overutilization for commercial, recreational, scientific, or educational purposes;
>
> (C) disease or predation;
>
> (D) the inadequacy of existing regulatory mechanisms;
>
> (E) other natural or manmade factors affecting its continued existence.
>
> (16 U.S.C. § 1533(a)(1)(A)-(E); 50 C.F.R. § 424.11(c)(1) - (5).)

This section describes threats to the yellow-cedar tree in the context of the five listing factors and demonstrates that the yellow-cedar is in danger of extinction within all or a significant portion of its range, or will be in the foreseeable future. The primary threat to yellow-cedar trees is the destruction and modification of habitat from greenhouse-gas-driven climate change. Adding to this threat is the current overutilization of yellow-cedar by the old-growth timber industry in southeast Alaska. Physiological and ecological attributes of yellow-cedar make it extremely unlikely that the species can adapt to changing habitats or migrate to new ones, and existing regulatory mechanisms are inadequate to address threats from greenhouse gas emissions and from unsustainable logging.

A. THE PRESENT OR THREATENED DESTRUCTION, MODIFICATION, OR CURTAILMENT OF HABITAT OR RANGE

Climate change is driving the fine-root death that results in yellow-cedar decline (Oliver and Hennon 2013, Hennon et al. 2012). Anthropogenic greenhouse gas emissions are rapidly altering the climate of southeast Alaska and coastal British Columbia, causing progressively widespread yellow-cedar decline. Due to climate change, scientists project that the frequency of occurrence of yellow-cedar trees will decrease by as much as 75% by 2085 (Hamann and Wang 2006).

Yellow-cedar decline is the result of freezing injury to the tree's fine roots when soils drop below the tree's physiological cold tolerance threshold during periods of low snow cover, during spring freeze-thaw cycles, in areas where the soils are wet, or where a lack of canopy cover creates a microclimate that encourages penetration of freezing temperatures into the soil surface.

Climate change will increase the intensity and spread of yellow-cedar decline that is caused by spring freezing injury through three primary mechanisms: (1) increased and earlier spring freezing events, (2) warmer winters leading to reduced snow cover, and (3) variations in soil drainage.

1. The Earth's Changing Climate

Human activities continue to release massive amounts of greenhouse gases into the atmosphere, primarily through the burning of fossil fuels, cement manufacturing and deforestation, with the rate of emissions increasing by 3% each year, well above that predicted under most climate scenarios (Hansen et al. 2013).

The last twenty years have been the warmest period in the entire global instrumental temperature record. The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) concludes that most of the observed global temperature increase since the mid-20th century is due to increases in anthropogenic greenhouse gas concentrations.

Plant health is predicted to suffer under climate change through a variety of mechanisms, from accelerated pathogen evolution and northward spread of pathogens, to increasing abiotic stress due to mismatches between biota of an ecosystem and the climate, such as earlier springs and changes in freeze-thaw cycles (Ahanger et al. 2013).

Anthropogenic greenhouse gases are projected to result in air temperature warming of more than 3 degrees C by 2100, while temperature increases of just 1.5 – 2.5 degrees C are projected to result in significant ecological consequences (IPCC 2011). The rate of climate change projected to occur over the next century is an order of magnitude greater than the average rate occurring since the last glacial maximum. Many species of plants and animals will be incapable of successfully tracking and adapting to such changes through migration to more suitable habitats (Spittlehouse 2008, Aitken et al. 2008).

Species that will be the most vulnerable to climate change will be those that are large and long-lived, with specialized habitats, limited mobility, and low regeneration rates (Lenoir et al. 2008).

Further, trees that have late sexual maturity, with small populations and fragmented ranges, are less likely to be able to adapt or migrate in response to climate change (Aitken et al. 2008).

2. Climate Change in Southeast Alaska and British Columbia

Warming associated with climate change is amplified in northern regions. Over the past 50 years, high-latitude regions have warmed more than any other region worldwide. Future increases are projected to continue to be proportionally greater at higher latitudes, with Alaska warming at least twice as much as the rest of the world during the 21st century (Kattsov and Kallen 2005). (Figure 16). Under current emissions scenarios, average annual temperatures in Alaska are projected to rise by an additional 1 to 2 degrees C by 2050, and another 3 to 4 degrees C by the end of the century. Even with substantial emission reductions, average temperatures in Alaska are projected to warm by 2 to 3 degrees C by the end of this century (Chapin et al. 2014).

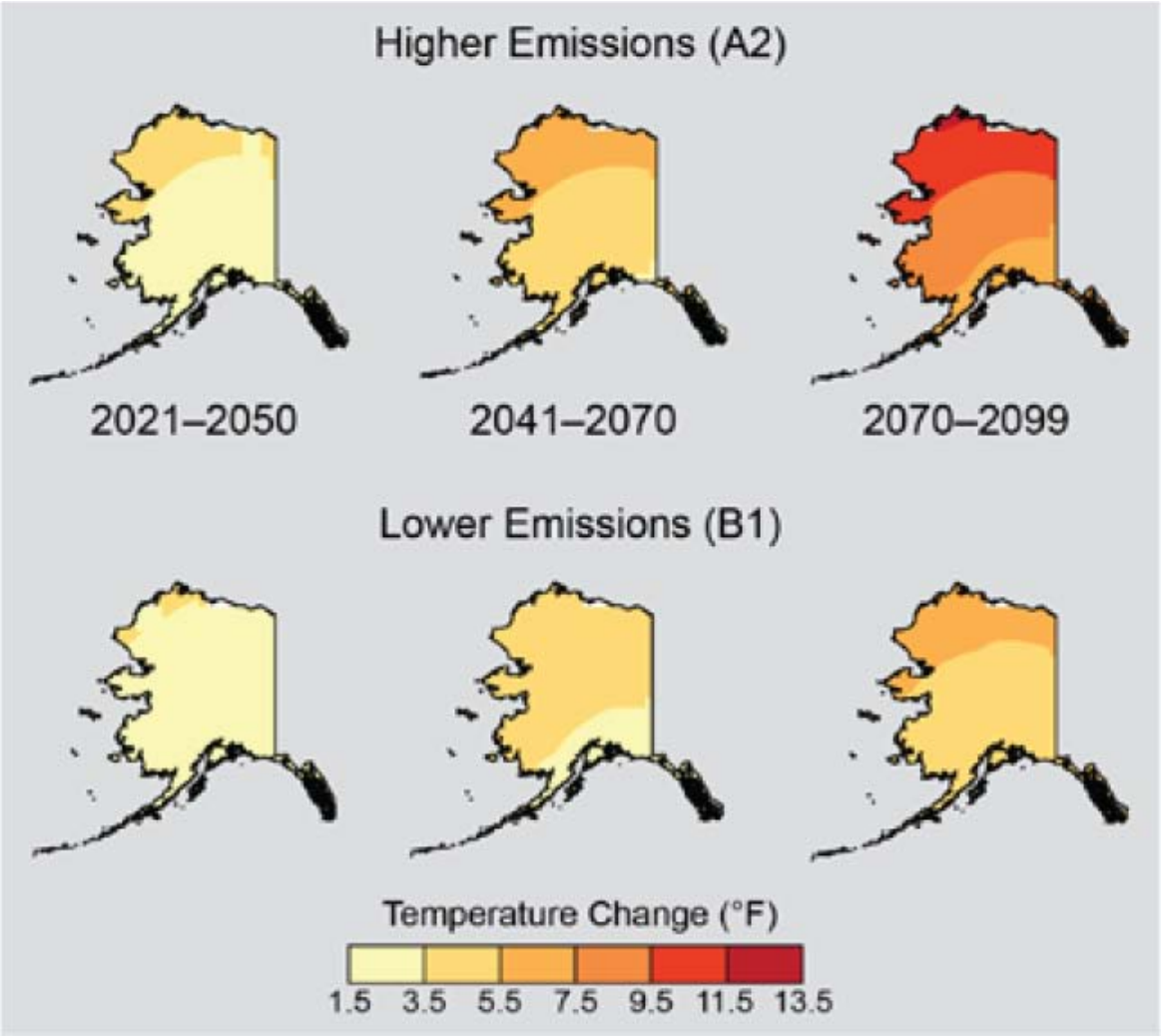

Figure 16: Northern latitudes are warming faster than temperate regions, and Alaska has already warmed much faster than the rest of the country. Maps show changes in temperature relative to 1971-1999, projected for Alaska in the early, middle, and late parts of the century, if heat trapping gas (GHG

emissions) continue to increase (higher emissions A2), or are substantially reduced (lower emissions, B1). Source: Chapin et al. 2014 as adapted from Steward et al. 2013.

Average precipitation in Alaska is projected to increase, but with increased evaporation actually reducing water availability for most of the state. As a result of these changes, the risk of wildfire and insect outbreaks will increase (Chapin et al. 2014).

Warming temperatures pose a serious threat to areas of Alaska where average temperatures are very close to freezing, as is the case in southeast Alaska. Here, a small change in temperature can have major impacts. Juneau's average winter temperature rose by 0.9-1.7 degrees C over the past 60 years (Figure 17; Kelly et al. 2007), with 2013 being the first year in which the average temperatures remained above freezing. January 2014 was the second warmest since 1944, while the average daily low of 33.5 degrees F was the warmest on record.

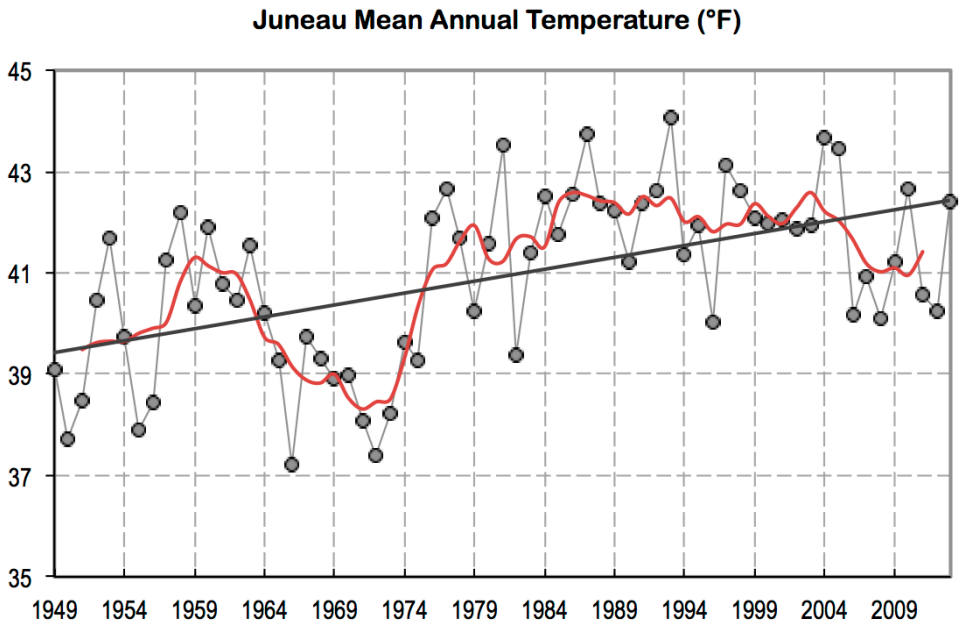

Figure 17: Mean annual temperature in Juneau from 1949 to 2013. Source: Alaska Climate Research Center

The reduction of the length of the snow season in Alaska (Liston and Hiemstra 2011) will impact timing of spring warm-up and periods of freeze thaw. The average winter snowfall at sea level in the City and Borough of Juneau decreased from 277 cm to 236 cm over the past 60 years. However, overall precipitation increased, with a shift to more rain. Average winter precipitation including rain and snow (reported as inches of liquid water), increased by 6.6 cm or more (Kelly et al. 2007). For example, precipitation in Juneau in January 2014 totaled 25.8 cm, nearly double the normal amount. This is a new record, but snowfall constituted only 11.9 cm, which is only 17% of the normal amount (Alaska Climate Research Center 2014).

Climate models predict that warming will continue under future greenhouse gas emissions scenarios. Overall, models predict that the city of Juneau will have warmer and wetter weather, especially in fall and winter. The IPCC predicts a temperature increase of 5.5 degrees C for

southeast Alaska by the end of the 21st Century, accompanied by 50 to 70 fewer days below freezing per year (Kelly et al. 2007).

Climate change in British Columbia will follow a similar trend. Mean annual temperature and precipitation are expected to increase on average by as much as 4 degrees C, and by 16% respectively by the 2050s, with the largest temperature increase in coastal areas, where yellow-cedar decline is already occurring (Murdock and Spittlehouse 2011). As the climate of coastal British Columbia has warmed, there are fewer days with temperatures below freezing (Daniels et al. 2011). These above-average temperatures result in more rain than snow, a reduced snowpack and earlier snowmelt (Mote et al. 2005). The intensities and frequencies of extreme climatic events, such as late-winter thaws and freezes, have increased disproportionally relative to climatic means.

Studies show that yellow-cedar productivity is influenced by the maximum winter temperature, with cooler values resulting in the highest productivity (Russell and Krakowki *in* Harrington et al. 2010). Summer moisture, snowpack, and spring and autumn temperatures are also strong drivers of productivity, correlating with both growing season length and early and late frost damage to the fine root system.

Climate change will substantially increase the number of frost-free days in the forests of coastal Alaska and British Columbia (Meehl et al. 2004), with precipitation falling as rain rather than snow due to a small shift in temperatures that will push the average winter temperature above freezing. At low-elevation weather stations in southeast Alaska, temperatures have historically hovered just around freezing during the winter months (Beier et al. 2008). A shift to above-freezing winter temperatures will have widespread and major consequences for yellow-cedar.

3. Climate Change and Yellow-cedar Decline

Worldwide, tree distribution is primarily shaped by both climate and soil properties, and climate change is the driving factor behind the precipitous rate of yellow-cedar decline (Hennon et al. *in* Harrington 2010; Mathys et al. 2014).

Climate change affects a tree species in four major ways. First, it can significantly reduce the tree's capacity for growth and reproduction. Second, climate change can result in mismatches in climatic cues for physiological responses. This is one of the primary reasons for yellow-cedar die-off, where the timing of winter/spring dehardening of fine roots no longer corresponds with climate-associated snowcover and spring thaws. Thus, the tree is unable to adapt physiologically to shifts in the freeze-thaw cycle due to climate change. Third, climate change, such as warming and changes in precipitation that stress a tree species, may also favor the spread and growth of insect and fungal pathogens, with cumulatively lethal effect. Some examples of climate-dependent increase in disease and infestations are increased fungal pathogens and spruce beetle outbreaks. Finally, a changing climate increases the frequency and intensity of total area of forest fires (Bunnell and Kremsater 2012). Fire is not considered a concern for yellow-cedar throughout most of its range, but may threaten trees growing in the lower 48 states and in southern British Columbia.

The Forest Service has determined that over 70% of yellow-cedar trees have died in stands with yellow-cedar decline and that global warming over the next 100 years will greatly increase the area in which trees will suffer decline symptoms (Hennon et al. 2008, Forest Service 2013a). Long-lived conifers may be especially maladapted to a changing climate, and are unlikely to be able to simply move northward or upward with climate change, because soil formation at high latitudes and high altitudes is slow (Bunnell and Kremsater 2012). Additionally, because yellow-cedars are so long-lived, and very slow growing, projections for decline must be made for more than 100 years in the future. Fragmentation of the landscape due to timber harvest, human development, or road building may further prevent species adaptation and migration to more suitable regions as a response to climate change (Lenoir et al. 2008, Bunnell and Kremsater 2012).

As a tree that depends on exceptional longevity, resistance to pests, and adaptation to marginal site conditions, the yellow-cedar has little potential to move or adapt to rapidly changing climatic conditions. Historically, mature yellow-cedar trees have a very low mortality rate, and the widespread area of yellow-cedar decline means that the species is unlikely to survive into the species' biologically appropriate future if anthropogenic greenhouse gas emissions continue at their current rate. In fact, the tree is expected to suffer a 75% decrease in frequency by 2085 (Hamann and Wang 2006). This will be followed by a more gradual decline for remaining trees, where existing trees in some areas that remain suitable for a longer period of time will live out their lifespan but with little or no regeneration, resulting in slow but inevitable extirpation of the species. A catastrophic disease event, enabled by climate change, could result in additional precipitous declines in the future (Sturrock et al. 2011).

a. Reduced Snow Cover

A key threat to yellow-cedar habitat has been reduced snow cover accelerated by climate change. Snow insulates soil and acts as a buffer between freezing and thawed soil temperatures. The presence or absence of snow is closely linked to historical yellow-cedar distribution, and to current observations of yellow-cedar decline (also see Section II). When snow is not present, soil temperatures often drop below the lethal threshold (-5 degrees C) in the shallow-rooting zone for cedar (7. 5 cm depth) during late winter and early spring (Hennon et al. 2010). When snow is present, shallow soils retain a temperature just above freezing. Yellow-cedar decline and the original post-Holocene era distribution of yellow-cedar are linked to snow cover and drainage conditions (Figure 18). Clearly, the presence of snow is critical to preventing fine-root freezing injury.

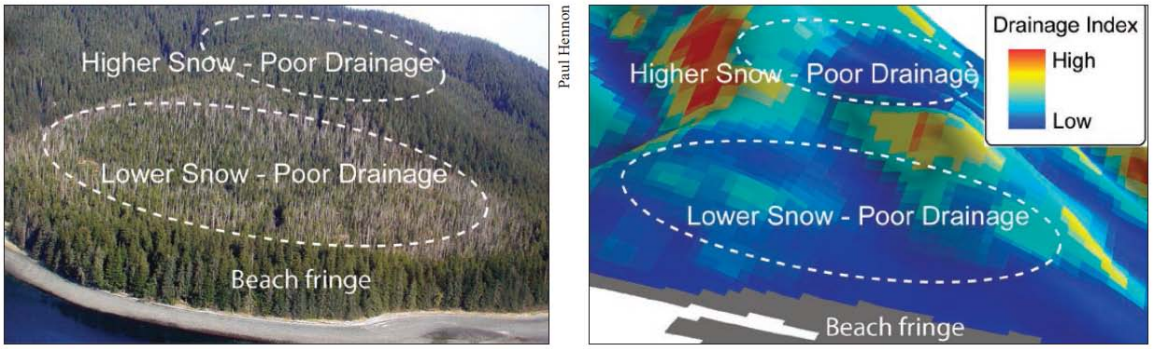

Figure 18: Drainage classes at Poison Cove watershed on Chichagof Island, Alaska. Yellow-cedar trees have died in the areas with less snow and poor drainage. Trees remain living in areas with more snow and poor drainage at slightly higher elevation where the snowpack persists later in the spring and protects shallow roots from lethal freezing injury. Source: Oliver and Hennon 2013.

Research finds that snow protects yellow-cedar from decline by delaying the dehardening process and/or protecting fine shallow roots from freezing. As little as several centimeters of snow may be all that is required to buffer the soil temperature enough to prevent root injury. In a study investigating the effects of simulated snow cover on yellow-cedar roots, Schaberg et al. 2008 found that the roots of yellow-cedar seedlings could tolerate soil temperatures down to -5 °C. When soil temperatures fell below this threshold on plots without simulated snow, roots were severely injured and seedlings died (Figure 19; Schaberg et al. 2008).

Figure 19: Insulating presence of snow protects seedlings from freezing injury. Blocks of seedlings on the left and middle were protected by perlite to mimic snow. These seedlings remained healthy because soil temperatures never dropped below -5 degrees C. Seedlings on the right were unprotected and the soil dropped below the temperature threshold of mortality. Source: Forest Service at http://www.fs.usda.gov/detail/r10/forest-grasslandhealth/?cid=fsbdev2_038760

Thus, reliable snow cover from February through March or April allows yellow-cedar to survive a period of potential vulnerability during spring freezing episodes. A loss of snow cover during these time periods makes the trees vulnerable to freezing injury and death. When snow is present after the last hard freeze in the spring, this provides protection for yellow-cedars from root injury.

A lack of insulating snowpack in spring can explain the broad spatial distribution of yellow-cedar decline on the landscape (Figure 19; Hennon et al. 2008). In areas in which the level of snow cover is insufficient to protect roots from freezing injury, suitable habitat for yellow-cedar is limited to moderately- to well-drained soils where roots can penetrate to deeper soil horizons and thus avoid freezing injury. In areas with adequate snow cover yellow-cedar trees can continue to survive at poorly drained sites, unless they are outcompeted.

Normally, snowpack insulates fine roots from extreme cold. When snowpack is absent, freeze events are fatal to the unprotected roots of yellow-cedar. Snow, and reduced snow cover, has a major influence on yellow-cedar health and decline (Figures 19 and 20). Snow can be modeled at the regional or small island spatial scale. Mapping of temperature/snowpack and topographic layers clearly demonstrate that warming temperatures—and snowpack—are critical factors in yellow-cedar decline.

In western North America, regional warming resulting in decreased snowpack and consequent increased drought stress appears to be the dominant cause of increasing tree mortality, especially of large trees. In a long-term study from 1977 to 2007, van Mantgem et al. (2009) found that a temperature increase of 1 °C across the coast of British Columbia was enough to significantly reduce winter snowpack, causing earlier snow melt and increasing the duration of summer droughts in the region (van Mantgem et al. 2009). As discussed in great detail throughout this petition, the current consensus of the scientific community is that yellow-cedar decline is a direct result of regional climate change, specifically loss of snow cover and fine root freezing (Beier et al. 2008). Figure 20 illustrates the link between snow cover and yellow-cedar decline, with areas of red indicating yellow-cedar mortality.

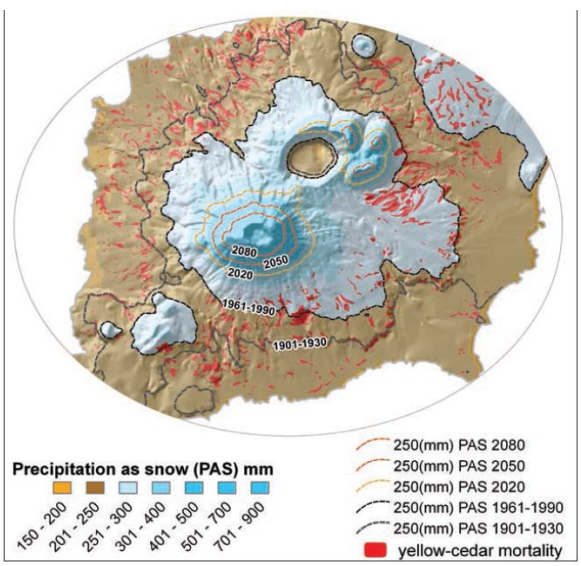

Figure 20: The distribution of yellow-cedar decline on Mount Edgecumbe near Sitka, Alaska, is mapped from color infrared photography. The annual precipitation as snow between 1961 and 1990 is shown with colors indicating the values above (gray, protects yellow-cedar) or below (dark gray, inadequate) the threshold of 10 inches of annual precipitation as snow. Forecasts for this modeled snow threshold are indicated by dashed lines. Source: Dustin Wittwer *in* Oliver and Hennon 2013.

Figure 21 below projects snow decline in the future, and how a loss of snow-cover may impact yellow-cedar. This figure demonstrates that yellow-cedar will decline significantly under future climate change scenarios, occupying very little of its current range and even less of the range it once occupied in the late 1880s and early 1900s. By the year 2080, yellow-cedar will be restricted to just fragments of suitable habitat.

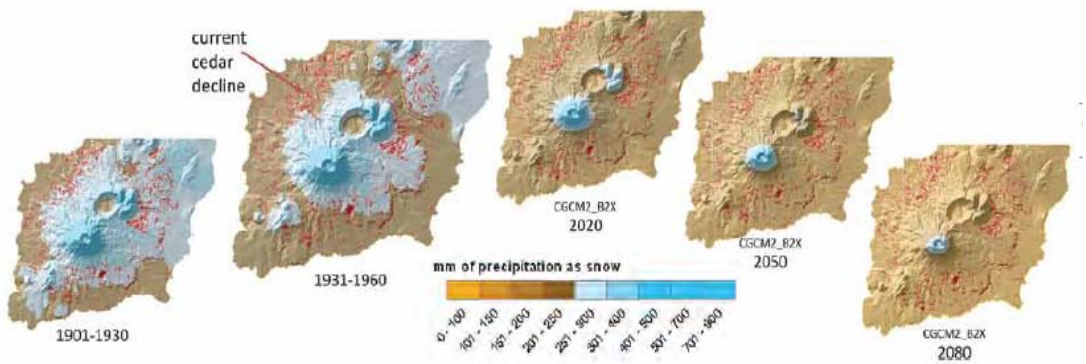

Figure 21: Past and projected (CGMC2 B2 scenario shown here) annual snow accumulation using PRISM data, with downscaling by an elevational adjustment (Wang and others 2006). Light blue zones represent sufficient snow to protect cedar from spring freezing injury (annual precipitation as snow = 2500 mm); current areas of cedar decline mapped from aerial photographs are shown in red. Note the abundance of habitat protected by snow (shades of blue) in the early 1900s and progressive shrinking of habitat through this sequence, to being nearly absent by 2080. Data sources: PRISM Group, Oregon State University; IPCC 2001. Source: Hennon and Wittweb 2013.

b. Soil Type and Drainage

In southeast Alaska, slope and soil properties, including peat accumulations, produce gradients of soil drainage that are largely responsible for driving forest productivity. Topography, moisture, elevation, and humus quality are the primary environmental variables that determine species composition in the forest of southeast Alaska (Ver Hoef et al. 1988). Forest types in the area range from large-stature, closed canopy forests on well drained soils to stunted, open canopy forests on saturated organic soils (Ver Hoef et al. 1988).

Historically, yellow-cedar has preferred wet soils, typically reaching its greatest abundance here relative to other trees (Hennon et al. 2008). The wet soils in yellow-cedar habitat were probably present several thousand years before the start of yellow-cedar decline, when cool and wet climatic conditions along the Pacific coast facilitated extensive peat development (Heusser et al. 1985). The cool, moist climate during the late Holocene created the bog and forested wetlands that favored the establishment of yellow-cedar, which was competitive at those sites due to its fine-root system's ability to access nitrogen (D'Amore et al. 2009). Open canopy conditions on boggy sites created a more extreme microclimate, allowing for greater warming during late winter and early spring, but also meaning that during cold temperatures, freezing conditions were able to penetrate more deeply into the soil (Hennon et al. 2010).

Variations in soil drainage play a critical role in yellow-cedar decline and health, and are also influenced by precipitation changes due to climate change. Current yellow-cedar decline is most strongly associated with trees growing on wetter soils, with a soil saturation threshold found to separate living and dead forests (Figure 22). Past a certain threshold, soils become more favorable to other tree species, which outcompete yellow-cedar for growth and space. Thus, as the climate warms, the specialized niche of soils where yellow-cedar is able to survive freezing, but still competitive with other tree species, becomes increasingly rare.

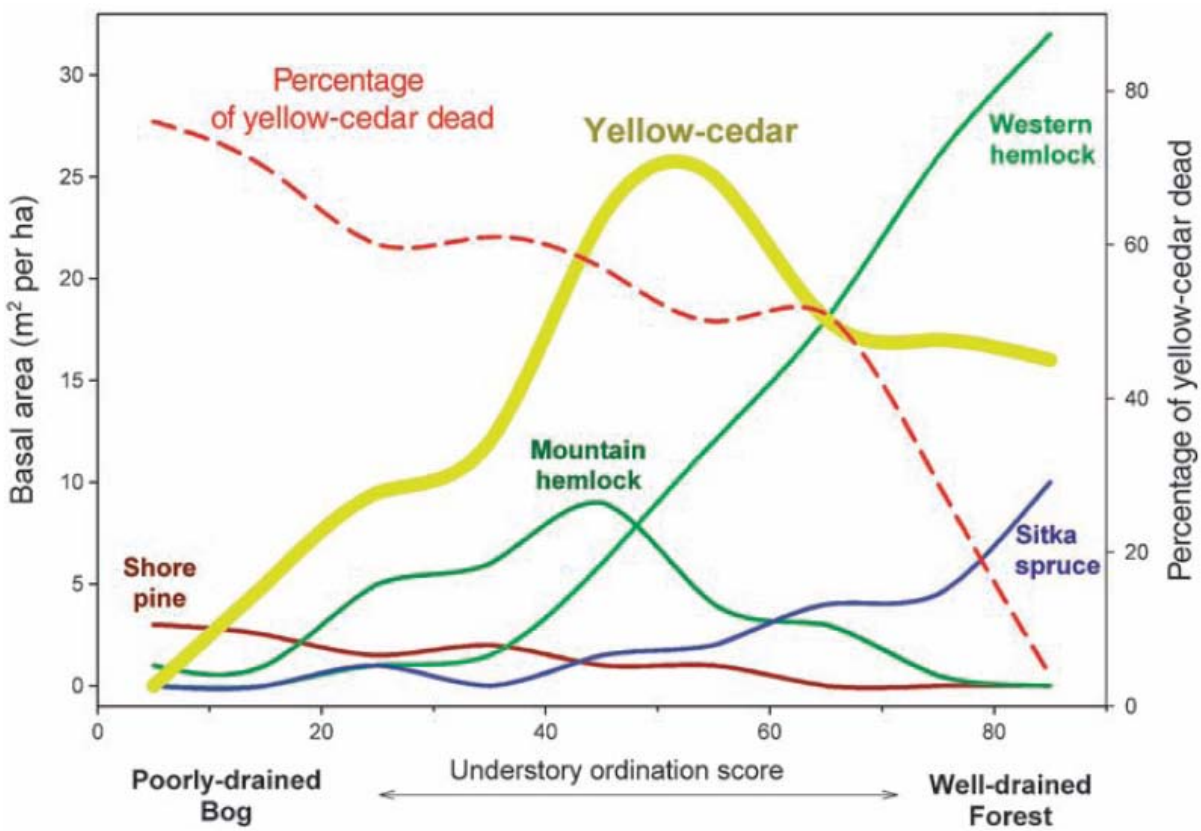

Figure 22: Yellow-cedars' optimum edaphic (soil-related) niche and the occurrence of yellow-cedar mortality along the soil-drainage gradient. The percentage of dead yellow-cedar basal area reveals an apparent threshold of drainage, beyond which yellow-cedar is healthy but outcompeted by faster-growing tree species. Source: Hennon et al. 2012.

The link between site drainage and yellow-cedar decline was noted early in aerial photographs compiled from 1927, 1948, 1965 and 1976, that show the peripheral boundaries of yellow-cedar mortality expanding over a 60-year period at all sites (Hennon et al. 1990). Mortality spread from poorly-drained sites to sites with better drainage, generally upslope (Wooton and Klinkenberg 2011).

Microclimate changes due to reduced canopy cover play an important role in decline. Tree growth rates, standing biomass of live trees, and canopy cover are all reduced in wet soils, due to less nutrient cycling and more shallow rooting depth (D'Amore and Hennon 2006). Hennon et al. (2010) found that estimated canopy cover at a site was highly correlated to basal area of live trees for all species along a soil drainage gradient. Reduced canopy cover was associated with

more extreme microclimates on the ground, exacerbating extreme highs and lows in temperature. As more yellow-cedar trees die, canopy cover decreases, further increasing the high-low temperature extremes on the ground that promote yellow-cedar decline.

Thus, there is a tight feedback related to wet soils and yellow cedar decline. In wet soils with historically little canopy cover, the lack of canopy cover causes small shifts in microclimate that lead to yellow cedar decline, resulting in further reduced canopy and the outward spread of yellow-cedar decline (Hennon et al. 2010). This can be visualized in Figure 15, which shows the typical inward-out spread of yellow cedar decline at a wet, low-elevation site.

Soil type and drainage should be introduced into models at the fine spatial scale. Yellow-cedar trees are primarily found in an area called the Marine West Coast Forest, the most productive forested zone in the Pacific Northwest, with high annual precipitation. Temperate coastal forests contain soils that vary from infertile, well drained shallow soils to nutrient-rich bogs with high organic matter content (Mathys et al. 2014). Yellow-cedar in well-drained soils appears resilient to decline, even when snow-cover is inadequate for yellow-cedar growing in wet soils, although competition with other tree species may limit the tree's establishment. Yellow-cedar decline is more severe and more strongly linked to snow cover at wet and boggy sites.

c. Analogous Species: Yellow Birch

In a similar well-documented climate-related decline, extensive dieback due to climate change has also been recorded for yellow birch (*Betula alleghaniensis* Britt.) in the Northeastern United States. Yellow birch decline occurs due to changing spring conditions, where prolonged winter thaws are followed by sharp freezing temperatures, which result in fine-root damage and tree death. Yellow birch decline has resulted in a 19% loss of the growing stock of the tree in North America (Ward and Stephens 1997), with major economic losses. As with yellow-cedar, yellow birch has a shallow fine root system, and is especially vulnerable to freezing injury when snow cover is absent or inadequate (Bourque et al. 2005). Also, similar to yellow-cedar, dieback first began in the northern parts of the tree's range, with up to 95% of trees affected (Bourque et al. 2005). Another economically and culturally important tree of northeastern North America, sugar maple (*Acer saccharum*), is projected to decline by over 90% by 2100 due to climate change (Iverson and Prasad 2001).

These species show that there is strong precedent for a climate-change link to extensive tree death, especially for tree species found at high altitude, northern, and/or marginal habitats, where a competitive strategy of shallow fine-roots and early dehardening are used to take advantage of early spring nutrient uptake. This type of strategy also makes trees especially vulnerable to reduced snow cover. Like yellow-cedar, yellow-birch shows few signs of adaptation or migration in response to climate change.

4. Projected Range-wide Decline of Yellow-cedar

a. Current Decline

Yellow-cedar decline in Alaska occurs most intensely at lower elevations and on wetter soils, with little decline above about 200 m (Hennon and Wittweb 2013). Meso-scale mapping shows a correlation between decline and slope aspect, with yellow-cedar decline occurring at higher elevations on warmer southerly aspects (Hennon and others 2010, Lamb and Wurtz 2009), and decline is more strongly associated with gentle slopes compared to steep slopes (D'Amore and Hennon 2006, D'Amore and others 2009). Decline is strongly associated with snowpack, soil and air temperatures, and wetter soils.

b. Modeling and Projecting Yellow-cedar Decline

Most climate change scenarios predict a dramatic reduction in yellow-cedar range. The response of vegetation to climate change is likely to be complicated with varying outcomes; however, generally species' ranges are expected to shift northward and upward in elevation to cooler areas, with recent studies documenting these patterns (Aitken et al. 2008, Lenoir et al. 2008). This shift may be difficult if higher elevation soils or conditions are not appropriate for yellow-cedar, which requires a highly specialized ecological niche to survive. Thus, models based merely on future "climatic envelopes" do not adequately assess the future survival of the species, but merely provide a rough projection of the future.

Snowpack and drainage are the two controlling factors to determine landscape suitability for yellow-cedar, and are essential factors to developing management strategies for long-term conservation of yellow-cedar (Oliver and Hennon 2013). Indeed, there is a close association between yellow-cedar decline and the lowest snow accumulation zone (Schaberg et al. 2008, Hennon et al. 2010, Oliver and Hennon 2013). Mapping shows that there is massive projected range-wide decline by 2080, as projected snow cover greatly declines (Oliver and Hennon 2013).

Climate change is likely to proceed at a pace that exceeds the ability of yellow-cedar to regenerate at more suitable locations. For example, Hamann and Wang developed a model based on climatic factors alone, which predicts a 75% decline in the frequency of yellow-cedar by the year 2085 (Figure 23), and matches the results of the PRISM snow-accumulation model (Hamann and Wang 2006). The authors of this study note that modeling is based merely on climate profiles, and does not consider other important factors for the establishment of yellow-cedar such as adequate snow cover, acidic or boggy soils, soil drainage, and complications to regeneration such as Sitka deer browsing, or competition with other tree species. As such, it is more useful for predicting how rapidly the climate in areas where yellow-cedar are now living will change to the point of initiating yellow-cedar decline, than for predicting where yellow-cedar may regenerate in the future.

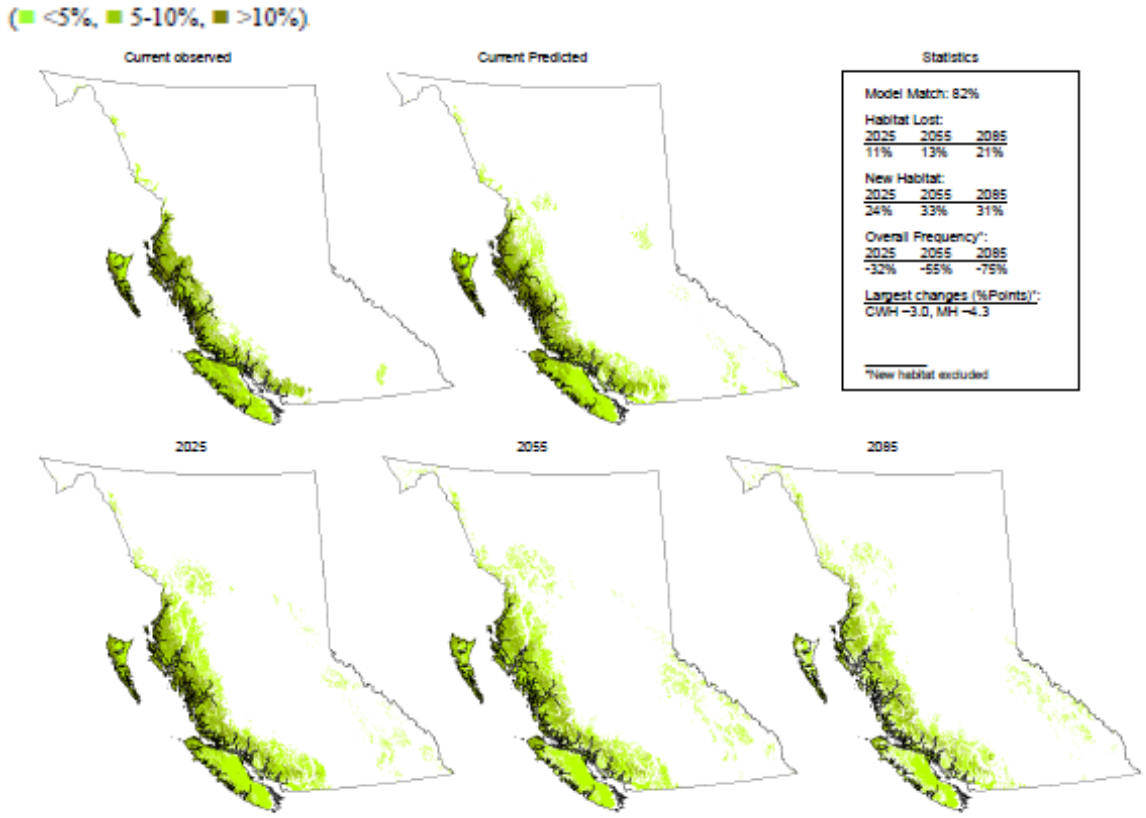

Figure 23: Observed and predicted frequency for yellow-cedar. "Model Match" is the correctly predicted habitat, based on current climate (1961-1990 normals) as a percentage of the observed species range. "Habitat Loss" is the area predicted as unsuitable habitat for the species under climate change as a proportion of the total current habitat. "New Habitat" is the area predicted as suitable habitat under climate change, where the species is currently not present. The authors of this study note that a species is unlikely to colonize most of this area within a few decades. "Overall Frequency" is a weighted average of predicted frequency changes where the species is already present. This excludes new habitat areas, as it is unlikely that yellow-cedar will colonize most of this area. Source: Hamann and Wang 2006.

5. Habitat Threats Summary

Greenhouse-gas-driven climate change is causing significant and widespread changes to yellow-cedar habitat throughout its range. The species cannot adapt to these rapid changes, is as apparent from its current decline. Thus, yellow-cedar is in danger of extinction throughout all or a significant portion of its range as a result of habitat modification.

B. OVERUTILIZATION OF THE SPECIES FOR COMMERCIAL, RECREATIONAL, SCIENTIFIC, OR EDUCATIONAL PURPOSES

Logging threatens the continued survival of yellow-cedar, particularly because it targets long-lived trees that may be able to withstand climate change impacts while greenhouse gas emissions are reduced. These trees would provide an important source of genetic material for future regeneration of the species. In the 2008 Tongass Land Management Plant (TLMP), the Forest Service developed an integrated old-growth conservation strategy of large, medium, and small reserves to protect and maintain old-growth habitat in southeast Alaska. The goal was to maintain the mix of habitats at different spatial scales capable of supporting the full range of naturally occurring flora, fauna, and ecological processes (Forest Service 2008). However, the large scale and rapid loss of yellow-cedar trees in landscapes that are protected from timber harvest demonstrates the inadequacy of current measures in the TLMP to protect cedar habitat types from climate change (Hennon et al. 2008). Moreover, healthy yellow-cedar trees continue to be logged in disproportionally high numbers under current management. Approximately 274,377 total acres, or 10% of the Tongass National Forest is expected to be subject to timber harvest in the next 100 years (Johnson 2013). There is great pressure on yellow-cedar for timber harvest due to the wood's desirable characteristics and high value at market (Figure 25; Green et al. 2002). Yellow-cedar constitutes just 9% of the growing stock on unreserved national forest land in southeast Alaska (van Hees and Mead 2005), yet it accounts for a disproportionately high percentage of timber harvest. This "high-grading" of yellow-cedar is unsustainable and is accelerating the species' decline, and limiting any chance of future recovery.

1. The Tongass National Forest Timber Sale Program Targets Areas with Yellow-Cedar for Large Timber Sales

Western redcedar and yellow-cedar drive the layout of most major timber sales in the Tongass (Carstensen and Christensen 2008, Forest Service 2008) because of their higher economic value, as shown in Figure 25 below. From 2010 through 2013, the average Forest Service sale price for yellow-cedar was $140.23 per thousand board feet (MBF). Western redcedar is the second most valuable species, with an average sale value of $116.21 per MBF from 2010-2013 (Carstensen and Christensen 2008, Forest Service 2008, Forest Service Cut and Sold Reports FY 2010-2013 2013). For comparison, western hemlock sold for a mere $3.76 per MBF. These price differentials are significant because Congress has prohibited the Alaska Region of the Forest Service from advertising deficit timber sales,[1] which has greatly reduced the Tongass National Forest's ability to sell timber (Housely et al. 2007). As a result, timber sale planners often target yellow-cedar for removal because it is the only species that generates positive appraisals across the Tongass National Forest (Housely et al. 2007). Conversely, western hemlock, which comprises roughly half the volume in an average Tongass National Forest timber stand, is not worth the cost of cutting (Housely et al. 2007).

[1] *See, e.g.* FY 2003 Interior and Related Agencies Appropriations Act, § 318, PL 108-7; Consolidation Appropriations Act of 2012, PL 112-74; 125 STAT 1042, § 414 ("No timber sale in Alaska's Region 10 shall be advertised if the indicated rate is deficit").

A significant factor that increases the value of yellow-cedar is a Congressional exemption from the domestic processing requirements that apply to other Tongass National Forest tree species. This exemption allows timber operators to freely export unprocessed Alaska yellow-cedar trees to foreign purchasers.[2] Timber markets favor unprocessed raw log exports, and Tongass National Forest timber sale purchasers are likely to export as much as they can.[3] The Forest Service acknowledges that the premium value for yellow-cedar and the Congressional export authorization ensure that yellow-cedar always has the highest value in a timber sale (Wilson 2002). Thus, because of the prohibition on deficit sale advertisements and the particularly high value of yellow cedar for raw log export markets, Tongass National Forest timber sales must target a combination of western redcedar and yellow-cedar in order to generate positively appraised timber sales.

This dynamic leads to yellow-cedar trees being disproportionately logged, in a strategy dubbed "high-grading." In 2002 and 2006, the Forest Service evaluated the amount of cedar scheduled for removal in timber sales in response to public concerns about high-grading yellow-cedar and western redcedar (Wilson 2002). The report estimated that although yellow-cedar comprised only 9.7% of the net volume of growing stock on timberlands and western redcedar comprised only 5.9%, the agency was removing 19.6% of each species (Wilson 2002).

The agency provided several interrelated explanations for the higher levels of cedar harvest. First, the report indicated that the agency was high-grading both cedar species on a geographic scale because timber harvest was occurring primarily (94% of the volume) in the southern portion of the Tongass National Forest, where there is a higher percentage of both cedar species (Wilson 2002). In the northern Tongass, yellow-cedar comprises 7% of the net volume of growing stock and there is no western red cedar, while yellow-cedar comprises 13.7% of the net volume of growing stock in the central Tongass and 9.5% in the southern Tongass (Wilson 2002). In 2007, the agency conducted an economic analysis of timber sales that illustrated that the Tongass National Forest needed to target a combination of redcedar and yellow-cedar on the southern and central Tongass in order to generate positively appraised timber sales (Housely et al. 2007). Since that time, nine of the ten largest Tongass National Forest timber sales have been planned by southern and central Tongass ranger districts.

Second, the report indicated that the agency was high-grading both cedar species at a finer scale because timber sale planners were selecting project areas with higher than average cedar components, or designating the removal of a greater proportion of cedar than naturally occurred within a project area in order to address timber sale economics concerns (Wilson 2002). For example, many of the largest timber sales occur in the Thorne Bay Ranger District, which is located within the southern Tongass inventory area where yellow cedar-comprises 9.5% of net volume of growing stock (Wilson 2002). The two largest timber projects implemented by the Tongass National Forest over the past five years – the 2009 Logjam Timber Project and 2013 Big Thorne Project – also occur within the Thorne Bay Ranger District. The species composition for the Logjam project was comprised of 11% yellow-cedar and 34% of both cedar species (Sheets 2009). Logjam Timber Project cutting units specifically targeted healthy yellow-cedar

[2] *See, e.g.* FY 2003 Interior and Related Agencies Appropriations Act, § 318, PL 108-7;

[3] USDA Forest Service. 2012. Tonka Project Final Environmental Impact Statement, Volume I at 3-16-17. Tongass National Forest, Petersburg Ranger District. R10-MB0705c. Ketchikan, AK: Alaska Region. March 2012.

stands occurring in areas of adequate soil drainage where cedar decline is less likely to occur (Forest Service 2009a). For the 2013 Big Thorne Project, the project area species composition was comprised of 17% Alaska yellow-cedar and 28% of both cedar species (Forest Service 2013b).

Similarly, ongoing or planned projects in central Tongass ranger districts also occur in areas with disproportionately high levels of yellow-cedar and western redcedar (Myers et al. 2011). The pending Navy Timber Project occurs in a project area where the species composition consists of 17% yellow-cedar and 19% western redcedar (Forest Service 2009b). Yellow-cedar comprised 17.5% of the volume removed under the final decision for the 2011 Central Kupreanof Timber Project (Forest Service 2011a).

Thus, in the Tongass National Forest, in order to extract the economically valuable yellow-cedar, intact biological communities containing "junk" hemlock are destroyed just to remove a few individual yellow-cedar trees (Carstensen and Christensen 2008), creating ecosystem impacts beyond those to yellow-cedars themselves.

2. Commercial Logging Exacerbates Yellow-Cedar Decline

The large-scale clearcutting of old-growth yellow-cedar forests causes a conversion from yellow-cedar to other species in the newly regenerated stands (Forest Service 1999). In other words, once logged, yellow-cedar trees do not return. Western hemlock and Sitka spruce trees have faster growth rates and higher reproduction rates and thus out-compete yellow-cedar trees in regenerating stands (Hennon et al. 2012).

Deer browse compounds the poor natural regeneration because deer prefer yellow-cedar (Hanley et al. 1989, Stroh et al. 2008).[4] Stroh et al. studied the potential for western redcedar regeneration using deer exclusion studies and came to the conclusion that:

> [t]he likelihood that young, year-round palatable redcedars can escape deer browsing in an understory already severely depleted in resources for deer is understandably very limited. Our results indicate that any effort to restore redcedar generation in old-growth forest patches will need to achieve a significant reduction in deer abundance and maintain this reduction over a long period of time [Stroh et al. 2008].

In the Thorne Bay Ranger District's Logjam project area, regenerated and pre-commercially thinned stands showed a substantial decline in yellow-cedar composition and a large-scale conversion to hemlock-dominated forests after logging (Forest Service 2009a). Yellow-cedar comprises just 1% of the young growth stands in the Big Thorne Project area, and there is an ongoing conversion to spruce-dominated forests (Forest Service 2011b).

[4] *See http://www.fs.fed.us/r10/spf/fhp/cedar/management.html; http://www.fs.fed.us/r10/spf/fhp/cedar/regen.html.*

Further, clearcutting transforms dense forested landscapes into large, open canopy gaps that exacerbate the freeze/thaw cycle responsible for yellow-cedar decline by creating conditions that cause more extreme temperature fluctuations:

> Air and soil temperatures respond primarily to exposure. Open canopies provide inlets for solar radiation that warm vegetation and the soil surface and also allow more rapid loss of energy at night. Dense forest canopies intercept solar radiation by shading during warm periods and insulate the loss of energy during cold periods, thus, creating buffered, less extreme temperature conditions. Soils located under open canopies warm more quickly in spring than the soils in dense canopies, as expressed by the rapid accumulation of soil degree days in the open canopy forest zones. The surface of these soils is also exposed to slightly colder night temperatures due to less insulation from the canopy [D'Amore and Hennon 2006].

Thus, logging not only permanently removes yellow-cedar from the ecosystem in areas where the trees are directly logged; it also exacerbates the climatic conditions that cause root-freezing injury and yellow-cedar decline. For this reason, all remaining living yellow-cedar should be protected from logging in order to: 1) conserve genetic diversity; 2) eliminate stressors related to timber harvest including changes in microclimates and soil chemistry; 3) avoid ecosystem changes such as deeper soil freezing due to loss of canopy cover, reduced snow-cover resulting in increased fine-root death, and changes in understory plants (Hennon et al. 2006, Oliver and Hennon 2013); and 4) prevent fragmentation of the landscape that may further hinder yellow-cedar adaptation and migration to more suitable regions as a response to climate change (Bunnell and Kremsater 2012). However, rather than protecting live yellow-cedar, current timber harvest practices on the Tongass selectively target these vulnerable trees. This overutilization of yellow-cedar for commercial purposes works in concert with climate change to put the species in danger of extinction throughout all or a significant portion of its range.

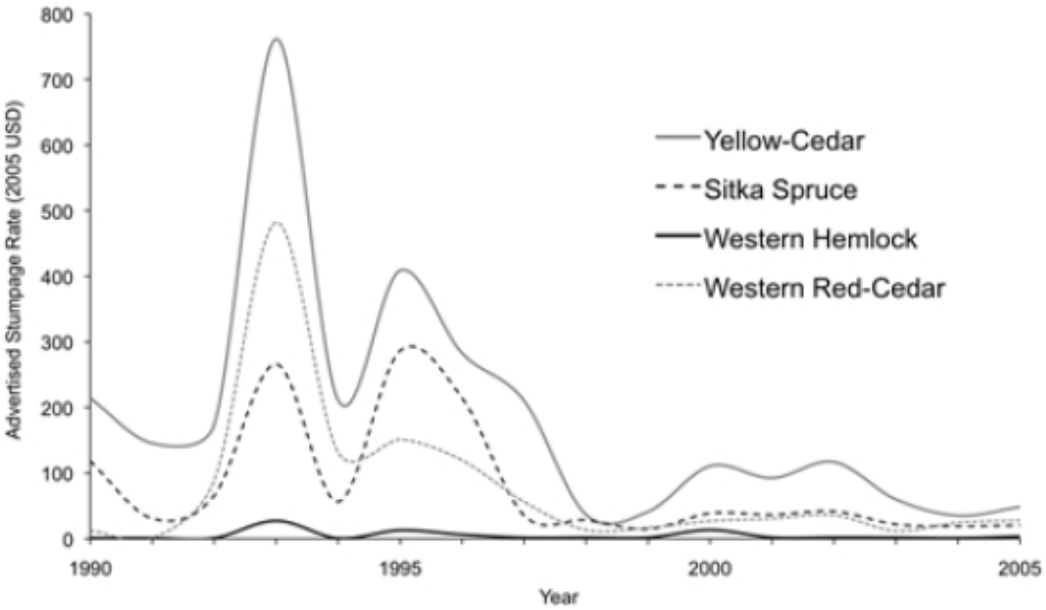

Figure 24: Mean advertised value of stumpage by species in Tongass National Forest timber sales from 1990-2005, in USD (not adjusted for inflation).

Unlike wood from live trees, which sells for high prices, wood from dead trees is rarely utilized, primarily going as firewood or to specialty niche markets including small-scale woodworkers, especially for musical instruments (Green et al. 2002). On the more than half-million acres where yellow-cedars are affected by widespread mortality, an average of 65% of the basal area of yellow-cedars are dead (Hennon et al. 1990). All ages of trees are affected. Managers and researchers suggest that salvage logging of dead yellow-cedar stands could be commercially valuable, help pay for ecological improvements, and direct harvest away from sites where yellow-cedars are not suffering from decline (Green et al. 2002, Donovan 2004, Beier 2011, Hennon and Wittweb 2013). Wood from dead yellow-cedars may be quite valuable, based on past sales (Figure 24 Hennon et al. 2012). However, salvage logging of yellow-cedar is rife with possible ecosystem problems (Mulvey and Lamb 2012) and is logistically difficult, generally involving helicopter-assisted harvest (Hennon et al. 2012).

C. DISEASE AND PREDATION

While yellow-cedar trees have strong resistance to most biotic pathogens, they may become more susceptible to disease under stress. The bright yellow color and strong aroma of yellow-cedar wood come from powerful natural biocides, including nootkatin (Barton 1976). The foliage also contains volatile leaf oils that may repel insect feeding (Cheng and von Rudloff 1970). Due to its natural defenses, at this time yellow-cedar has few serious problems with insect or fungal pests, although the paradigm shift in the occurrence of plant diseases due to climate change could increase the risk of healthy trees succumbing to what were once minor diseases.

During rigorous studies, biotic or contagious organism were ruled out as the primary cause of yellow-cedar decline (Hennon and Shaw 1997, Hennon et al. 2006). Researchers evaluated the following groups of organisms for their role in yellow-cedar decline, and ruled out each as a causative agent based on inoculation studies, or lack of association with affected tissues or areas of dying forests (Hennon et al. 2006): higher fungi (Hennon et al. 1990a, 1990b); oomycetes (Hennon et al. 2006); insects (Shaw 1985); nematodes (Hennon 1986); viruses and microplasmas (Hennon and McWilliams 1999); and bears (Hennon et al. 1990b).

Pathogens identified in diseased and dying yellow-cedar may play a small secondary role in yellow-cedar decline (Hennon et al. 1990b). While abiotic stresses are generally the root-cause of forest health problems, climate induced stressors are responsible for triggering many recent extensive forest insect and disease outbreaks (Allen 2009). Disease organisms often spread northward with climate change and tend to infect host trees that are already stressed by environmental factors (Sturrock et al. 2011). Some species of pathogens only impact a tree when it is stressed by other factors such as temperature extremes, or changes in the bioclimatic conditions. It is likely that the additive impacts of pathogens on tree species will increase in intensity with climate change, both independent of and in connection with fine-root freezing injury, the primary driver of yellow-cedar decline. When acting independently of climate effects, pathogens may affect yellow-cedar growing in sites where it is currently well-adapted, resulting

in increased tree death and exacerbating currently observed climate impacts on the species (Ahanger et al. 2013). A review of the known pathogens leading to increased morbidity in yellow-cedar and their potential future impacts on yellow-cedar mortality follows.

1. Root Disease

Armillaria species cause root disease in many forests worldwide, primarily infecting conifers (Sturrock et al. 2011). Infection leads to wood decay, growth reduction and mortality. *Armillaria* root disease commonly affects dying yellow-cedars in stands of trees that are already suffering from yellow-cedar decline (Sturrock *in* Harrington et al. 2010). Thus, its role in decline is secondary to the primary abiotic process discussed in detail in Part II.A of this petition (Hennon et al. 1990b).

2. Fungus and Insects

A variety of fungal pests affect yellow-cedar, mostly targeting young trees, and generally not leading to tree mortality.

In a 2001 report, shoot blight of yellow-cedar regeneration remained at endemic levels in southeast Alaska (Wittwer 2004). The fungus that causes this disease is closely related to snow molds or blights and does not affect mature yellow-cedar trees. The terminal and lateral shoots of young trees (seedlings and saplings) become infected and die during late winter or early spring, with dieback extending as far as 10 to 20 cm from the tip of the shoot. Small seedlings of up to 0.5 m tall may be killed outright. The causal fungus is of the *Apostrasseria* genus but remains to be confirmed or identified to species levels.

More than a dozen different species of *Basidiomycetous* decay fungi have been identified on living yellow-cedar trees (Harrington 2010). All of the decay fungi-affected yellow-cedar trees can be categorized as causing either white rot or brown rot. White rot fungi digest all the components of wood tissue, including lignin, cellulose, and hemicellulose, and leave behind decayed wood. Brown rot fungi cannot digest lignin and leave behind brown crumbly wood decay that is mostly composed of modified lignin and may be resistant to further deterioration. Yellow-cedar trees are rarely killed by these fungi, although infected trees may have extensive internal decay without any visible external signs of rot (Harrington 2010).

More than 50 species of fungi were identified on dying or dead yellow cedar, but none were consistently related to yellow-cedar decline, while inoculation trials found that none of ten species of fungi killed unstressed seedlings.

Fungal decay is of greater concern for commercial wood products than for its impact on yellow-cedar survival. The ecological role of fungi in old-growth forests has not been the subject of extensive research. Researchers have observed old and decayed yellow-cedar with boles that snapped to create canopy gaps, indicating that decay fungi may be important mortality agents of old cedar trees that create small-scale disturbance in old-growth forests (Hennon et al. 2005).

Phloeosinius sp. (bark beetles) play a minor role in yellow-cedar mortality, and are frequently found on declining cedars, but they only attack trees that are already nearly dead or stressed due to other factors (Hennon and Shaw 1997). The beetles act as secondary damage agents to trees

already stressed by freezing injury. Bark beetle outbreaks will move upward in latitude and elevation with climate change in the United States and Canada, and have already contributed to severe decline in tree species growing at elevation, including whitebark pine (*Pinus albicaulis*; Jessie et al. 2010).

3. Invasive Pathogens

Recent observations by researchers in Scotland and Argentina show that the pathogen *Phytophthora austrocedrae* may in the future significantly impact yellow-cedars in Alaska. This pathogen was first described as a new species in 2007, after it was isolated from dying Chilean cypress trees (*Austrocedrus chilensis*) located in Argentina, where it was destructive and presumed to be invasive. In 2011, the same pathogen was isolated from dying, cultivated yellow-cedars in Scotland. The pathogen's origin is unknown, as is the susceptibility of Alaska yellow-cedar to this pathogen, and whether this pathogen could survive Alaska's coastal rainforest environment. To date, there is no documentation of this pathogen being found in Alaska's soil or water, but it may pose a significant future risk (Mulvey and Lamb 2012).

4. Bears and Deer

Yellow-cedars, especially young saplings, are an important source of browse for Sitka deer, and adult trees are frequently damaged by Alaska brown bears (Hennon et al. 2012). Alaska brown bears gnaw on yellow-cedar trunks in the spring to access the soft under-bark layer, the phloem, which is high in fructose. As noted above, basal scars from either brown bears or Alaska Natives were evident on over 49% of the yellow-cedars on Chichagof and Baranof Islands (Hennon et al. 1990a), and in some stands the majority of yellow-cedars have basal scars from bear feeding (ADNR 2000). Brown bear damage to trees in Alaska and British Columbia creates open wounds that may allow for growth of destructive fungi (see Section III.A.1.b), but feeding by brown bears does not generally lead to mortality of yellow-cedar.

Saplings and young cedar may suffer high mortality due to browsing by Sitka deer. If proposed regeneration of yellow-cedar at long-term bioclimatically suitable sites is to be successful, managers must develop techniques to reduce Sitka deer grazing that leads to high levels of mortality (Hennon et al. 2009, 2012).

D. INADEQUACY OF EXISTING REGULATORY MECHANISMS

Existing regulatory mechanisms are woefully inadequate to curb the primary threats to yellow-cedar posed by anthropogenic greenhouse gas emissions and selective timber harvest, as discussed below. The strong links between the global carbon budget, energy and water cycles, and forest dynamics demonstrate that there is a critical need for the immediate implementation of regulatory mechanisms that will directly reduce the incidence of yellow-cedar decline.

1. Regulatory Mechanisms Addressing Greenhouse Gas Emissions and Climate Change are Inadequate

Greenhouse gas emissions pose a major threat to the continued existence of yellow-cedar trees through impacts from climate change, especially reduced snow cover and shifts in the freeze-thaw cycles in late winter and early spring that result in fine-root death of the trees. Regulatory mechanisms at the national and international level do not adequately protect yellow-cedar from these impacts, nor do they require the greenhouse gas emissions reductions necessary to protect yellow-cedar from extinction. As USFWS recognized when it listed the polar bear (*Ursus maritimus*) as a threatened species, while "there are some existing regulatory mechanisms to address anthropogenic causes of climate change . . . these mechanisms are not expected to be effective in counteracting the worldwide growth of greenhouse gas emissions within the foreseeable future." (Determination of Threatened Status for the Polar Bear (*Ursus maritiums*) Throughout Its Range, 73 Fed. Reg. 28212, 28241 (May 15, 2008)). Similarly, the National Marine Fisheries Service (NMFS) acknowledged in its 2012 *Management Report for 82 Corals Status Review under the Endangered Species Act* that no countries are reducing emissions enough to keep the increase in global temperature below 2 degrees C; and the top ten emitters, including the United States, are performing poorly or very poorly at meeting needed greenhouse gas reductions (NMFS 2012). No additional regulations have been implemented to adequately curb greenhouse gas emissions since USFWS's 2008 finding or NMFS's 2012 finding.

As detailed below, the continued failure of the U.S. government and the international community to implement effective and comprehensive greenhouse gas reduction measures places yellow-cedar at ever-increasing risk of extinction.

a. Global Greenhouse Gas Emissions are tracking the worst IPCC Emissions Scenario

The atmospheric concentration of CO_2 reached 400 parts per million (ppm) for the first time in human history in May 2013, compared to the pre-industrial concentration of ~280 ppm (Scripps Institution of Oceanography 2013). The current CO_2 concentration has not been exceeded during the past 800,000 years and likely not during the past 15 to 20 million years (Denman et al. 2007, Tripati et al. 2009). Atmospheric CO_2 emissions have risen particularly rapidly since the 2000s (Raupach et al. 2007, Friedlingstein et al. 2010). The global fossil fuel CO_2 emissions growth rate was 1.0% per year in the 1990s compared with 3.1% per year since 2000, and this growth rate has largely tracked or exceeded the most fossil-fuel-intensive emissions scenarios projected by the IPCC (A1FI and RCP 8.5) since 2000 (Raupach et al. 2007, Peters et al. 2012). The CO_2 emissions growth rate fell slightly in 2009 due largely to the global financial and economic crisis; however, the decrease was less than half of what was expected and was short-lived (Fiedlingstein et al. 2010). In 2013, global CO_2 emissions rose by the highest amount on record (http://www.esrl.noaa.gov/gmd/ccgg/trends/).

b. Greenhouse Gas Emissions Reductions Needed to Protect the Yellow-cedar

Recent international agreements have focused on a goal of limiting global temperature increase to 2°C above pre-industrial levels to "prevent dangerous anthropogenic interference with the climate system" as required by the United Nations Framework Convention on Climate Change

(UNFCCC 2012).[5] However, many studies demonstrate that a 2°C temperature increase above pre-industrial levels is well past the point where severe and irreversible impacts will occur (Smith et al. 2009).

Because a 2°C target would commit the world to serious harm, many climate scientists and governments have urged a target of 1.5°C to avoid dangerous climate change (Hansen et al. 2008, Rockström et al. 2009), which roughly corresponds to reducing the atmospheric CO_2 concentration to 350 ppm (Hare and Schaeffer 2009).[6] Limiting warming to 1.5°C has been called for by the Alliance of Small Island States, the Least Developed Countries, and Executive Secretary of the United Nations Framework Convention on Climate Change Christiana Figueres. As climate scientist Dr. James Hansen and colleagues concluded, "if humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO_2 will need to be reduced . . . to at most 350 ppm [equivalent to ~1.5°C], but likely less than that" (Hansen et al. 2008). This 350 ppm target must be achieved within decades to prevent dangerous tipping points and "the possibility of seeding irreversible catastrophic effects" (Hansen et al. 2008).

Reducing the atmospheric CO_2 concentrations to at most 350 ppm, and perhaps much lower (300 to 325 ppm CO_2) would help protect yellow-cedar from the threats of climate change, especially precipitation falling as rain rather than snow, and increased spring freeze/thaw cycles, that threaten the tree's essential habitat and create conditions unsuitable for the tree's continued survival.

c. U.S. Measures to Reduce Greenhouse Gas Emissions Are Insufficient

While existing domestic laws including the Clean Air Act, Energy Policy and Conservation Act, Clean Water Act, Endangered Species Act and others provide authority to executive branch agencies to require greenhouse gas emissions reductions from virtually all major sources in the United States, these agencies are either failing to implement or only partially implementing these laws for greenhouse gases. For example, the EPA has issued a rulemaking regulating greenhouse gas emissions from automobiles that will reduce greenhouse emissions emitted per vehicle mile traveled by passenger vehicles in the future; but because the improvements are modest, and more vehicles are projected to be driven more miles in the future, the rule will only slow the rate of increase somewhat compared to what it would be without the rule. EPA, Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule, 75 Fed. Reg. 25324 (May 7, 2010). Meanwhile the government concedes that emissions reductions for heavy-duty vehicles "are not sufficient by themselves to reduce total [heavy-duty] vehicle emissions below their 2005 levels by 2020." NHTSA, Medium- and Heavy-Duty Fuel Efficiency Improvement Program – Final Environmental Impact Statement (June 2011). This means that the vehicle rule is far from achieving emissions goals agreed to by the United States in the Copenhagen Accord, which aim to keep global warming below 2°C.

[5] The non-legally binding Cancún Agreement of 2010 and Copenhagen Accord of 2009 recognize the objective of limiting warming to 2°C above pre-industrial levels.
[6] An analysis of low emissions pathways found that only those that approach 350 ppm by 2100 have a reasonable probability (40–60%) of limiting warming to 1.5°C.

To date, the EPA has proposed to use the Clean Air Act's new source performance standard program to reduce greenhouse gas pollution from one stationary source, electric generating units (power plants), from both new and existing power plants. While there is enormous potential to reduce emissions through this program overall and through the power plants rule proposals in particular, the EPA's rules for new and existing plants are insufficiently stringent, increasing the nation's use of natural gas plants while failing to require meaningful emissions reductions from them, even though such reductions are readily achievable. The EPA admits that the proposed rule for new plants will not reduce emissions from these sources between now and 2022 compared to what would be expected without the rule. EPA. Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 1430 (Jan. 8, 2014). Indeed, in the rulemaking the EPA concedes that the rule for new power plants "will result in negligible CO_2 emission changes, quantified benefits, and costs by 2022." (Id. at 1495). The proposed rule for existing plants proposes to reduce existing power plant emissions 30 % below 2005 levels by 2030, which is equivalent to 7.7 % below 1990 levels, the base year for the international climate treaty, by 2030 (EPA. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, EPA-HQ-OAR-2013-0602). However, according to the IPCC Fourth Assessment Report and other scientific studies, developed countries such as the United States must reduce their emissions 25 % to 40 % below 1990 levels by 2020 to have a medium chance of limiting warming to 2 degrees C (Gupta et al. 2007), meaning that this proposed rule falls far short of requiring emissions reductions needed to meet the internationally agreed-upon climate target and avoid dangerous climate impacts.

While full implementation of our flagship environmental laws, particularly the Clean Air Act, would provide an effective and comprehensive greenhouse gas reduction strategy, due to their non-implementation, existing domestic regulatory mechanisms must be considered inadequate to protect yellow-cedar from climate change

d. International Measures to Reduce Greenhouse Gas Emissions Are Inadequate

International initiatives are also currently inadequate to effectively address climate change. The United Nations Framework Convention on Climate Change, negotiated in 1992 at Rio de Janeiro, Brazil, provides the forum for the international negotiations. In the Framework Convention, signed and ratified by the United States, the world agreed to take the actions necessary to avoid dangerous climate change. Parties to the Convention also agreed as a matter of fairness that the world's rich, developed countries, having caused the vast majority of emissions responsible for the problem, would take the lead in solving it (Figure 25). It was not until the 1997 meeting in Kyoto, Japan, that the first concrete, legally binding agreement for reducing emissions was signed: the Kyoto Protocol. The Protocol requires the world's richest countries to reduce emissions an average of 5 percent below 1990 levels by 2012, while developing nations also take steps to reduce emissions without being subject to binding emissions targets as they continue to raise their standard of living. The United States has been a major barrier to progress in the international negotiations. After the Clinton administration extracted many concessions from the rest of the world in exchange for the United States signing on in Kyoto, the Senate rejected the equity principles behind the Convention, saying the United States should not agree to reduce its own emissions unless all other countries — regardless of

their responsibility or ability — were similarly bound. Citing the same excuses, President George W. Bush repudiated the Kyoto Protocol entirely. Thus the United States is the only industrialized country in the world that has yet to ratify the Kyoto Protocol. The United States' negotiating team under both the George W. Bush and the Obama administrations has pursued two primary objectives in the international talks: to refuse any legally binding emissions reduction commitments until all other countries—but particularly China and India—do so, and to push back the date for a new agreement. Not surprisingly, the United States failed to meet its (never ratified) Kyoto pledge to reduce emissions to 7.2% below 1990 levels by 2012; to the contrary, U.S. emissions have increased by 10.5% since 1990 (EPA 2012).

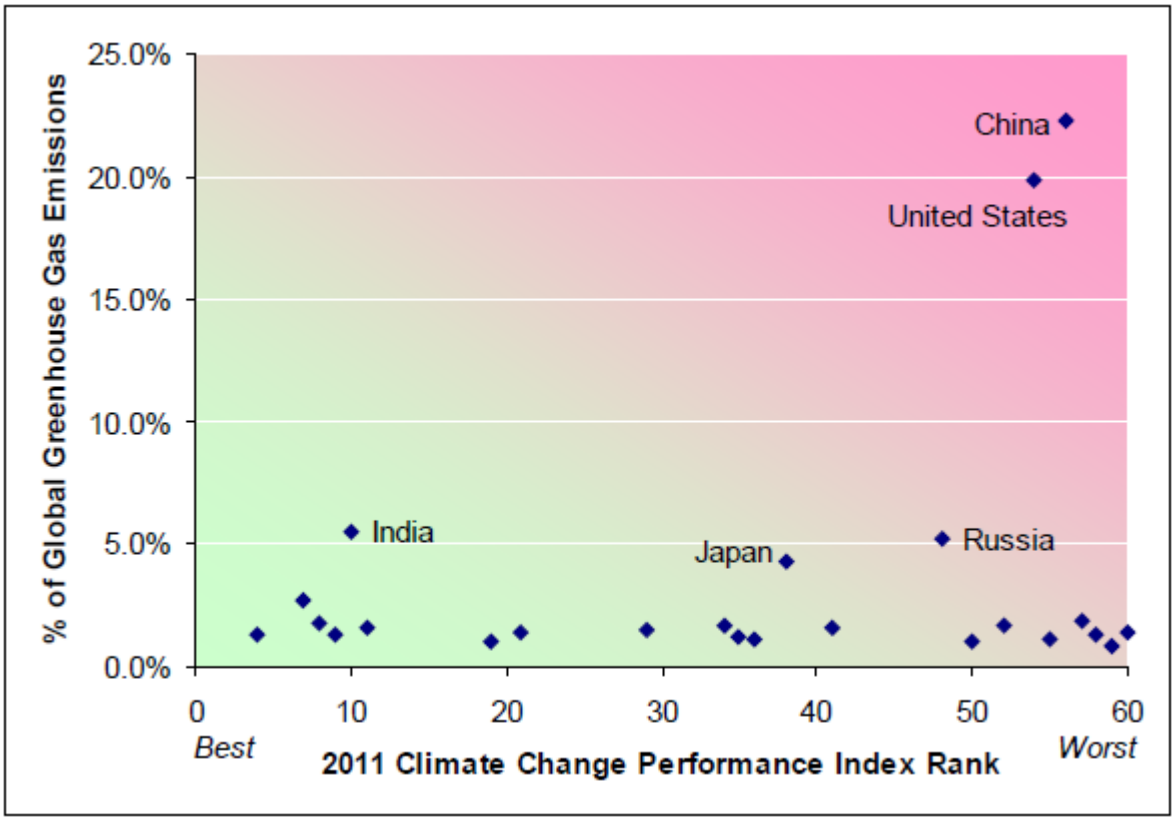

Figure 25: This figure is a qualitative illustration of which countries have the most potential to increase their positive impact on greenhouse gas emissions globally. The Climate Change Performance Index (CCPI) ranks the 60 emitting countries annually in various factors including emissions level, emission trend, and climate change policy. The United States and China are the top two greenhouse gas emitters, and were both ranked in the "very poor" category in the 2011 CCPI.

Moreover, the Kyoto Protocol's first commitment period only sets targets for action through 2012, and there is still no binding international agreement governing greenhouse gas emissions in the years beyond 2012. While the 2009 U.N. Climate Change Conference in Copenhagen called on countries to hold the increase in global temperature below 2°C (an inadequate target for avoiding dangerous climate change), the non-binding "Copenhagen Accord" that emerged from the conference, and the subsequent "Cancún Accords" of 2010 and "Durban Platform" of 2011 failed to enact binding regulations that limit emissions to reach this goal. Even if countries were to meet their Copenhagen and Cancún pledges, analyses have found that collective national

pledges to cut greenhouse gas emissions are inadequate to achieve the 2°C target, and instead suggest emission scenarios leading to 2.5°C to 5°C warming (Rogelj et al. 2010, UNEP 2010, 2011). As of July 2013, many governments were not implementing the policies needed to meet their inadequate 2020 emission reduction pledges, making it more difficult to keep global temperature rise to 2°C and likely leading to a temperature rise of at least 3.5°C (USGCRP 2013). As noted in the NMFS Management Report, the United States has yet to issue regulations to limit greenhouse gas emissions in accordance with its pledge under the Copenhagen Accord (NMFS 2012).

2. Regulatory Mechanisms Addressing Management and Logging of Yellow-Cedar in the Face of Climate Change Are Inadequate

Existing forest management law in the United States contains inadequate regulatory mechanisms to protect yellow-cedar. Yellow-cedar is almost exclusively found on public lands and is therefore subject to the National Forest Management Act (NFMA), of 1976 16 U.S.C. §§ 1600, *et seq*., and the Healthy Forest Restoration Act (HFRA), 16 U.S.C. §§ 6501, *et seq*.

NFMA contains a mandate that the Forest Service adopt guidelines for the management of national forests that "provide for the diversity of plant and animal communities" and, in particular, provide for "steps to be taken to protect the diversity of tree species." 16 U.S.C. § 1604 (g)(3)(B). Despite this specific language, this provision has not resulted in enforceable mandates to preserve yellow-cedar. To the contrary, in 2012 the Forest Service finalized new regulations that weakened measures to protect wildlife and water quality. Forest Service, National Forest System Land Management Planning, Final Rule, 77 Fed. Reg. 21162-21275 (April 9, 2012). The Forest Service explicitly recognized that there are "limits to the Agency's authority and the inherent capability of the land." *Id*. at 21175. Further, the Tongass National Forest interprets NFMA's diversity provisions as procedural in nature, and insists that NFMA imposes no obligation to maintain any specified level of abundance or distribution of particular species (Forest Service 2009b).

NFMA also requires each national forest to develop management plans and periodically revise them. Plans are open to public review and comment. The 2008 Tongass Land Management Plan (TLMP) is part of NFMA. The 2008 TLMP requires the agency to monitor forest health and evaluate silvicultural prescriptions in light of future stand diversity, particularly overstory species such as yellow-cedar (Forest Service 2008). However, the TLMP contains no language to protect healthy yellow-cedar from timber harvest. There is no language in the TLMP that limits the agency from harvesting a particular volume of any species (Wilson 2002). Instead, the agency interprets the TLMP to allow for sales with a higher than average cedar component (Wilson 2002). This is because without these species present, the agency cannot generate an economically viable timber sale; indeed, the Tongass National Forest interprets its Forest Plan to require an emphasis on cedar in order to meet timber resource objectives and comply with its Standards and Guidelines (Wilson 2002).

The HFRA of 2003 was designed to reduce risk of forest fires, and does not mandate the conservation of yellow-cedar specifically, or the more general conservation of forest diversity.

Forest fires are rarely a problem in the temperate rain forests where the majority of yellow-cedar occurs.

The Forest Service has conducted extensive research on yellow-cedar decline and spearheaded research efforts into yellow-cedar decline, modeling, and recommendations for future yellow-cedar conservation (Forest Service 2013a). However, research has not equated to protective management practices, and extensive areas of healthy yellow-cedar continue to be subject to timber sales. Current Forest Service yellow-cedar research focuses on ecosystem effects of a loss of yellow-cedar from the landscape, and how shifts in forest communities will affect long-term management and conservation (Mulvey and Lamb 2012).

The Forest Service has also developed recommendations for yellow-cedar conservation, while recognizing the futility of conserving or restoring yellow-cedar in areas where it is now maladapted due to climate change, or will be maladapted in the future (Hennon et al. 2012). The Forest Service also has stated that it has plans to publish a yellow-cedar conservation plan, but details of when that may be released are not available. In general, Forest Service efforts to date have been focused on yellow-cedar research, and are not part of any national mandate. Any actions to protect yellow-cedar are still in the development stage and do not address greenhouse gas emissions. In short, existing regulatory mechanisms and efforts toward protecting yellow-cedars are not adequate to deal with existing threats to the species.

E. OTHER NATURAL OR MANMADE FACTORS AFFECTING ITS CONTINUED EXISTENCE

The potential for a tree species such as yellow-cedar to adapt, and thus survive changing climatic conditions in northwest North America through migration, is low. Hurdles to successful migration include the ability of a tree to produce and disperse seeds, and the difficultly in those seeds ending up in appropriate conditions for regeneration (Bunnell and Kremsater 2012). This is especially so for yellow-cedar. Yellow-cedar has historically occupied an extremely selective microhabitat, is generally not competitive with other tree species except under marginal conditions that pose additional obstacles to successful regeneration, has an extended life-history and long lifespan, has greatly contracted its range in the past due to climate change, and has a very low rate of regeneration.

Recent research suggests that yellow-cedar is significantly less likely to regenerate in forests affected by the dieback and that the loss of this species can dynamically rearrange the plant community. A recent site-specific study (Oakes et al., in review) found that yellow-cedar seedling and sapling abundance decreased in forests affected with widespread mortality from yellow-cedar decline. In these forests, yellow-cedar sapling occurrence decreased significantly from 0.56 in forests not affected by yellow-cedar decline, to 0.07. On average, dead yellow-cedar comprised 80% of the total (live and dead) yellow-cedar basal area in forests affected by the dieback, indicating that some individuals may still survive once the forests become affected. At this time, researchers do not understand if surviving yellow-cedar trees are superior genetically, or if they are growing with deeper roots on better microsites. Yellow-cedar decline may be more

likely to affect smaller trees first, while death of larger trees occurs subsequently in a staggered process. Beier et al. (2008) found that surviving yellow-cedar trees in declining stands can produce larger growth rings, but with greater interannual variability after the onset of decline. Despite the survival of some individuals once a forest becomes affected, current scientific understanding documents significant losses of this species across all life stages (from reproduction to large trees) in areas affected by the dieback at low elevations, and yellow-cedar appears to be maladapted to areas affected for the foreseeable future. Yellow-cedar trees growing at higher elevations and to the north, where snowpack protects their roots from freezing injury, is helping to sustain the species in Alaska. Ongoing projections of snowfall in the future will predict the fate of these yellow-cedar populations.

Another major obstacle to natural regeneration of yellow-cedar a sites where yellow-cedar die-off has occurred is browsing by Sitka deer. As discussed earlier in this petition, Sitka deer selectively graze on yellow-cedar saplings. Where deer are present in any number, yellow-cedar are unlikely to survive.

There is no scientific evidence indicating that yellow-cedar will migrate to higher elevations or more suitable locations, as root-freezing injury kills off more trees at lower elevations. Yellow-cedar is adapted to a specific niche, dependent on wetter soil conditions, where it can outcompete other tree species. In addition to the barriers to natural migration, including low reproductive potential, it is likely that many other factors will come into play, limiting the trees ability to migrate. These include, lack of adequate soils at higher elevations, out-competition by other trees and understory plants due to yellow-cedar slow growth rate, and steeper slope aspects.

IV. CRITICAL HABITAT

The ESA mandates "to the maximum extent prudent and determinable," USFWS "shall, concurrently with making a determination . . . that a species is an endangered species or threatened species, designate any habitat of such species which is then considered to be critical habitat" 16 U.S.C. § 1533(a)(3)(A)(i); see also id. at § 1533(b)(6)(C). The ESA defines the term "critical habitat" to mean:

> i. the specific areas within the geographical area occupied by the species, at the time it is listed . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and
> ii. specific areas outside the geographical area occupied by the species at the time it is listed . . . upon a determination by the Secretary that such areas are essential for the conservation of the species.

Id. at § 1532(5)(A).

The Center for Biological Diversity expects that USFWS will comply with this unambiguous mandate and designate critical habitat concurrently with the listing of yellow-cedar. Critical

habitat must include suitable habitat from areas of the tree's natural range in southeast Alaska that are projected to be free from freezing injury due to climate change in the near future, are free from deer browsing, and are in areas where yellow-cedar will be able to survive over its entire 1,000-year-plus lifespan.

V. MANAGEMENT RECOMMENDATIONS

Climate change must be addressed in forest planning. Climate and landscape models can be used to evaluate how well specific conservation areas may meet their goals in the future and where widespread problems might develop as climate change continues. The Forest Service has no regulations in place to address rising greenhouse gas emissions and instead takes a reactive approach to management by monitoring and implementing "adaptive management" as needed. Yellow-cedar that is currently growing in zones where it is adapted, and where climate models show that it will continue to be adapted over the next hundred years, should not be subject to harvest. However, under the current TLMP, cedars in these areas are not explicitly protected. As Hamann and Wang state in their 2006 paper on the effects of climate change on tree species, "if currently observed climate trends continue or accelerate, major changes to management of natural resources will become necessary." With continued and rapidly accelerating climate change, implementation of management measures for yellow-cedar are currently not taking place quickly enough to protect the species or to ensure its long-term survival.

Active management to favor yellow-cedars is most likely to be successful in areas of south-facing, gentle sloped, well-drained soil, where yellow-cedar has continued to thrive and show resilience to climate change, even without adequate snow cover (Hennon et al. 2012). Active management would consist of favoring yellow-cedar through planting and thinning to expand yellow-cedar's realized niche, and protecting existing healthy stands of yellow-cedar from timber harvest. However, while small patches of this long-lived tree species may benefit from these measures, rapid changes in climate caused by continued greenhouse gas emissions, and the threat to the long-term survival of yellow-cedar, must be addressed through national and international regulations, not at the Forest Service management plan level.

Active management or restoration through human intervention is unlikely to be possible in many areas, due to the region's remoteness and inaccessibility, and instead a new community of plants will succeed to take the place of yellow-cedar (Hennon et al. 2012). As discussed in Hennon and Wittweb (2013), the zones where there will be adequate snow to protect against yellow-cedar decline are shrinking, even though currently healthy yellow-cedar occur in select areas (eg. south-facing slopes with gentle decline and adequate drainage) above 200 meters. "By 2080, only a small area near the cone of the volcano is predicted to have sufficient snow to protect yellow-cedar from root-freezing injury" (Hennon and Wittweb 2013).

Further efforts to restore, replant, or conserve yellow-cedar should be focused on the few sites where the species is likely to be well adapted for the next millennia, due to the tree's extreme longevity and the rapid die-off caused by small shifts in climate. Such sites will become increasingly rare and may disappear entirely over the next few hundred years. All modeling to date has only projected out to 2085, predicting massive declines, with yellow-cedar in Alaska

only surviving at high elevations (Figure 21). Thus, active management is unlikely to meet with long-term success unless it is accompanied by a drastic reduction in greenhouse gas emissions, and an immediate end to timber harvest of living yellow-cedar. The following are a few actions that may allow some resiliency for yellow-cedar in the face of currently occurring climate change.

A. GENETIC CONSERVATION

In stands where a high percentage of yellow-cedar trees have died, the remaining trees may contain important genetic material for maintaining diversity in out-plantings (Oliver and Hennon 2013). While genetic studies are ongoing, genetic material from these trees should be collected and stored for possible future outplanting.

In Alaska there has been little research on the genetic structure of yellow-cedar, while somewhat more research has been conducted in British Columbia. Conservation of the genetic structure of yellow-cedar in the context of widespread and substantial decline must be investigated further (Hennon et al. *in* Harrington 2010). In order to conserve genetic structure, a genetics program that investigates breeding trees for late spring dehardening and for freezing resistance should be employed to potentially restore yellow-cedar in areas prone to decline now and in future.

B. SILVICULTURE AND REPLANTING

Yellow-cedar does not rapidly reproduce, and successful silviculture may require new and as yet unknown or untested techniques. Barriers to successful regeneration through planting include seed collection and germination, competing vegetation, browse by Sitka deer, and spring freezing injury. Reproduction through layering mainly occurs on boggy sites, where branches have contact with the ground. A planting trial for yellow-cedar began in 1986 on Etolin Island (Forest Service 2000). Results found that yellow-cedar can be regenerated on logged sites, when it is planted quickly following harvest. Another study near Ketchikan showed that rooted cuttings (stecklings) could substitute for seedlings (Hennon et al. 2009). Many aspects of yellow-cedar reproductive biology, and how to best achieve maximum yield through the use of seeds, seedlings, or layering, remain unknown. Further research must be conducted if yellow-cedar is to be successfully outplanted at suitable sites.

Planting yellow-cedar at suitable sites may be the best way to ensure that the tree does not go extinct. Modest climate warming across the natural range of yellow-cedar predicted by current general circulation models will likely result in increased productivity on sites with low hazard for yellow-cedar decline and improve performance of populations planted upward and northward of their origins (Russell and Krakowski 2012).

Silviculture of yellow-cedar in young-growth forest is poorly known, and needs more research and management attention, particularly in Alaska. Studies should include how best to dissuade Sitka deer from browsing on yellow-cedar saplings, such as the use of stock with genetically higher terpene concentrations. The ability of yellow-cedar to compete and maintain its canopy status in the long-term has also not been evaluated (Hennon et al. *in* Harrington 2010).

In addition, little is known about how to select an ideal site for yellow-cedar outplanting. Yellow-cedar utilizes calcium in a unique way to allow for competitive advantage at the fringes of bogs and other poorly drained soils. Yellow-cedar is able to alter nitrogen availability through this process, but this has not been field-tested (D'Amore et al. 2009). Selecting sites that are high in calcium, or adding calcium to the soil, may provide a competitive advantage to yellow-cedar.

C. SALVAGE LOGGING

There are no published long-term scientific studies on the ecological value of yellow-cedar snags (Mulvey and Lamb 2012, Oliver and Hennon 2013). Areas containing dead yellow-cedar trees may provide important wildlife habitat, for bats, raptors, songbirds, marten, flying squirrels, and other species, perhaps related to the extreme longevity and rot-resistance of standing trees (Hennon et al., 2007). While salvage logging of dead yellow-cedar is certainly preferable to harvest of ancient stands of living cedar, these areas are protected in many cases, because of yellow-cedar's propensity to occur on marginal, generally less productive sites (Green et al. 2002, Donovan 2004, Harrington 2010). These areas are often protected as existing wilderness or administratively protected lands (Oliver and Hennon 2013). However, as the yellow-cedar increases in price and demand, due to its rarity and unique wood qualities, dead yellow-cedar snags will likely be subject to harvest, and their ecological value must be taken into consideration.

VI. CONCLUSION

As demonstrated in this petition, yellow-cedar faces high magnitude and growing threats to its continued existence. Yellow-cedar decline is the most severe tree die-off ever reported in North America, and has been extensively studied for over 30 years, with scientists concluding that climate change is the leading cause. Yellow-cedar decline occurs over an expanding 600,000 acres in Alaska and British Columbia. Anthropogenic greenhouse gas emissions continue to rise at an unprecedented rate, leading to warmer springs, reduced snow cover, and a shift to average winter temperatures of above freezing throughout much of yellow-cedar's habitat.

Climate change threatens to severely reduce the suitable bioclimatic range for yellow-cedar, with a projected 75% decrease in population by 2085. Any measures to protect yellow-cedar trees that are currently well-adapted, or to plant yellow-cedar in currently suitable habitats, will eventually fail unless they are accompanied by drastic cuts in greenhouse gas emissions. Unless these cuts are made, yellow-cedar will suffer a rapid decline in population followed by a slower decline, ultimately leading to extinction. Additionally, failure to protect living stands of yellow-cedar from timber harvest reduces genetic diversity and further imperils the species. USFWS must promptly make a positive 90-day finding on this petition, initiate a status review, and expeditiously proceed toward listing and protection of this species.

VII. REFERENCES

Adams, H., A. Macalady, D. Breshears, C. Allen, N. Stephenson, S. Saleska, T. Huxman, and N. McDowell. 2010. Climate-induced tree mortality: earth system consequences. EOS, Transactions, American Geophysical Union 91:153–154.

Ahanger, R. A., H. A. Bhat, T. A. Bhat, S. A. Ganie, A. A. Lone, and A. Imtiyaz. 2013. Impact of climate change on plant diseases. International Journal of Modern Plant and Animal Sciences 1:105–115.

Aitken, S. N., S. Yeaman, J. A. Holliday, T. Wang, and S. Curtis-McLane. 2008. Adaptation, migration or extirpation: climate change outcomes for tree populations. Evolutionary Applications 1:95–111.

Allen, C. D. 2009. Climate-induced forest dieback: an escalating global phenomenon? Unasylva 60:43–49.

Anderegg, W. R. L., J. A. Berry, D. D. Smith, J. S. Sperry, L. D. L. Anderegg, and C. B. Field. 2011. The roles of hydraulic and carbon stress in a widespread climate-induced forest die-off. Proceedings of the National Academy of Sciences 109:233–237.

Baltzinger, C., N. Stroh, and J. Martin. 2009. Can the missing understory in the old-growth forests on Haida Gwaii (British Columbia, Canada) recover after deer exclusion? Pages 1–7 *in* G. Blokhin, editor. XXIXth International Union of Game Biologists Congress "Papers and Posters." Russion Federation, Moscow, Russia.

Barton, G. 1976. A review of yellow cedar (Chamaecyparis nootkatensis) [D. Don] Spach) extractives and their importance to utilization. Wood and Fiber Science 8:172–176.

Beier, C. 2011. Factors influencing adaptive capacity in the reorganization of forest. Ecology and Society 16:40.

Beier, C. M., S. E. Sink, P. E. Hennon, D. V. D'Amore, and G. P. Juday. 2008. Twentieth-century warming and the dendroclimatology of declining yellow-cedar forests in southeastern Alaska. Canadian Journal of Forest Research 38:1319–1334.

Boland, J. L., J. P. Hayes, W. P. Smith, and M. M. Huso. 2009. Selection of day-roosts by Keen's myotis (Myotis keenii) at multiple spatial scales. Journal of Mammalogy 90:222–234.

Bourque, C. P.-A., R. M. Cox, D. J. Allen, P. A. Arp, and F.-R. Meng. 2005. Spatial extent of winter thaw events in eastern North America: historical weather records in relation to yellow birch decline. Global Change Biology 11:1477–1492.

Bunnell, F., and L. Kremsater. 2012. Migrating like a herd of catsClimate change and emerging forest in British Columbia. Journal Ecosystems and Management 13:1–24.

Carstensen, R., and B. Christensen. 2008. Assessment of TLMP 2008 and TCC Conservation Strategy.

Chapin, F. I., S. Trainor, P. Cochran, H. Huntington, C. Markon, M. McCammon, A. McGuire, and M. Serreze. 2014. Ch.22: Alaska. Pages 514–536 Climate Change Impacts in the United States: The Third National Climate Assessment. U.S. Global Change Research Program.

Cheng, Y., and E. von Rudloff. 1970. The volatile oil of leaves of chamaecyparis nootkatensis. Phytochemistry 9:2517–2527.

D'Amore, D. V., and P. E. Hennon. 2006. Evaluation of soil saturation, soil chemistry, and early spring soil and air temperatures as risk factors in yellow-cedar decline. Global Change Biology 12:524–545.

D'Amore, D. V., P. E. Hennon, P. G. Schaberg, and G. J. Hawley. 2009. Adaptation to exploit nitrate in surface soils predisposes yellow-cedar to climate-induced decline while enhancing the survival of western redcedar: A new hypothesis. Forest Ecology and Management 258:2261–2268.

Daniels, L. D., T. B. Maertens, A. B. Stan, S. P. J. McCloskey, J. D. Cochrane, and R. W. Gray. 2011. Direct and indirect impacts of climate change on forests: three case studies from British Columbia. Canadian Journal of Plant Pathology 33:108–116.

Deal, R. 2009. Reconstruction of stand structure and growth following partial cutting of southeast Alaska forests: sustainable forest management or highgrading? Page 187– Forest Growth and Timber Quality: Crown Models and Simulation Methods for Sustainable Forest Management Proceedings of an International Conference. Portland, OR.

Denman, K., A. Brasseur, P. Chidthaisong, P. Ciais, P. Cox, R. Dickinson, D. Hauglustaine, C. Heinze, E. Holland, D. Jacob, U. Lohmann, S. Ramachandran, P. da Silva Dias, S. Wofsy, and X. Zhang. 2007. Couplings Between Changes in the Climate System and Biogeochemistry. *in* S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. Averyt, M. Tignor, and H. Miller, editors. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and NY, New York, USA.

Donovan, G. H. 2004. Consumer willingness to pay a price premium for standing-dead Alaska. Forest Products Jornal 54:38–42.

El-Kassaby, Y., J. Maze, D. MacLoed, and S. Banerjee. 1991. Reproductive-cycle plasticity in yellow-cedar (Chamaecyparis nootkatensis). Can. J. For. Res. 21:1360–1364.

Forest Service. 1999. Sea Level Timber Sale FEIS.

Forest Service. 2000. Finding value in dead yellow-cedar.

Forest Service. 2008. Tongass Land Resource Management Plan, Final Environmental Impact Statement.

Forest Service. 2009a. Logjam Timber Project FEIS.

Forest Service. 2009b. Navy Timber Project FEIS. Pages 3–98.

Forest Service. 2011a. Central Kupreanof Timber Project ROD.

Forest Service. 2011b. Big Thorne EIS.

Forest Service. 2013a. Yellow-cedar decline research. http://www.fs.fed.us/pnw/research/climate-change/yellow-cedar/.

Forest Service. 2013b. Big Thorne Project FEIS, Silviculture Section. Pages 312–435.

Forest Service Cut and Sold Reports FY 2010-2013. 2013. Forest Service Yellow Cedar Pricing Data 2010-2013.

Friedlingstein, P., R. A. Houghton, G. Marland, J. Hackler, T. A. Boden, T. J. Conway, J. G. Canadell, M. R. Raupach, P. Clais, and C. Le Quéré. 2010. Update on CO2 emissions. Nature Geoscience 3:811–812.

Gadek, P., D. Alpers, M. Heslewood, and C. Quinn. 2000. Relationships within Cupressaceae sensu lato: a combined molecular and molecular approach. American Journal of Botany 87:1044–1057.

Global Carbon Project. 2011. Carbon Budget 2010, report available at http://www.globalcarbonproject.org/index.htm.

Green, D., K. McDonald, P. Hennon, J. Evans, and J. Stevens. 2002. Flexural properties of salvaged dead yellow-cedar from southeast Alaska. Forest Products Journal 52:81–88.

Gupta, S., D. A. Tirpak, N. Burger, J. Gupta, N. Höhne, A. I. Boncheva, G. M. Kanoan, C. Kolstad, J. A. Kruger, A. Michaelowa, S. Murase, J. Pershing, T. Saijo, and A. Sari. 2007. No Title. Page 776 *in* B. Metz, O. R. Davidson, P. R. Bosch, R. Dave, and L. A. Meyer, editors. Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and New York, USA.

Hak, O., and J. Russell. 2004. Environmental effects on yellow-cedar pollen quality. Forest Genetics Council of British Columbia:1–12.

Hamann, A., and T. Wang. 2006. Potential effects of climate change on ecosystem and tree distribution in British Columbia. Ecology 87:2773–2786.

Hanley, T., C. Robbins, and D. Spalinger. 1989. Forest habitats and the nutritional ecology of Sitka black-tailed deer: a research synthesis with implications for forest management. Pages 1–58. Porland, OR.

Hansen, J., P. Kharecha, and M. Sato. 2013. Climate forcing growth rates: doubling down on our Faustian bargain. Environmental Research Letters 8:1–9.

Hansen, J., M. Sato, P. Kharecha, D. Beerling, V. Masson-Delmotte, M. Pagani, M. Raymo, D. L. Royer, and J. C. Zachos. 2008. Target atmospheric CO2: Where should humanity aim? Open Atmospheric Science Journal 2:217–231.

Harrington, C. 2010. A Tale of Two Cedars: International Symposium on Western Redcedar and Yellow-Cedar. Page 177 p. Gen. Tech. Rep. PNW-GTR-828. Pacific Northwest Research Station, Portland, OR.

Harris, A. S. 1990. Chamaecyparis nootkatensis (D. Don) Spach: Alaska-cedar. Pages 97–102 *in* R. Burns and B. Hakata, editors. Silvics of North America Volume 1: conifers. Agricultural Handbook 654. USDA Forest Service.

Van Hees, W. W. S., and B. R. Mead. 2005. Extensive, strategic assessment of southeast Alaska's vegetative resources. Landscape and Urban Planning 72:25–48.

Hennon, P. 1986. Ecological and pathological aspects of yellow-cedar decline in southeast Alaska. Oregon State University.

Hennon, P. E., D. V. D. Amore, D. T. Wittwer, and J. P. Caouette. 2008. Yellow-Cedar Decline: Conserving a Climate-Sensitive Tree Species as Alaska Warms. Intergrated restoration of forested ecosystems to achieve multirresource benefits: proceedings of the 2007 national silviculture workshop Gen.Tech. :306.

Hennon, P. E., D. V. D'Amore, S. Zeglen, and M. Grainger. 2005. Yellow-cedar decline in the north coast forest district of British Columbia. Research Note PNW-RN-549:1–23.

Hennon, P. E., D. David, P. G. Schaberg, D. Wittwer, and S. Shanley. 2012. Shifting Climate, Altered Niche, and a Dynamic Conservation Strategy for Yellow-Cedar in the North Pacific Coastal Rainforest. BioScience 62:147–158.

Hennon, P. E., and M. G. McWilliams. 1999. Decline symptoms do not develop with grafting from dying yellow-cedar. Canadian Journal of Forest Research 29:1985–1988.

Hennon, P. E., P. Northwest, D. T. Witter, M. B. Lamb, P. Forestry, and F. H. Protection. 2010. Influence of Forest Canopy and Snow on Microclimate in a Declining Yellow-cedar Forest of Southeast Alaska. Northwest Science 84:73–87.

Hennon, P. E., C. I. Shaw, and E. Hansen. 1990a. Dating decline and mortality of Chamaecyparis nootkatensis in Southeast Alaska. Forest Science 36:502–515.

Hennon, P., M. McClellan, S. Spore, and E. Orlikowska. 2009. Survival and Growth of Planted Yellow-Cedar Seedlings and Rooted Cuttings (Stecklings) near Ketchikan, Alaska. Western Journal of Applied Forestry 24:144–150.

Hennon, P., and G. I. Shaw. 1997. The enigma of yellow-cedar decline: what is killing these long-lived, defensive trees? Journal of Forestry 95:4–10.

Hennon, P., C. Shaw III, and E. Hansen. 1990b. Symptoms and fungal associations of declining chamaecyparis nootkatensis in southeast Alaska. Plant Disease 74:267–273.

Hennon, P., and D. Wittweb. 2013. Evaluating key landscape features of a climate-induced forest decline (Project WC-EM-07-01. Pages 117–122 *in* K. Potter and B. Conkling, editors. Forest health monitoring: national status, trends, and analysisGen. Tech. USDA, Forest Service, Southern Research Station, Asheville, NC.

Hennon, P., D. Wittwer, A. Johnson, P. Schaberg, G. Hawley, C. Beier, S. Sink, and G. Juday. 2006. Climate warming, reduced snow, and freezing injury could explain the demise of yellow-cedar in southeast Alaska, USA. World Resource Review 18:427–450.

Hennon, P., B. Woodward, and P. Lebow. 2007. Deterioration of wood from live and dead Alaska yellow-cedar in contact with soil. Forest Products 57:23–30.

Heusser, C., L. Heusser, and D. Peteet. 1985. Late-quatenary climatic change on the American North Pacific Coast. Nature 315:485–487.

Ver Hoef, J. M. Ver, B. J. Neiland, L. Resources, and D. C. Glenn-lewin. 1988. Vegetation gradient analysis of two sites in Southeast Alaska. Northwest Science 62:171–180.

Houghton, J., L. Meira Fihlo, B. Lim, K. Treanton, I. Manaty, Y. Bonduki, D. Griggs, and B. Callender. 1997. Intergovernmental Panel on Climate Change (IPCC). Revised 1996 IPCC Guidelines for National Greenhouse Inventories. IPCC/Organisation for Economic Co-operation and Development/International Energy Association, Bracknell, UK.

Housely, R., K. Vaughan, and S. Alexander. 2007. Timber market analysis of the effects of export and interstate commerce on timber sale value and volume. Forest Service, Region 10.

Iverson, L. R., and A. M. Prasad. 2001. Potential changes in tree species richness and forest community types following climate change. Ecosystems 4:186–199.

Jessie, E., B. J. Bentz, J. L. Hayes, and J. A. Hicke. 2010. Climate change and bark beetles of the western United States and Canada: direct and indirect effects. Bioscience 60:602–613.

Johnson, A. 2013. Natural tree death, forest harvest, changes in hillslope hydrology, and implications for slope stability. http://serc.carleton.edu/vignettes/collection/37714.html.

Joyce, L. A., D. Running, V. Breshears, R. Dale, R. W. Malmsheimer, B. Sampson, B. Sohngen, and C. W. Woodall. 2014. Forests: Climate change impacts in the United States. Pages 175–194 *in* J. Melillo, T. Richmond, and G. Yohe, editors. U.S. Global Change Research Program.

Kelly, B. P., T. Ainsworth, D. J. Boyce, E. Hood, P. Murphy, and J. Powell. 2007. Climate change: predicted impacts on Juneau. Juneau, AK.

Kelsey, R. G., P. E. Hennon, M. Huso, and J. J. Karchesy. 2005. Changes in heartwood chemistry of dead yellow-cedar trees that remain standing for 80 years or more in southeast Alaska. Journal of Chemical Ecology 31:2653–70.

Krajina, V. 1969. Ecolosty of Forest Trees in British Columbia. Ecology of Western North America, Vol. 2. Department of Botany, University of British Columbia.

Lamb, M., and T. Wurtz. 2009. Forest Health Conditions in Alaska — 2008. US Forest Service, Alaska Region FHP Protec:43–44.

Laroque, C. P., and D. J. Smith. 1999. Tree-ring analysis of yellow-cedar (Chamaecyparis nootkatensis) on Vancouver Island, British Columbia. Canadian Journal of Forest Research 29:115–123.

Lenoir, J., J. C. Gégout, P. A. Marquet, P. de Ruffray, and H. Brisse. 2008. A significant upward shift in plant species optimum elevation during the 20th century. Science 320:1768–71.

Liston, G. E., and C. A. Hiemstra. 2011. The Changing Cryosphere: Pan-Arctic Snow Trends (1979–2009). Journal of Climate 24:5691–5712.

Little, D. 2006. Evolution and circumscription of the true cypresses (Cupressaceae: Cupressus). The American Society of Plan Taxonomists 31:461–480.

Little, D. P., A. Schwarzbach, R. P. A. Adams, and C. U. H. Hsieh. 2004. The circumscription and phylogenetic relationships of Callitropsis and the newly described genus Xanthocyparis (Cupressaceae). American Journal of Botany 91:1872–1881.

Van Mantgem, P. J., N. L. Stephenson, J. C. Byrne, L. D. Daniels, J. F. Franklin, P. Z. Fulé, M. E. Harmon, A. J. Larson, J. M. Smith, A. H. Taylor, and T. T. Veblen. 2009. Widespread increase of tree mortality rates in the western United States. Science (New York, N.Y.) 323:521–4.

Massah, N., J. Wang, J. H. Russell, A. Van Niejenhuis, and Y. A. El-Kassaby. 2010. Genealogical relationship among members of selection and production populations of yellow cedar (Callitropsis nootkatensis [D. Don] Oerst.) in the absence of parental information. The Journal of heredity 101:154–63.

Mathys, A., N. Coops, and R. Waring. 2014. Soil water availability effects on the distribution of 20 tree species in western North America. Forest Ecology and Management 313:144–152.

McKinley, D., M. Ryan, R. Birdsey, C. Giardina, M. Harmon, L. Heath, R. Houghton, R. Jackson, J. Morrison, B. Murray, D. Pataki, and K. Skog. 2011. A synthesis of current knowledge on forests and carbon storage in the United States. Ecological Applications 21:1902–1924.

McMullen, C. P., and J. Jabbour. 2009. Climate Change Science Compendium 2009. United Nations Environment Porgramme, Nairobi, EarthPrint, available at http://www.unep.org/compendium2009/.

Mote, P. W., A. F. Hamlet, M. P. Clark, and D. P. Lettenmaier. 2005. Declining Mountain Snowpack in Western North America. Bulletin of the American Meteorological Society 86:39–49.

Mulvey, R., and M. Lamb. 2012. Forest Health Conditions in Alaska - 2011. Pages 1–68. Anchorage, AK.

Murdock, T. Q., and D. L. Spittlehouse. 2011. Selecting and Using Climate Change Scenarios for British Columbia. Page 39.

Myers, E., N. Walker, M. Kirchhoff, and J. Schoen. 2011. High-grading on the Tongass National Forest: Implications of Pending Land Selections on Forest Diversity. Pages 1–22. Anchorage, AK.

NMFS. 2012. Management Report for 82 Corals Status Review under the Endangered Species Act : Existing Regulatory Mechanisms. Pages 1–73.

Oliver, M., and P. Hennon. 2013. Forests in Decline: Yellow-Cedar Research Yields Prototype for Climate Change Adaptation Planning. Pages 1–6 Science Findings 150. Portland, OR.

Ostry, M. E., R. C. Venette, and J. Juzwik. 2011. Decline as a disease category: is it helpful? Phytopathology 101:404–9.

Peters, G. P., R. M. Andrew, T. Boden, J. G. Canadell, P. Ciais, C. Le Quéré, G. Marland, M. R. Raupach, and C. Wilson. 2012. The challenge to keep global warming below 2 ° C. Nature Climate Change:2–4.

Pojar, J., and A. MacKinnon. 1994. Plants of Coastal British Columbia including Washington, Oregon and Alaska. Lone Pine Publishing, Vancouver, B.C.

Raupach, M. R., G. Marland, P. Ciais, C. Le Quéré, J. G. Canadell, G. Klepper, and C. B. Field. 2007. Global and regional drivers of accelerating CO2 emissions. Proceedings of the National Academy of Sciences of the United States of America 104:10288–10293.

Ritland, C., T. Pape, and K. Ritland. 2001. Genetic structure of yellow cedar (Chamaecyparis nootkatensis). Can. J. Bot. 79:822–828.

Rogelj, J., J. Nabel, C. Chen, W. Hare, K. Markman, and M. Meinshausen. 2010. Copenhagen Accord pledges are paltry. Nature 464:1126–1128.

Rotenberg, E., and D. Yakir. 2011. Distinct patterns of changes in surface energy budget associated with forestation in the semiarid region. Global Change Biology 17:1536–1548.

Russell, J. 1993. Clonal forestry with yellow-cedar. Clonal Forestry II:188–201.

Russell, J. 2012. A new conifer species affects taxonomic classification in the Cupressaceae. Pages 3–4 Forest Genetics Council of British Columbia.

Russell, J. H., and J. Krakowski. 2012. Geographic variation and adaptation to current and future climates of Callitropsis nootkatensis populations. Canadian Journal of Forest Research 42:2118–2129.

Ryan, M. G., M. E. Harmon, R. A. Birdsey, C. P. Giardina, L. S. Heath, R. A. Houghton, R. B. Jackson, D. C. Mckinley, J. F. Morrison, B. C. Murray, D. E. Pataki, and K. E. Skog. 2010. A synthesis of the science on forests and carbon for U.S. forests. Pages 1–16.

Schaberg, P. G., D. V. D'Amore, P. E. Hennon, J. M. Halman, and G. J. Hawley. 2011. Do limited cold tolerance and shallow depth of roots contribute to yellow-cedar decline? Forest Ecology and Management 262:2142–2150.

Schaberg, P. G., P. E. Hennon, D. V. D. Amore, G. J. Hawley, and C. H. Borer. 2005. Seasonal differences in freezing tolerance of yellow-cedar and western hemlock trees at a site affected by yellow-cedar decline. Can.J. For. Res. 2070:2065–2070.

Schaberg, P., P. Hennon, D. D'Amore, and G. Hawley. 2008. Influence of simulated snow cover on the cold tolerance and freezing injury of yellow-cedar seedlings. Global Change Biology 14.

Scripps Institution of Oceanography. 2013. The Keeling Curve. http://keelingcurve.ucsd.edu/now-what/.

Shaw, C. I. 1985. Decline and mortality of chamaecyparis nootkatensis in Southeastern Alaska, a problem of long duration but unknown cause. Plant Disease 69:13–17.

Sheets, R. M. 2009. Logjam TS DEIS Timber and Vegetation Resource Report.

Smith, J. B., S. H. Schneider, M. Oppenheimer, G. W. Yohe, W. Hare, M. D. Mastrandrea, A. Patwardhan, I. Burton, J. Corfee-Morlot, C. H. D. Magadza, H.-M. Füssel, A. B. Pittock, A. Rahman, A. Suarez, and J.-P. van Ypersele. 2009. Assessing dangerous climate change through an update of the Intergovernmental Panel on Climate Change (IPCC) "reasons for

concern". Proceedings of the National Academy of Sciences of the United States of America 106:4133–7.

Snyder, C., and J. Lundquist. 2007. Forest Health Conditions in Alaska-2006. Page 96 pp (J. Lundquist, Ed.). U.S. Department of Agriculture, Forest Service, Alaska Region: State of Alaska, Dept. of Natural Resources, Division of Forestry.

Spittlehouse, D. L. 2008. Climate Change , Impacts , and Adaptation Scenarios:Climate Change and Forest and Range Management in British Columbia Scenarios:Climate Change and Forest and Range Management in British Columbia. Page 47.

Stephenson, N. L., A. J. Das, R. Condit, S. E. Russo, P. J. Baker, N. G. Beckman, D. A. Coomes, E. R. Lines, W. K. Morris, N. Rüger, E. Álvarez, C. Blundo, S. Bunyavejchewin, G. Chuyong, S. J. Davies, Á. Duque, C. N. Ewango, O. Flores, J. F. Franklin, H. R. Grau, Z. Hao, M. E. Harmon, S. P. Hubbell, D. Kenfack, Y. Lin, J.-R. Makana, A. Malizia, L. R. Malizia, R. J. Pabst, N. Pongpattananurak, S.-H. Su, I.-F. Sun, S. Tan, D. Thomas, P. J. van Mantgem, X. Wang, S. K. Wiser, and M. A. Zavala. 2014. Rate of tree carbon accumulation increases continuously with tree size. Nature.

Stewart, H. 1995. Cedar: tree of life to the Northwest Coast Indians. Pages 1–192. Douglas and McIntyre.

Stroh, N., C. Baltzinger, and J.-L. Martin. 2008. Deer prevent western redcedar (Thuya plicata) regeneration in old-growth forests of Haida Gwaii: Is there a potential for recovery? Forest Ecology and Management 255:3973–3979.

Sturrock, R. N., S. J. Frankel, A. V. Brown, P. E. Hennon, J. T. Kliejunas, K. J. Lewis, J. J. Worrall, and A. J. Woods. 2011. Climate change and forest diseases. Plant Pathology 60:133–149.

Thompson, S. L., Y. Bérubé, A. Bruneau, and K. Ritland. 2008. Three-gene identity coefficients demonstrate that clonal reproduction promotes inbreeding and spatial relatedness in yellow-cedar, Callitropsis nootkatensis. Evolution 62:2570–9.

Tripati, A. K., C. D. Roberts, and R. a Eagle. 2009. Coupling of CO2 and ice sheet stability over major climate transitions of the last 20 million years. Science (New York, N.Y.) 326:1394–7.

Turner, N. J., M. B. Ignace, and R. Ignace. 2007. Traditional ecological knowledge and wisdom of aboriginal peoples in British Columbia. Ecological Applications 10:1275–1287.

UNEP. 2010. The Emissions Gap Report: Are the Copenhagen Accord Pledges Sufficient to Limit Global Warming to 2C or 1.5C? Available at http://www.unep.org/publications/ebooks/emissionsgapreport/pdfs/GAP_REPORT_SUNDAY_SINGLES_LOWRES.pdf.

UNEP. 2011. Bridging the emissions gap. http://www.unep.org/publications/contents/pub_details_search.asp?ID=6227.

UNFCCC. 2012. The Cancun Agreements - Key Steps of the United Nations Climate Change Conference, available at http://cancun.unfccc.int/cancun-agreements/main-objectives-of-the-agreements/#c33; unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf.

USGCRP. 2013. Ocean and Marine Resources in a Changing Climate. Pages 1–345.

W. Hare and M. Schaeffer. 2009. Low mitigation scenarios since the AR4 – Global emission pathways and climate consequences.

Walters, B. B. 1991. Small mammals in a subalpine old-growth forest and clearcuts. Northwest Science 65:0–4.

West Coast Region Ministry of Natural Resource Operations. 2011. Summary of Cedar Management Considerations for Coastal British Columbia Discussion Draft. Pages 1–13.

Westfall, J., and T. Ebata. 2012. 2011 Summary of forest health conditions in British Columbia. Pages 1–88.

White, K. S., G. W. Pendleton, and E. Hood. 2009. Effects of snow on Sitka black-tailed deer browse availability and nutritional carrying capacity in southeastern Alaska. Journal of Wildlife Management 73:481–487.

Wilson, B. 2002. Cedar harvest on the Tongass National Forest (UNPUBLISHED). Alaska Region Forest Management.

Wittwer, D. 2004. Forest Health Conditions in Alaska- 2003.

Wooton, C. E., and B. Klinkenberg. 2011. A landscape-level analysis of yellow-cedar decline in coastal British Columbia. Can. J. For. Res. 1648:1638–1648.

Zobel, J., and D. Antos. 1986. Habitat relationships of Chamaecyparis nootkatensis in southern Washington, Oregon, and California. Canadian Journal of Botany 64:1898–1909.

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Introduction

In 2010 the Forest Service announced a Transition Framework for the Tongass National Forest, proposing a "new path forward in the region that enhances economic opportunities to communities while conserving the Tongass National Forest."

This important announcement, from an agency historically focused on the production of old growth timber, recognized the decades-long decline of the timber industry in southeast Alaska and the subsequent rise of other economic sectors, such as tourism and fishing, which rely on intact and pristine Tongass National Forest resources.

The Transition Framework sought to support the well-being of the region's communities and economy by shifting to young growth harvests and restoration as well as investing more heavily in other program areas like recreation, wildlife, fish, and watershed protection.

This report examines whether such a transition has begun. It provides detailed budget and staffing information for the Tongass National Forest, examines how these resources were used programmatically, and reviews whether there has been a shift in budget and staffing in line with the proposed Transition Framework.

The report also explores whether Tongass National Forest resources now are being utilized to support significant and promising southeast Alaska economic sectors; and whether the Tongass National Forest timber program has moved beyond a historic emphasis on harvesting old growth timber and below-cost timber sales.

Executive Summary

In 2010 the Forest Service announced a new direction for the Tongass National Forest. Called the "Transition Framework," the Forest Service proposed a "new path forward in the region that enhances economic opportunities to communities while conserving the Tongass National Forest."

Four years since this commitment, it is fair to ask if a transition is in fact occurring, and whether it is improving economic opportunities for communities in southeast Alaska. To understand if change is taking place, this report examines the Tongass National Forest budget and staffing, as well as the economy of southeast Alaska and proposed timber sales.

Summary Findings:

- The Tongass National Forest has made no meaningful shift in its budget and staff allocations since announcing the Transition Framework in 2010.

- The Tongass National Forest continues to invest disproportionately in a timber industry that provides relatively few jobs while neglecting more economically important industries to the region such as tourism and fishing.

- The Tongass National Forest remains predominantly focused on old growth harvests at a significant cost to U.S. taxpayers.

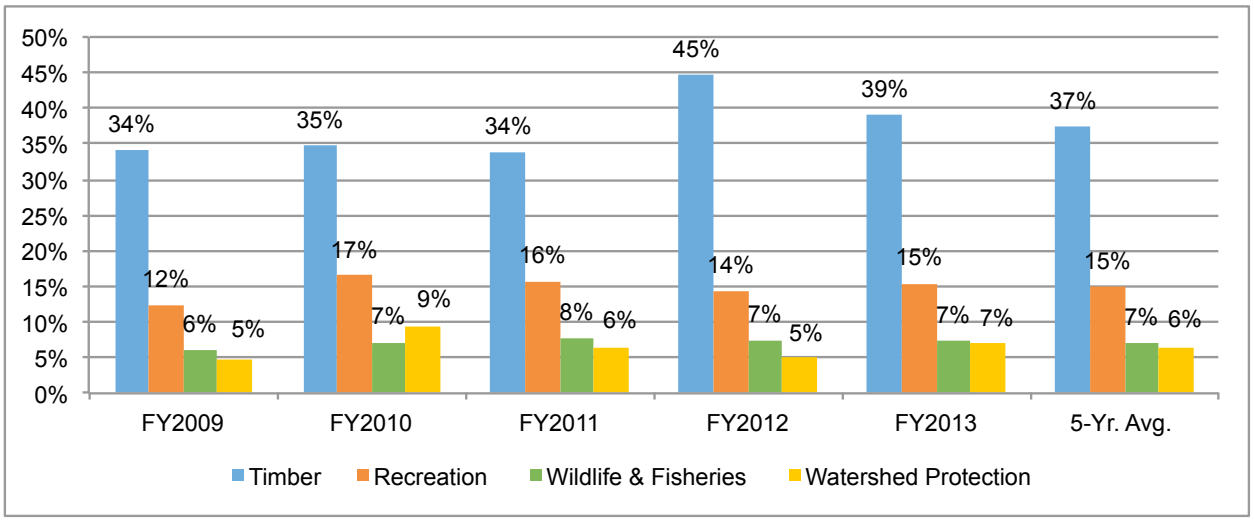
More Detailed Findings:

<u>Tongass National Forest Has Failed to Shift Resources from Timber Program</u>

The Tongass National Forest budget and staffing were examined in detail because they provide an indicator of agency priorities. Forest Service spending on timber continues to account for the largest portion of the Tongass National Forest budget—roughly 34 to 45 percent of the budget. Since the transition was announced, expenditures on timber production show no particular trend, though timber's share of the overall budget has increased. Despite overall staff cuts on the Tongass National Forest from FY2011 to FY2013, timber FTEs have largely held steady.

Recreation budget expenditures fell during the analysis period, though they were partially offset by increases in recreation receipts. In 2014 the Tongass National Forest announced its intention to enact future budget cuts in the recreation program—despite growing public demand for recreation activities on Forest Service lands. From FY2011 to FY2013, recreation staff declined more than any other major program on the Tongass National Forest, falling from 60 to 47 FTEs.

Tongass National Forest Budget by Program, Share of Total, FY2009 to FY2013 and 5-Yr. Avg.

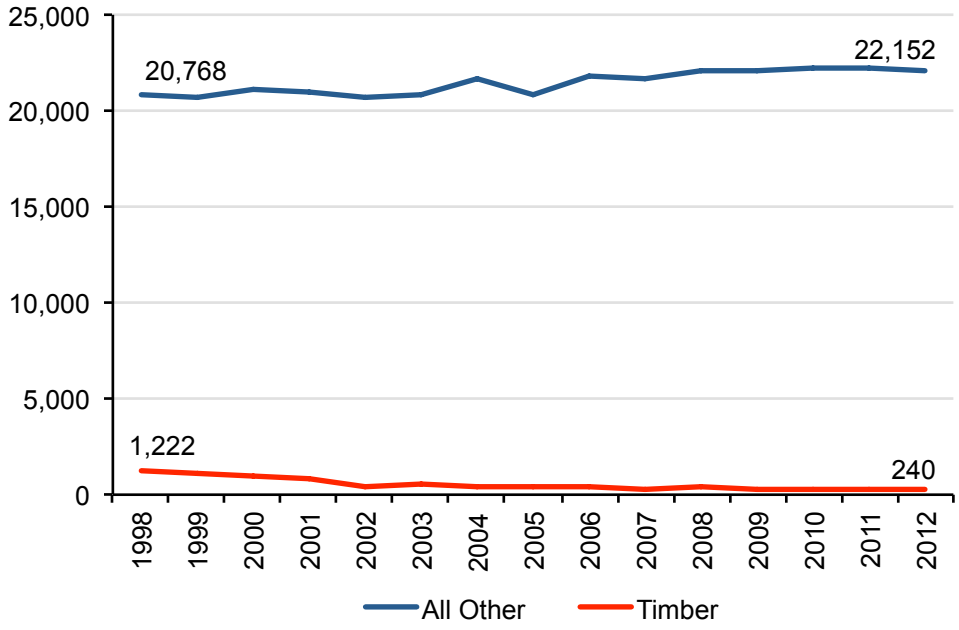


Source: U.S. Forest Service

Tourism and Fishing, Rather than Timber, Drive Southeast Alaska Economy

The southeast Alaska economy is no longer driven by the timber industry, which has steadily declined as a share of all private sector jobs. From 1998 to 2012, according to the U.S. Department of Commerce, regional timber jobs declined by more than 80 percent (-982 jobs), while all other private sector jobs grew by nearly seven percent (+1,384 jobs).

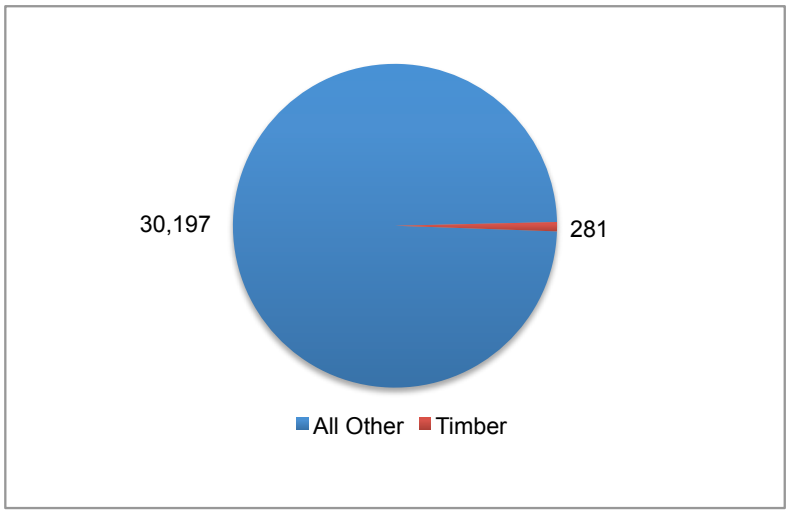
Private Sector Employment Trends, Timber vs. All Other, Southeast Alaska, 1998 to 2012



Source: County Business Patterns

In addition to a declining number of jobs, economic data from all sources indicate that timber industry employment in southeast Alaska today is small proportion of the regional economy. According to the U.S. Department of Commerce, regional timber industry jobs accounted for 1.1 percent of total private employment in 2012. An additional 41 self-employed individuals worked in the timber industry in 2012, or 0.5 percent of all self-employed people in the region—for a combined 0.9 percent of all private jobs and self-employed in southeast Alaska.

Private Sector Timber Jobs & Self-Employed vs. All Other Private Sector Jobs & Self-Employed, Southeast Alaska, 2012



Source: County Business Patterns, Nonemployer Statistics

By comparison, the two largest private sectors in the region's economy—the tourism and fishing industries—are growing. Southeast Conference reports that in 2013:

- The southeast Alaska visitor industry employed 6,707 people, is growing (+332 jobs, 5.2% change from 2012 to 2013), and accounted for 15 percent of total regional employment.

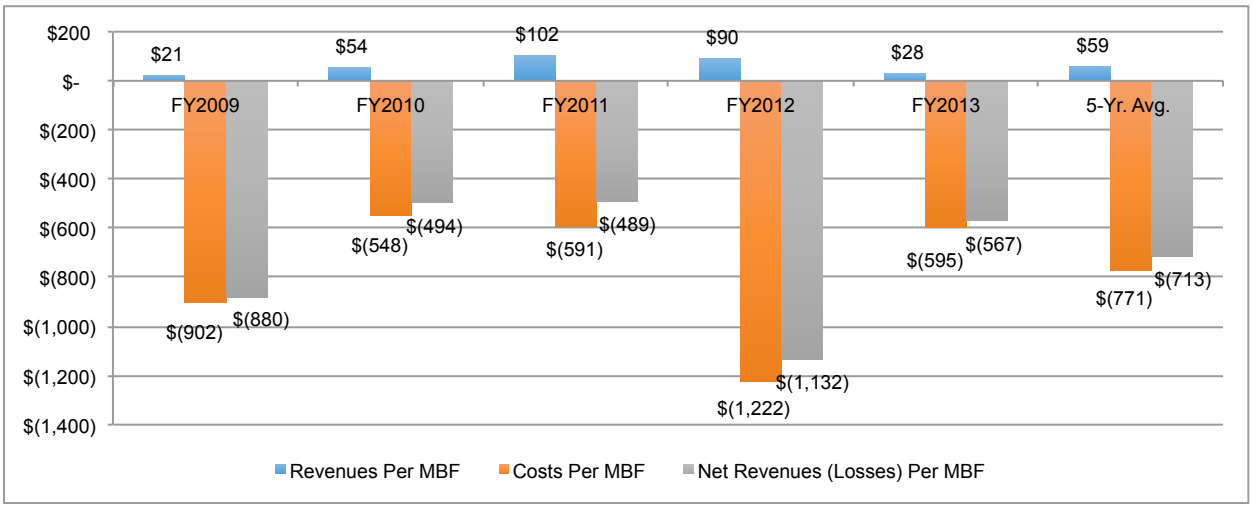
- The southeast Alaska seafood industry employed 4,252 people, is growing (+148 jobs, 3.6% change from 2012 to 2013), and accounted for nine percent of total regional employment.

The tourism and fishing industries both rely on land and water resources managed by the Tongass National Forest and directly benefit from enhancements to natural resource health, along with services and infrastructure provided by the Forest Service. Activities that degrade the pristine nature of the land, such as old growth harvesting, are likely to have adverse impacts on these important regional industries.

Narrow Focus on Old Growth Timber Sales with Subsidies Persists

Since the Transition Framework announcement, 87 percent of timber sales proposed by the Tongass National Forest have been old growth by volume. Timber sales have consistently cost much more to prepare, access, and administer than the federal government receives for the timber. The net loss to the U.S. taxpayer has ranged from $489 to $1,132 per thousand board feet—or more than $100 million—during these years.

Tongass National Forest Timber Sale Revenues and Costs, FY2009 to FY2013 and 5-Yr. Avg.



Source: Costs are from the budget table in this report; revenues and cut volume are from U.S. Forest Service Cut and Sold reports.

Earlier this year, the Forest Service awarded a 97-million board foot timber sale contract as part of the Big Thorne Project that was reportedly worth more than $6 million. But at the FY2013 average Tongass National Forest cost of $595 per MBF, the preparation and administration costs of the sale would be more than $57 million, with a net cost to the U.S. Treasury of $50 million—a nearly 10:1 expense-revenue loss ratio.

In summary, the allocation of scarce Tongass National Forest budget and staff resources to a minor economic sector represents a large opportunity cost for the regional economy: these resources could be repurposed, using the logic of the Transition Framework, to larger and more vibrant industries that support more jobs and communities in southeast Alaska. The casualties of this failure to seize a more promising economic trajectory are southeast Alaska's businesses and communities, as well as the U.S. taxpayer.

Methods

Forest Service Data

We requested budget and staffing data for the Tongass National Forest from the Forest Service's Region 10 Regional Office for the past five fiscal years—FY2009 through FY2013. In response, the Regional Office required the submission of two Freedom of Information Act requests for these and supplemental data.

We received FY2009 through FY2013 budget data. We also received FY2014 data, but these data were preliminary and incomplete, and thus are not used in this analysis. In addition, because the budget data did not include recreation-related mandatory spending accounts (as discussed below), we identified recreation fees retained and used by the Tongass National Forest in its annual *Recreation Program Fee Accomplishment Report* and included these funds in the Total Budget as well as under the Recreation Accounts in calculations. Be aware that the Total Budget exceeds the total of the accounts shown, since many programs (*e.g.*, land management planning, wildland fire management) are not shown in the summary table in this report.

In one fiscal year (FY2009) the Tongass National Forest budget was significantly larger than in subsequent years. This may have been due to short-term or one-time American Recovery and Reinvestment Act funding (see CRS Report 40537), but this was not verified. Requests to the Region 10 Regional Office for clarification and review on this and other topics were not responded to.

As noted, we also requested workforce data for the past five fiscal years—FY2009 through FY2013. We received data only for three fiscal years (FY2011 through FY2013). The data are measured in FTEs, full-time equivalents; this aggregates part-time and temporary employees to the equivalent of full-time employees, to reflect total workloads. The data include total FTEs for the Tongass National Forest and for each of the categories used for the budget allocation.

Budget Explanation

A significant portion of the Tongass National Forest annual budget is from mandatory spending accounts. As a result, it is important to understand the distinctions between annual appropriations and mandatory spending.

All federal spending comes from appropriations enacted by Congress. The majority is from annual appropriations, enacted in one of 10 annual appropriations acts. Forest Service annual funds are provided in the Interior, Environment, and Related Agencies Appropriations. The Forest Service funds are provided in four major accounts: Research; State & Private Forestry; National Forest System; and Construction; plus several minor accounts. Within each account, Congress provides details for the spending, both through budget line items and through written direction. For the Forest Service, such congressional guidance rarely provides funding direction for specific national forests. The agency's Research Branch administers research appropriations to research stations. State & Private Forestry funds are for assistance programs administered by the Forest Service Regional Offices, except in the Northeast Area.

National Forest System and Construction appropriations are provided in numerous budget line items to each national forest through the regional offices. In general, the budget line items correspond to the various agency programs, such as timber, recreation, range management, watershed and wildlife protection, etc. A comprehensive list and description of each budget line item is included in the agency's annual budget justifications (available through the Forest Service's website, http://www.fs.fed.us/aboutus/budget/).

In addition to the annual appropriations, Congress has enacted laws that provide funding for specific purposes, funded from specified sources. These are commonly called permanent appropriations or mandatory spending. The term "trust fund" is also used occasionally, but this often leads to misconceptions, since in federal parlance, "trust fund" indicates the disposition of interest on the balance in the account, and does not indicate whether the money is available with or without an annual appropriation.

The Forest Service has numerous mandatory spending accounts. They are shown in the agency's annual budget justifications to Congress (see above), although this is not required since the accounts do not need annual appropriations. (The history and purposes of Forest Service mandatory spending accounts are described in more detail in CRS Report RL30335.) The Forest Service often includes some, but not all, of its mandatory spending accounts in reported budget data.

Many of the Forest Service mandatory spending accounts have been funded from timber sale receipts; their magnitude and relative importance have declined with the widespread decrease in Forest Service timber sales since 1990, but many still provide substantial funds for agency operations. In recent years, Congress has created mandatory spending accounts funded from recreation fees, and their magnitude and importance have been increasing.

Program Categories

The categories we use to show the Tongass National Forest budget and staffing allocations generally include more than one account—one or more budget line items of annual appropriations and one or more mandatory spending accounts. For a description of acronyms that follow, see the Appendix at the end of this report.

Timber includes two budget line items—NFTM, Forest Products; and CMRD, Roads Capital Improvements & Maint—and three mandatory spending accounts—CWKV and CWK2, K-V Projects; RTRT, the Reforestation Trust Fund; and SSSS, Salvage Sales. Forest Products is the budget line item used to pay for timber sale preparation and administration. Road Construction and Maintenance is substantially for timber access. (See below) To the extent that some road construction and reconstruction is for other purposes (recreation, administration, etc.), this may overstate total timber expenditures on the Tongass National Forest. The Knutson-Vandenberg (K-V) Fund is a mandatory spending account funded from timber sale receipts for reforestation, timber stand improvements, and mitigation and enhancement of other resources in timber sale areas. The Reforestation Trust Fund is another mandatory spending account, funded from tariffs on imported wood products for reforestation and timber stand improvements. The Salvage Sale Fund is a third timber-related mandatory spending account. It is funded from the receipts of designated salvage sales for preparing and administering further salvage sales.

Some would doubtless dispute all these costs as entirely timber-related. For example, roads are used for other purposes, and thus some would attribute road costs to other resources. However, timber has been the primary reason for road building in the national forests; the primary purpose for road construction, reconstruction, and maintenance is no longer reported, but even in the years of relatively low timber sale levels since 1990, more than 90 percent of new roads and more than 80 percent of road reconstruction was for timber removal. (CRS Report 97-706)

Similarly, attributing reforestation costs to current timber sales could be disputed. The U.S. Internal Revenue Service (IRS) generally prohibits private landowners from such expensing of reforestation costs, and requires them to capitalize the costs for deduction from future income. However, the National Forest Management Act of 1976 (NFMA; 16 U.S.C. 1600, *et al*.) mandates reforestation within five years of timber harvesting in the national forests, making reforestation a requirement of harvesting. Furthermore, private landowners would expense reforestation costs if the IRS allowed it, because it would reduce taxable income without altering cash flow. Thus, it seems appropriate to include reforestation as a cost of timber harvesting.

Recreation includes four budget line items—NFRW, Recreation, Heritage, & Wilderness; FDRF, Deferred Recreation—Recreation; CMTL, Trails Capital Improvements & Maint; and Recreation Receipts. The first three of these accounts clearly relate to various aspects of recreation in the national forests. The fourth, Recreation Receipts, is not shown in the budget data received from the Regional Office, but is clearly both an income from and expenditure on recreation management activities. As noted above, these data are from the annual Tongass National Forest *Recreation Program Fee Accomplishment Report.*

Wildlife and Fish includes one budget line item—NFWF and NFWF Subsistence, Wildlife & Fisheries Habitat Mgt. NFWF Subsistence, which is combined with NFWF in the Tongass National Forest budget allocations, provides support for Native American subsistence uses of wildlife and fish.

Watershed Protection includes two budget line items—NFVW, Vegetation & Watershed Management; and CMLG, Legacy Roads &Trails. The first item includes activities to protect and improve watershed conditions, such as reforesting sites after wildfires and landslides. Legacy Roads and Trails is an account created by Congress to provide for reconstructing or obliterating roads and trails that were in poor condition due to lack of planning (*e.g.*, roads created by recreation users, without planning and engineering) or inadequate maintenance.

Examining the Legacy Roads &Trails retrospectively, it could be considered a timber account, since many of the roads were used for timber harvesting. However, examining the line item prospectively, it is a watershed protection account, since the intent is to halt or prevent watershed damages from roads (and bridges and culverts) in poor condition. To the extent that timber roads are the cause of poor road conditions, the inclusion of Legacy Roads funding as watershed protection understates the expenditures related to timber harvesting in the Tongass National Forest.

Other Accounts are also included in the Tongass National Forest budget allocations, but are not shown in the budget table in this report. Some of these accounts are for other resource purposes

(*e.g.*, NFMG, Minerals & Geology Management; and NFRG, Grazing Management) or for purposes that support all resources (*e.g.*, NFIM, Inventory & Monitoring; CMFC, Facilities Capital Improvements & Maint; and WFWF, Wildland Fire Management). Hence, the total annual Tongass National Forest budget allocation exceeds the sum of timber, recreation, wildlife and fish, and watershed protection.

The Tongass National Forest budget allocation data do not show all the Forest Service expenditures on the Tongass National Forest. The budget allocation tables in this report include many, but not all, of the mandatory spending accounts. The largest timber-related accounts—the K-V Fund, the Salvage Sale Fund, and the Reforestation Trust Fund—are shown, but other timber-related accounts—Cooperative Deposits, from purchasers for post-sale road restoration; and Brush Disposal, from timber purchasers to dispose of slash (tree tops and limbs, and unusable trees) from the sale—are not presented in the budget allocations. It is possible that the brush disposal account is not used on the Tongass National Forest, since its use is not required, but the Forest Service has always treated brush disposal funds differently from other accounts, even though the authorizing language is quite similar. On the other hand, cooperative road (and other cooperative) deposits of $264,711 are shown under receipts in the "Tongass Financials" table on page 11 of the *State of the Tongass National Forest FY2013* (USFS Report R10-MB-786), but they are not shown in the budget allocation tables. (The *State of the Tongass* report is not used for this budget analysis because it shows deposits to mandatory spending accounts as revenues, but does not show expenditures from any of these accounts as expenses.) Thus, it seems likely that the Tongass National Forest budget presented in this report understates timber expenditures.

In addition, three recreation mandatory spending accounts were not included in the budget allocation tables received from the Forest Service. The Federal Land Recreation Enhancement Act (FLREA) authorizes the Forest Service (and other federal agencies) to collect and retain certain recreation fees, and spend them on certain types of projects. (See CRS Report RL33730) Because of their significance—more than $3 million collected annually since FY2010—some estimate of the relevant expenditures was warranted. For this report, recreation receipts shown in the annual Tongass National Forest *Recreation Program Fee Accomplishment Reports* were included to estimate the expenditures from these mandatory spending accounts.

Fiscal Year

The federal government fiscal year is the accounting period that begins on October 1 and ends on September 30. The fiscal year is designated by the calendar year in which it ends; for example, FY2013 begins on October 1, 2012 and ends on September 30, 2013.

Regional Definition

In this report "southeast Alaska" refers to the following Boroughs and Census Areas: Haines Borough AK, Hoonah-Angoon Census Area AK, Juneau City and Borough AK, Ketchikan Gateway Borough AK, Petersburg Census Area AK, Prince of Wales-Hyder Census Area AK, Prince of Wales-Outer Ketchikan Census Area AK, Sitka City and Borough AK, Skagway Municipality AK, Skagway-Hoonah-Angoon Census Area AK, Wrangell City and Borough AK, Wrangell-Petersburg Census Area AK, and Yakutat City and Borough AK.

The Evolution of the Tongass National Forest "Transition Framework"

On May 26, 2010 Agriculture Secretary Tom Vilsack proposed to "chart a new path forward in the region that enhances economic opportunities to communities while conserving the Tongass National Forest." The Secretary announced a "Transition Framework" designed to create jobs and community stability through a new emphasis on "forest restoration, renewable energy, tourism and recreation, subsistence, fisheries, and mariculture." He also proposed "a new approach to forest management … [that] will move timber harvesting into roaded, young growth areas and away from old-growth timber in roadless areas." (USDA 2010)

Regional Forester Beth Pendleton added that the Transition Framework would be designed to diversify the economy of southeast Alaska and above all to "develop a region-wide job creation platform." She went on to identify additional goals: "promote small business creation, expansion, and retention; improve access to capital; create quality jobs and sustainable economic growth; promote job training and educational opportunities; and maximize a forest restoration economy and by-product use."

Later in 2010 the Juneau Economic Development Corporation (JEDC), a partner in the evolving Transition Framework and under contract with the Forest Service, launched the Southeast Alaska Cluster Initiative to engage key interests and outline a business cluster approach to regional economic development. JEDC completed an asset map for the region and identified cluster action initiatives that the Forest Service and others could support in the region. (JEDC)

In 2011, after an extensive consultation process in the region, the Forest Service released a report refining the direction of Transition Framework efforts. An interagency team recommended initiatives that cross agency boundaries, support agency priorities, and are realistically achievable. These initiatives were organized around the concept of industry clusters and were focused on ocean products, with an emphasis on watershed restoration and mariculture; visitor services supporting independent traveler opportunities, new land and water trails, and guided access for forest resources; forest products with an emphasis on second-growth harvests and more efficient use of wood waste; and renewable energy, including the development of a renewable energy plan and projects focused on woody biomass. (USDA 2011)

In 2013 the Forest Service released a "Leader's Intent" document on young growth management to clarify how the Tongass National Forest would transition its timber program to a "young-growth forest products industry" and integrate this with "restoration, collaboration, and forest stewardship to support ecological, community and economic health." The document, signed by Region 10 and Tongass National Forest leadership, recognized constraints in making a timber transition and offered no firm deadlines. Under the heading "Actions," it proposed to "Offer increasing annual volumes of young growth timber and gradually reduce old growth harvests…." (USDA 2013)

In 2013 the Forest Service also released an update on Tongass National Forest economic diversification strategies in southeast Alaska. The report cited new cluster initiatives around mining, and research and development; and also proposed an innovation summit; a biomass initiative; and a "multi-year integrated plan for active forest management activities, including old and young growth timber sales, ecological restoration and enhancement, and road work." (USDA 2013)

In 2014 the Forest Service released a "Leader's Intent" document on recreation, wilderness, and heritage programs that acknowledged that outdoor recreation continues to grow in the region but indicated that the Forest Service would be cutting back on its investments in recreation and trail infrastructure due to budget constraints starting in FY2015. (USDA 2014)

Budget and Staffing Analysis

This section reviews findings from the analysis of the Tongass National Forest's budget and staffing during the Transition Framework period and evaluates whether discernable changes were made in either budgets or staffing.

Budget Analysis

The table and figure below summarize findings from the budget analysis.

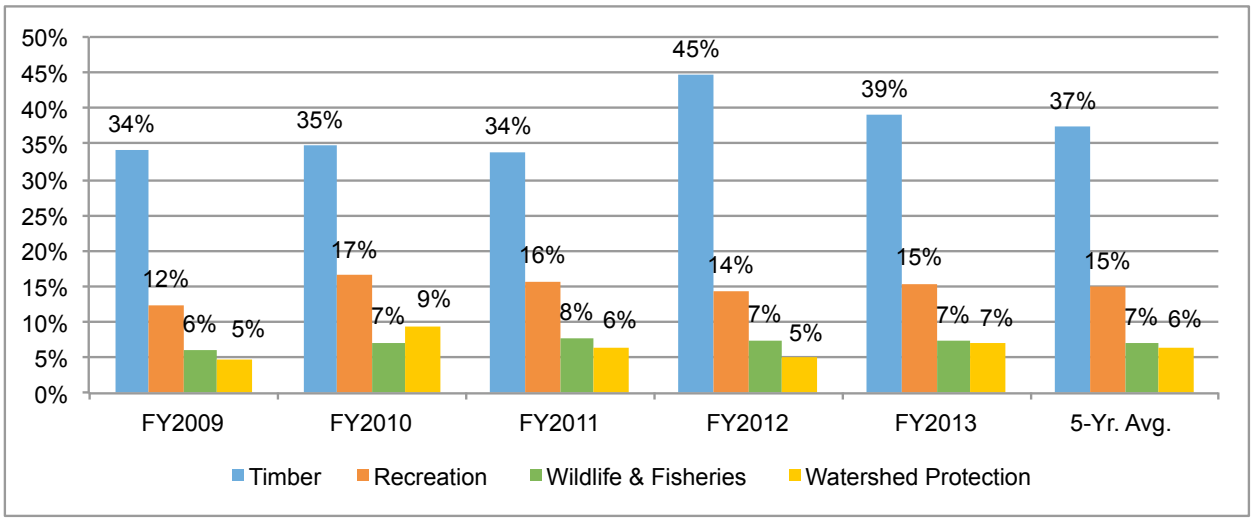
Tongass National Forest Budget by Program, FY2009 to FY2013 and 5-Yr. Avg.

Fiscal Year	FY2009	FY2010	FY2011	FY2012	FY2013	5-Yr. Avg.
Total Budget	**$74,773,208**	**$55,826,372**	**$ 56,841,568**	**$56,850,896**	**$55,302,207**	**$ 59,918,850**
Timber Accounts						
NF Forest Products [NFTM]	$14,179,865	$ 11,307,823	$ 11,609,957	$10,858,311	$10,621,183	$ 11,715,428
K-V projects [CWKV + CWK2]	$ 95,000	$ 98,000	$ 207,050	$ 164,730	$ 442,000	$ 201,356
Reforestation Trust Fund [RTRT]	$ 1,382,107	$ 1,434,000	$ 1,420,172	$ 1,421,253	$ 1,567,942	$ 1,445,095
Salvage Sales [SSSS]	$ 200,000	$ 200,000	$ 500,000	$ 800,000	$ 789,000	$ 497,800
Subtotal	**$15,856,972**	**$13,039,823**	**$ 13,737,179**	**$13,244,294**	**$13,420,125**	**$ 13,859,679**
Timber-related programs						
Roads [CMRD]	$ 9,732,200	$ 6,363,750	$ 5,549,666	$12,214,050	$ 8,208,324	$ 8,413,598
Subtotal	**$ 9,732,200**	**$ 6,363,750**	**$ 5,549,666**	**$12,214,050**	**$ 8,208,324**	**$ 8,413,598**
Timber Total	**$25,589,172**	**$19,403,573**	**$ 19,286,845**	**$25,458,344**	**$21,628,449**	**$ 22,273,277**
Timber Share	**34%**	**35%**	**34%**	**45%**	**39%**	**37%**
Recreation Accounts						
Recreation & Wilderness [NFRW]	$ 5,015,500	$ 4,249,015	$ 4,086,561	$ 3,875,730	$ 3,775,277	$ 4,200,417
Deferred Maint. Recreation [FDRF]		$ 731,201				$ 146,240
Trails [CMTL]	$ 1,987,785	$ 1,251,374	$ 1,650,300	$ 1,284,095	$ 1,271,005	$ 1,488,912
Recreation Receipts	$ 2,312,532	$ 3,005,430	$ 3,245,632	$ 3,036,745	$ 3,516,487	$ 3,023,365
Recreation Total	**$ 9,315,817**	**$ 9,237,020**	**$ 8,982,493**	**$ 8,196,570**	**$ 8,562,769**	**$ 8,858,934**
Recreation Share	**12%**	**17%**	**16%**	**14%**	**15%**	**15%**
Wildlife and Fish Accounts						
W & F [NFWF & NFWF Subsistence] Total	**$ 4,550,435**	**$ 4,012,222**	**$ 4,405,136**	**$ 4,247,316**	**$ 4,088,231**	**$ 4,260,668**
Wildlife & Fisheries Share	**6%**	**7%**	**8%**	**7%**	**7%**	**7%**
Watershed Protection Accounts						
Vegetation & Watershed [NFVW]	$ 2,701,736	$ 2,706,380	$ 2,963,618	$ 2,660,900	$ 2,931,650	$ 2,792,857
Legacy roads & trails [CMLG]	$ 896,000	$ 2,503,870	$ 683,773	$ 146,230	$ 926,180	$ 1,031,211
Watershed Protection Total	**$ 3,597,736**	**$ 5,210,250**	**$ 3,647,391**	**$ 2,807,130**	**$ 3,857,830**	**$ 3,824,067**
Watershed Protection Share	**5%**	**9%**	**6%**	**5%**	**7%**	**6%**

Source: U.S. Forest Service

Note: This table does not display Regional Office budget allocations that support timber, even though the Tongass National Forest has accounted for 90 percent or more of the timber harvested in Region 10, which includes only the Tongass and Chugach national forests.

Tongass National Forest Budget by Program, Share of Total, FY2009 to FY2013 and 5-Yr. Avg.



Source: U.S. Forest Service

The results show that timber expenditures account for the largest share of the Tongass National Forest budget in all years. The total budget was $75 million in FY2009 and $55 million to $57 million annually for FY2010 through FY2013. The total budget five-year average was $60 million. Timber expenditures ranged from $19 million to $26 million during the five years, accounting for 34 percent (FY2009 and FY2011) to 45 percent t (FY2012) of the total budget. Timber expenditures accounted for 37 percent of total on average during the five-year study period.

Recreation, wildlife and fish, and watershed protection combined accounted for less of the total budget than timber for the entire period FY2009 to FY2013. Recreation expenditures ranged from $8 million to $9 million, 12 percent to 17 percent of the total. Wildlife and fish expenditures averaged about $4 million annually, 6 percent to 8 percent of the total. Watershed protection expenditures ranged from $3 million to $5 million, 5 percent to 9 percent of the total.

These three non-timber categories aggregated to $15 million to $18 million annually. At their peak in FY2010, they accounted for 33 percent of the Tongass National Forest budget, only a little less than the 35 percent of the Tongass National Forest budget in that year's relatively low timber expenditures; the difference was less than $1 million. In FY2012, however, the difference was much greater, with the three non-timber categories accounting for only 27 percent of the Tongass National Forest budget compared to 45 percent for timber expenditures; the difference was more than $10 million in FY2012.

FY2009 may be an outlier as the total Tongass National Forest budget in that year, $75 million, was $18 million to $20 million (about 25%) higher than the subsequent years. It is unknown whether this was because of additional American Recovery and Reinvestment Act funding in FY2009 (see CRS Report 40537), or if this is part of a longer-term trend; additional data and further analysis would be needed to make such an assessment.

Looking at the five-year period does not show a significant change for most categories of expenditures. For timber expenditures, the two highest years were FY2009 and FY2012, with the lowest timber expenditures in FY2010 and FY2011; this shows no particular trend. Similarly, wildlife and fish, and watershed protection expenditures show no clearly identifiable rising or falling trend.

For recreation expenditures, it is worth distinguishing between changes in budget allocations and recreation receipts. Recreation budget expenditures fell by $2 million from FY2009 to FY2013. This downward trend was partially offset by increases in recreation receipts paid by forest users. The budget cutbacks are consistent with language from the agency's 2014 leader's intent document that indicates the Tongass National Forest will be cutting the recreation budget, despite increasing demand for Tongass National Forest recreation resources.

These budget findings show no evidence of a transition in Tongass National Forest priorities. The timber program remains the largest program, larger than the other program areas combined for all years. Recreation cutbacks in the budget have been partially offset by increases in retained receipts from users. As we will see below, these budget commitments are out of step with the economy of southeast Alaska and opportunities for the Tongass National Forest to contribute to expanded economic opportunities in the region.

Staffing Analysis

The table and figure below summarize findings from the staffing analysis.

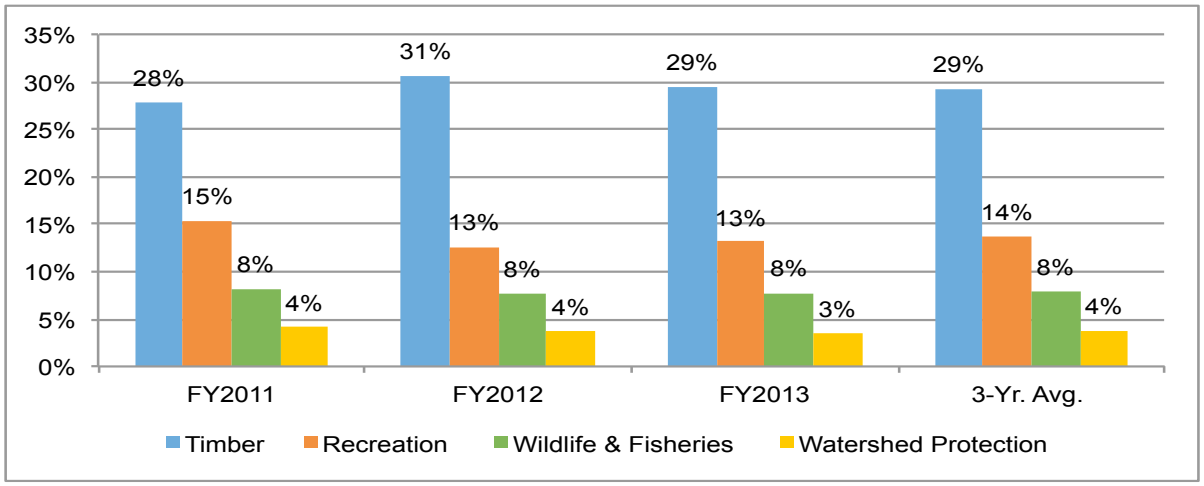
Tongass National Forest Staffing (FTEs) by Program, FY2011 to FY2013 and 3-Yr. Avg.

Fiscal Year	FY2011	FY2012	FY2013	3-Yr. Avg.
FTE Total	**392**	**368**	**356**	**372**
Timber Accounts				
NF Forest Products [NFTM]	85.6	82.4	78.3	82.1
K-V projects [CWKV]	0.5	0.8	0.8	0.7
Reforestation Trust Fund [RTRT]		2.7	2.6	1.8
Salvage Sales [SSSS]	2.5	6.3	5.4	4.8
Timber-related programs				
Roads [CMRD]	20.5	20.4	17.8	19.6
Timber Total	**109.1**	**112.6**	**104.9**	108.9
Timber Share	**28%**	**31%**	**29%**	**29%**
Recreation Accounts				
Recreation & Wilderness [NFRW]	44.1	34.8	34.8	37.9
Deferred Maint. Recreation [FDRF]	1.2	0.0	0.0	0.4
Trails [CMTL]	14.8	11.5	11.9	12.8
Recreation Total	**60.2**	**46.3**	**46.7**	51.1
Recreation Share	**15%**	**13%**	**13%**	**14%**
Wildlife and Fish Accounts				
W & F [NFWF] Total	**32.0**	**28.4**	**27.6**	29.3
Wildlife & Fisheries Share	**8%**	**8%**	**8%**	**8%**
Watershed Protection Accounts				
Vegetation & Watershed [NFVW]	15.7	13.1	12.0	13.6
Legacy roads & trails [CMLG]	0.5	0.4	0.4	0.4
Watershed Protection Total	**16.2**	**13.5**	**12.4**	14.0
Watershed Protection Share	**4%**	**4%**	**3%**	**4%**

Source: U.S. Forest Service

Note: This table does not display Regional Office staffing allocations that support timber, even though the Tongass National Forest has accounted for 90 percent or more of the timber harvested in Region 10, which includes only the Tongass and Chugach national forests.

Tongass National Forest Staffing by Program, Share of Total, FY2011 to FY2013 and 3-Yr. Avg.



Source: U.S. Forest Service

The results of the staff analysis are similar to those of the budget analysis. Timber is the most significant Tongass National Forest workforce commitment for all years, accounting for 105 to 113 FTEs annually for the three fiscal years—ranging from 28 percent to 31 percent of the total. This is a smaller share of the total Tongass National Forest staffing than is timber's share of the Tongass National Forest budget. The factors causing this difference probably include contracting for timber sale support (*e.g.*, some road work and some required environmental analyses) and that most of the mandatory spending accounts excluded from the budget allocation tables are not timber-related accounts. Timber accounted for 29 percent of all FTEs on average during the three-year study period.

Recreation staffing was smaller, at 60 FTEs in FY2011, 46 FTEs in FY2012, and 47 FTEs in FY2013. This ranges from 13 percent to 15 percent of the total Tongass National Forest staffing, roughly the same proportion as recreation's share of the Tongass National Forest budget when the recreation receipts are included. While the recreation staffing share of total remains consistent, the absolute decline in FTEs, from 60 in FY2011 to 47 in FY2013, shows that as the overall workforce on the Tongass National Forest shrank the recreation programs absorbed the largest losses.

Wildlife and fish staffing, at 28 to 32 FTEs, accounted for about 8 percent of the total Tongass National Forest staffing, also comparable to the wildlife and fish share of the total Tongass National Forest budget. Watershed protection staffing was much smaller, at 12 to 16 FTEs. This is only about 4 percent of the total Tongass National Forest staffing, smaller than the watershed protection share of the Tongass National Forest budget. Contracting for watershed protection work could explain the relatively smaller staff share.

These staff findings show no evidence of a transition in Tongass National Forest commitments. With only three fiscal years of FTE data, it is difficult to assess staff trends by workforce category. However, it does not appear there was a significant shift in FTE allocations across programs from FY2011 to FY 2013. The exception is the recreation program, which saw the largest declines. Timber remained the largest staff commitment, larger than all other programs combined during the three years.

Economic and Fiscal Analysis

This section reviews key southeast Alaska economic sectors for comparison with Tongass National Forest budget and staffing priorities, and assesses whether the Tongass National Forest has moved beyond an emphasis on old growth timber and below-cost timber sales.

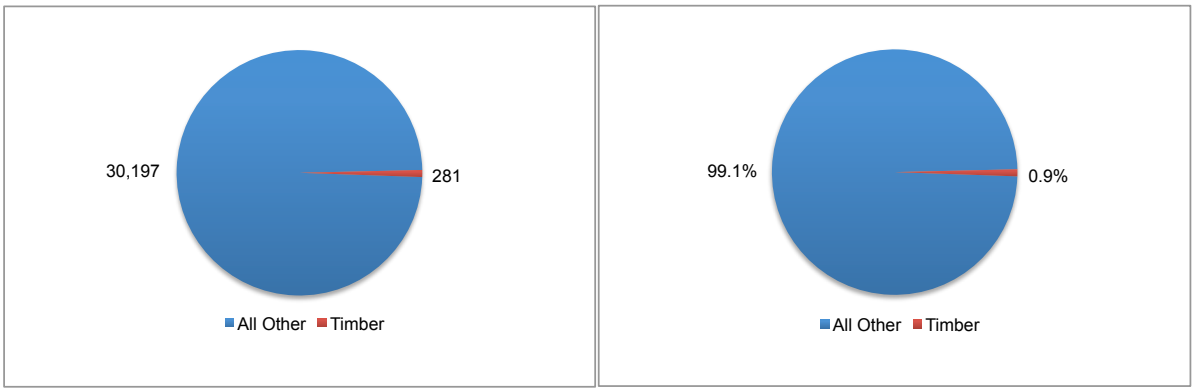
Economic Analysis

Evaluation of the Tongass National Forest budget and staffing shows that timber production is the largest resource management account, and is larger than the Tongass National Forest budget and staffing dedicated to recreation, wildlife and fish, and watershed protection combined. This allocation of funding and effort is at odds with the regional economy of southeast Alaska, where the timber industry is a small source of employment, and two of the largest sectors of the economy are the tourism and fishing industries.

The few studies of the economic impacts of Tongass National Forest management and activities are outdated and focus on timber production. For example, *Economic Growth and Change in Southeast Alaska* (USFS Report PNW-GTR-611) was published a decade ago in 2004. Many Forest Service studies and projections of the timber supply and timber industry in southeast Alaska appear to be based on sawmill capacity in 2003 and 2004. (See draft U.S. Forest Service studies, http://www.fs.fed.us/pnw/pubs/brackley/index.shtml.) These studies are thus based on the historic timber industry, not on current timber utilization by the existing industry.

However, the timber industry in southeast Alaska has clearly declined substantially in the past two decades. One industry source (Resource Development Council) stated that there were 457 people employed in forestry and sawmill jobs in all of Alaska in 2011, down 90 percent from the 4,600 jobs in 1990. A Forest Service source (*Economic Analysis of Southeast Alaska*) reported 265 timber-related jobs in Southeast Alaska in 2008. The Southeast Conference's most recent assessment (*Southeast Alaska by the Numbers 2014*) estimates the timber industry lost 3,500 jobs in the 1990s, and reports that the industry supported 270 jobs and 55 self-employed individuals in 2013, a two percent decline from the previous year and less than one percent of total regional employment in 2013. (Southeast Conference)

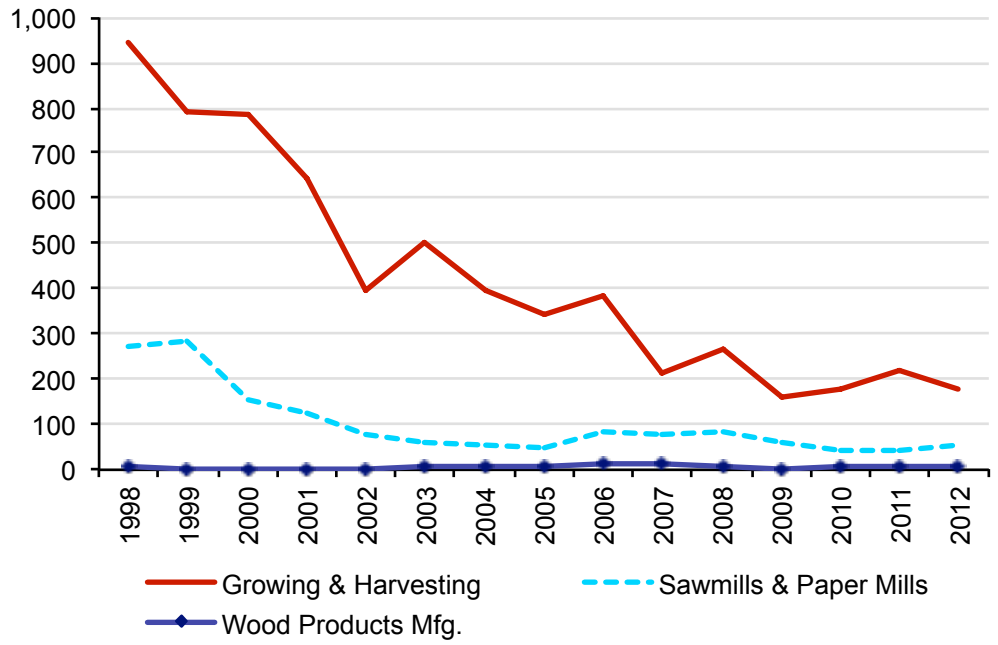
Private Sector Timber Jobs & Self-Employed vs. All Other Private Sector Jobs & Self-Employed, Southeast Alaska, 2012



Source: County Business Patterns, Nonemployer Statistics

Data from the U.S. Department of Commerce show similar trends and values. According to this source, southeast Alaska timber industry employment—in growing and harvesting, sawmills, and wood products manufacturing from timber cut on state, private, and federal lands combined—declined from 1,222 jobs in 1998 to 240 jobs in 2012, or 1.1 percent of total private employment that year. The largest declines were sustained in growing and harvesting jobs. Regional self-employed trends in timber-related activities are difficult to determine because of data limitations, but there were 41 self-employed individuals in the timber sector in 2012, or 0.5 percent of total self-employed people in the region that year. Private sector timber jobs and self-employed individuals together accounted for 0.9 percent of private jobs and self-employed in southeast Alaska in 2012. (County Business Patterns, Nonemployer Statistics)

Private Sector Employment Trends in Timber by Major Category, Southeast Alaska, 1998-2012



Source: County Business Patterns

These figures exaggerate the size of the timber sector that relies specifically on Tongass National Forest resources. A portion of the timber jobs in the region are not related to the Tongass National Forest, since the Tongass National Forest is not the only timber producer in southeast Alaska. In the Big Thorne Project Final Environmental Impact Statement, the Forest Service estimated that Tongass National Forest-related private employment was 109 in 2011. (Big Thorne Project Final EIS, 3-19) This is less than half of the total size of the timber industry in southeast Alaska as reported from other sources.

The cause of the decline in timber industry employment in southeast Alaska is disputed. Industry and federal and state government sources assert that declining timber sales from the Tongass National Forest are the cause. (See, *e.g.*, Alaska Timber Jobs Task Force, *Report to Governor Sean Parnell*.) Others (Colt, *et al*.) have noted that the decline was largely due to the closure of the two large pulp mills in southeast Alaska, both of which relied exclusively on Tongass National Forest timber, but whose closures was the result of declining Japanese pulp markets, not

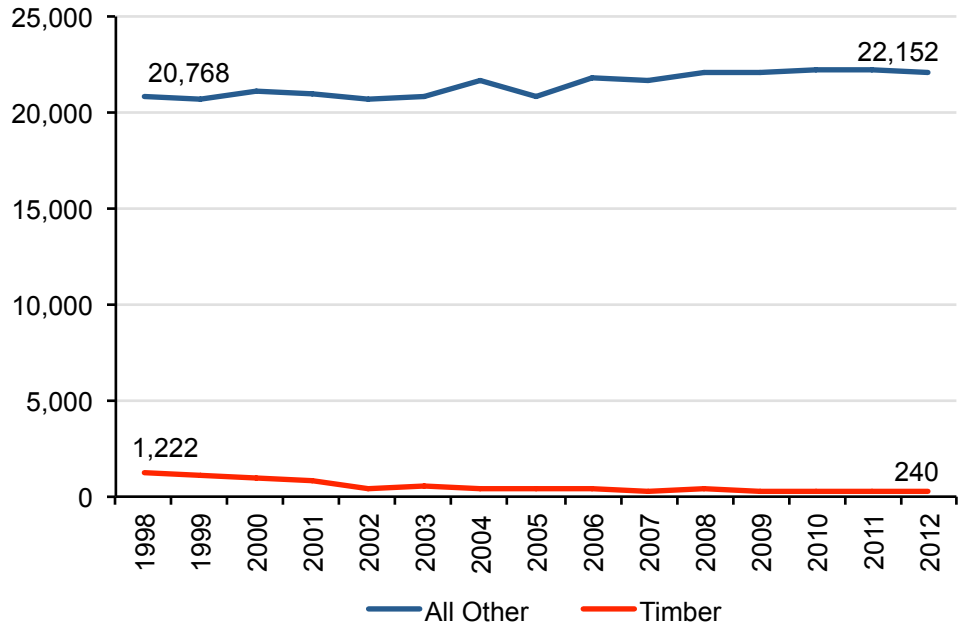
declining Tongass National Forest timber supplies. Environmental sources charge that estimated timber demand from the Tongass National Forest has been persistently overestimated, and that restrictions on log exports (to promote local wood processing jobs) have been eased to find markets for Tongass National Forest timber. (See, *e.g.*, *Tongass Timber Economics 101*.) Others (Colt, *et al*.) have noted that Alaska is a high-cost production area and is far from markets, making recovery and/or growth of the timber industry difficult.

The relative importance of the Tongass National Forest for timber supply is also unclear. One industry source (Resource Development Council) noted that the federal government administers about half of Alaska's forests, with the state government and Native corporations each administering about a quarter of the forests. A state source (AK Dept. of Commerce) stated that the federal government administers 65 percent of Alaska's forests, with 25 percent owned by the state and only 10 percent owned by Native corporations. Another industry source (Alaska Forestry Association) stated that the Tongass National Forest contains 93 percent of the timberland in southeast Alaska. In contrast, Sealaska, a Native corporation, maintains that it is the dominant timber producer in southeast Alaska, although Native corporations are not bound by the log export restrictions imposed on most logs from federal lands, and thus may provide little timber for domestic processing.

The conclusion from these data is that the timber industry in southeast Alaska has experienced a decades-long decline and today is a small part of the regional economy, accounting for no more than one percent of southeast Alaska employment while receiving the lion's share of Tongass National Forest budget and staffing resources.

The decline of the timber industry has been difficult for the region, but it has not kept the overall southeast Alaska economy from growing. According to the U.S. Department of Commerce, from 1998 to 2012 regional timber jobs declined by more than 80 percent (-982 jobs), while all other private sector jobs grew by nearly seven percent (+1,384 jobs). (County Business Patterns)

Private Sector Employment Trends, Timber vs. All Other, Southeast Alaska, 1998 to 2012



Source: County Business Patterns

In considering how the Tongass National Forest might contribute to the economic vitality of southeast Alaska communities, it is useful to examine two major regional industries—tourism and fishing—that are affected by Tongass National Forest management decisions and investments.

Tourism is a notoriously difficult sector to measure because it spans a number of industries and the U.S. Department of Commerce does not have a single industry code for tracking the travel and tourism economy. Despite this challenge, there are credible efforts to measure the visitor industry. Southeast Conference reports that in 2013 the southeast Alaska visitor industry employed 6,707 people, is growing (+332 jobs, 5.2% change from 2012 to 2013), and accounted for 15 percent of total regional employment. (Southeast Conference) Using data from the U.S. Department of Commerce, Headwaters Economics estimates that in 2012 travel and tourism-related industries combined—accommodation and food services; arts, entertainment, and recreation; passenger transportation; and retail trade—accounted for 4,711 jobs, or 21 percent of total private employment. (County Business Patterns)

The fishing, or seafood, industry also can be measured in a number of ways and has tracking challenges related to data nondisclosures and the large number of self-employed individuals. Despite these hurdles, Southeast Conference reports that in 2013 the southeast Alaska seafood industry employed 4,252 people, is growing (+148 jobs, 3.6% change from 2012 to 2013), and accounted for nine percent of total regional employment. (Southeast Conference) Using data from the U.S. Department of Commerce, Headwaters Economics estimates that in 2012 fishing-related sectors employed 1,780 people, along with another 2,408 self-employed individuals. This represents eight percent of total private employment and 31 percent of all self-employed people in the region. (County Business Patterns, Nonemployer Statistics)

There are also methods of calculating the broader regional economic significance (*i.e.*, including the multiplier effect of direct spending and employment) of the tourism and fishing industries in southeast Alaska. Several recent efforts, which confirm the economic importance of the tourism and fishing industries, are summarized below.

A 2014 McDowell Group study for the state of Alaska's Department of Commerce, Community, and Economic Development found that the visitor industry as a whole in southeast Alaska, including multiplier effects, totaled $1.1 billion in spending and resulted in 10,900 jobs and $407 million in labor income during the 12-month period from October 2012 to September 2013. The employment total represents 20 percent of total southeast Alaska employment in 2012. (Bureau of Economic Analysis) This report shows that the visitor industry is growing in the region. Since the 2011-2012 season, visitor spending increased by 10 percent, employment by 7 percent, and labor income by 10 percent. (McDowell Group 2014)

The McDowell Group also analyzed specific southeast Alaska visitor activities in an earlier 2012 study and found that top tourism activities were: "wildlife viewing (42 percent of visitors participated), hiking/nature walk (28 percent), day cruises (26 percent), flightseeing (15 percent), fishing (11 percent), bird watching (9 percent), zipline (7 percent), dogsledding (7 percent), kayaking/canoeing (7 percent), biking (4 percent), rafting (3 percent), ATV/4-wheeling (2 percent), camping (2 percent), Northern Lights viewing (1 percent), and hunting (<1 percent)." (McDowell 2012) Many of these visitor activities rely heavily on natural resources managed by the Tongass National Forest and the ability to access and enjoy the landscape in its natural state.

A 2010 TCW Economics report for Trout Unlimited found that southeast Alaska salmon fisheries and hatchery operations, including multiplier effects from commercial, recreational, and personal use/subsistence and the processing of commercially harvested salmon, accounted for $986 million in total economic output, 7,282 jobs, and $189 million in personal income in 2007. (TCW Economics) The employment total represents 14 percent of total regional employment in 2007. (Bureau of Economic Analysis)

A more recent 2013 McDowell Group study for the Alaska Seafood Marketing Institute, which was not limited to salmon and used different classifications than the TCW Economics report, found that the seafood industry produced $641 million worth of seafood (in wholesale terms) and, including multiplier effects, supported 9,650 average monthly jobs along with $468 million in labor income in 2011. (McDowell 2013) The average monthly job total represents 18 percent of total southeast Alaska employment in 2011. (Bureau of Economic Analysis) The salmon fishery, which relies on the Tongass National Forest for cold water and healthy spawning grounds, accounted for three quarters of the region's total commercial wholesale fishing value and drives the majority of the industry's economic impacts in southeast Alaska.

The conclusion from these data is that the tourism and fishing industries are two of the major economic sectors in southeast Alaska today, and are growing in scale and importance. Despite demonstrated growth in tourism and fining markets, these industries are not benefiting from increases, or even increases in share, of Tongass National Forest budget and staffing resources.

Fiscal Analysis

Tongass National Forest timber sales have consistently cost more to prepare, access, and administer than the federal government receives for the timber. The proposed transition from old growth to young growth timber, which in general has lower value, has brought renewed attention to losses on timber sales and the return these sales provide U.S. taxpayers. The argument that old growth must be harvested because it has higher value has not changed the fact that predominantly old growth timber sales on the Tongass National Forest continue to cost significantly more than they generate in revenue.

National concerns about Forest Service timber sales in which the sale costs exceeded the revenues (known as below-cost timber sales; see CRS Report 94-698 ENR) were first raised in 1980. That year, the Natural Resources Defense Council (NRDC) issued a lengthy report showing timber costs and revenues for each national forest in the country, and showing federal fiscal losses on timber sales from many national forests, including the Tongass National Forest. Several reports, mostly from various congressional agencies, were published in 1984, also showing fiscal losses on timber sales in many national forests, including the Tongass National Forest. (See CRS Report 84-799 ENR) The Forest Service and the timber industry have defended such practices, arguing that the agency was not required to make a profit for the U.S. Treasury and that timber sales were needed to stabilize communities. (See, *e.g.*, Beuter) Despite the concerns and counter-arguments, no action to reduce timber sale losses has been made by Congress or the several Administrations, but the concerns persist. (See CRS Report RL32485)

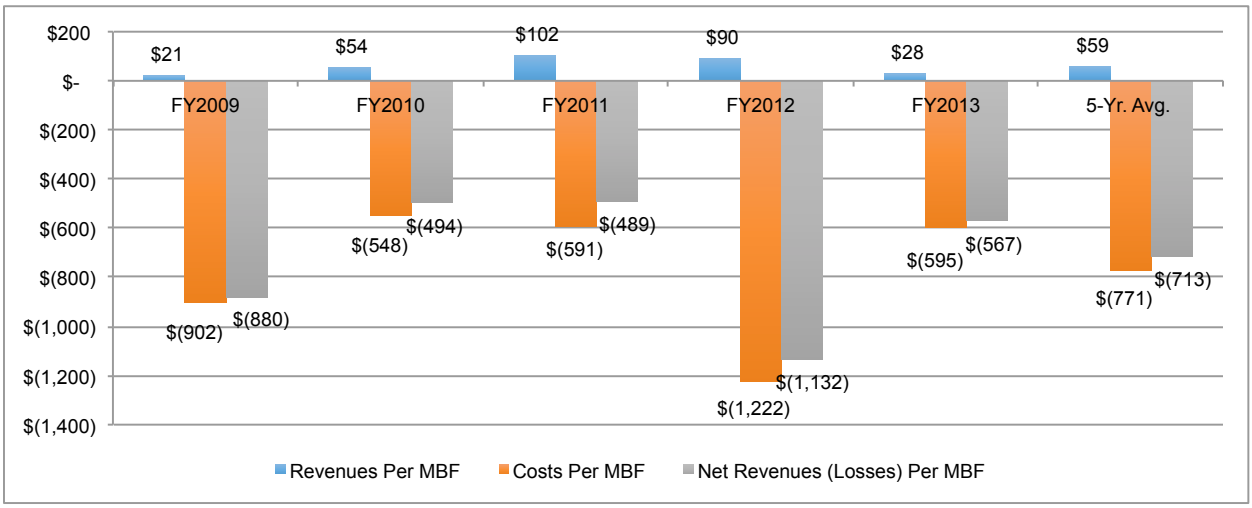
The Tongass National Forest clearly has lost money on recent timber sales, as the table below shows. (See also Mehrkens) Harvest revenues ranged from $600,000 to more than $3.3 million between FY2009 and FY2013—from $20 per thousand board feet (MBF) harvested to more than $100 per MBF. As noted above, timber-related costs have been significantly higher, ranging from $19 million to $26 million during the same period—from more than $500 per MBF harvested to more than $1,200 per MBF. This means that the Tongass National Forest lost nearly $25 million—$880 per MBF—in FY2009; more than $17 million—$494 per MBF—in FY2010; nearly $16 million—$489 per MBF—in FY2011; nearly $24 million—$1,132 per MBF—in FY2012; and nearly $21 million—$567 per MBF—in FY2013. The total net cost to the U.S. Treasury from Tongass National Forest timber sales during these five years was more than $100 million.

Tongass National Forest Timber Sale Revenues and Costs, FY2009 to FY2013 and 5-Yr. Avg.

Fiscal Year	FY2009	FY2010	FY2011	FY2012	FY2013	5-Yr. Avg.
Total Revenues	$ 605,166	$ 1,897,909	$ 3,330,495	$ 1,873,382	$ 1,015,373	$ 1,744,465
Total Costs	$ 25,589,172	$ 19,403,573	$ 19,286,845	$ 25,458,344	$ 21,628,449	$ 22,273,277
Net Revenues (Losses)	**$(24,984,006)**	**$(17,505,664)**	**$(15,956,350)**	**$(23,584,962)**	**$(20,613,076)**	**$(20,528,811)**
Volume Harvested (in MBF)	28,385	35,410	32,638	20,828	36,366	30,725
Revenues Per MBF	$ 21	$ 54	$ 102	$ 90	$ 28	$ 59
Costs Per MBF	$ 902	$ 548	$ 591	$ 1,222	$ 595	$ 771
Net Revenues (Losses) Per MBF	**$ (880)**	**$ (494)**	**$ (489)**	**$ (1,132)**	**$ (567)**	**$ (713)**

Source: Costs are from the budget table in this report; revenues and cut volume are from U.S. Forest Service Cut and Sold reports available online: http://headwaterseconomics.org/interactive/national-forests-timber-cut-sold.

Tongass National Forest Timber Sale Revenues and Costs, FY2009 to FY2013 and 5-Yr. Avg.



Source: Costs are from the budget table in this report; revenues and cut volume are from U.S. Forest Service Cut and Sold reports available online: http://headwaterseconomics.org/interactive/national-forests-timber-cut-sold.

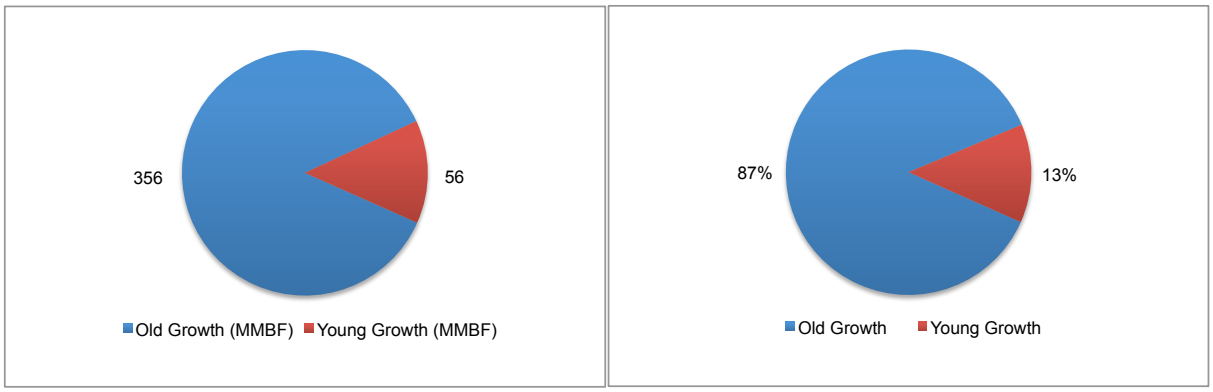
The Transition Framework outlines a transition from old growth to young growth harvests, but such a shift has yet to be shown in Tongass National Forest timber sales and is unlikely to improve the fiscal results of timber sales. A review of timber sales proposed (or in various planning stages) by the Tongass National Forest since the Transition Framework announcement shows an overwhelming bias toward old growth volume—approximately 87 percent of total proposed volume.

Recent Tongass National Forest Proposed Timber Sales, Old Growth vs. Young Growth

Project Name	District	Final Decision	Status	Date	Old Growth Volume (MMBF)	Young Growth Volume (MMBF)
Navy	Wrangell	N	FEIS	3/1/09	11.6	0
Central Kupreanof	Petersburg	Y	ROD/FEIS	2/4/11	26.3	0
Wrangell Roadside	Wrangell	Y	DN/EA	3/10/11	5	0
Tonka	Petersburg	Y	ROD/FEIS	3/28/12	38.5	0
Dargon Point	Thorne Bay	Y	DN/EA	2/19/13	0	2.5
Wrangell Island	Wrangell	N	Scoped	7/31/13	65	0
Kosciusko	Thorne Bay	N	Scoped	8/1/14	5	38
Mitkof	Petersburg	N	Draft Decision, EA, FONSI	8/7/14	28.5	0
Big Thorne	Thorne Bay	Y	FEIS/ROD/SIR	8/21/14	116.3	15
Saddle Lakes	Ketchikan	N	DEIS	8/29/14	60	0
Total Volume (MMBF)					**356**	**56**
Share of Total Volume					**87%**	**13%**

Source: Tongass National Forest planning documents; Tongass National Forest 5-Year Timber Sale Schedule (no longer publically available on the Tongass National Forest website); and Trajectory to Young Growth report.

Recent Tongass National Forest Proposed Timber Sales, Old Growth vs. Young Growth



Source: Tongass National Forest planning documents; Tongass National Forest 5-Year Timber Sale Schedule (no longer publically available on the Tongass National Forest website); and Trajectory to Young Growth report.

An instructive illustration of the continued money-losing reality is the Big Thorne Project, which has been approved by the Tongass National Forest but is being litigated by various environmental groups. This sale is the largest proposed timber sale in decades on the Tongass National Forest. It is predominantly an old growth timber sale and is rationalized in large part by the Forest Service's assertion that young growth trees on Prince of Wales Island are not commercially viable at present—that without a substantial old growth component the various proposed alternatives would incur significant financial loses, or find no bidders.

However, even with the dominant old growth component—which takes the Tongass National Forest in a direction counter to the Transition Framework and stated young growth leader's intent goal—the Tongass National Forest will likely find itself losing money for federal taxpayers. The recently awarded 97-million board foot sale contract was reportedly worth more than $6 million, but at the FY2013 average Tongass National Forest cost of $595 per MBF, the preparation and administration costs of the sale would be more than $57 million, with a net cost to the U.S. Treasury of $50 million—a nearly 10:1 expense-revenue loss ratio. (E&E News)

There may be legitimate questions about the readiness of second growth supply on the Tongass National Forest and the viability of young growth timber economics, but as these figures show the old growth program itself is not a self-supporting endeavor. The allocation of scarce Tongass National Forest budget and staff resources to a minor economic sector represents a large opportunity cost for the regional economy—these resources could be repurposed, using the logic of the Transition Framework, to larger and more vibrant industries that support more jobs and communities in southeast Alaska.

Conclusion

The Tongass National Forest Transition Framework, announced in 2010, came at an opportune time, promising a "new path forward in the region that enhances economic opportunities to communities while conserving the Tongass National Forest."

Southeast Alaska was poised to emerge from the Great Recession, and timber conflicts had seemingly given way to a discussion about how to shift to young growth harvesting and restoration that would in turn support other forest values and activities, and ultimately allow the Forest Service to better meet the needs southeast Alaskans.

Over time, the region's timber industry has shrunk to a fraction of its former size and continues to decline; while the large and growing tourism and fishing industries could benefit from new Tongass National Forest investments in infrastructure and supporting services. The goal of managing the Tongass National Forest in a way that contributes to the revitalization of the southeast Alaska economy seemed within grasp.

A close analysis, however, shows a path taken that is much different than the promises made. Today, four years after the start of the Transition Framework, the Forest Service continues to allocate the largest share of its budget and manpower to timber production, while simultaneously flat-lining or even reducing support for recreation, wildlife, fish, and watershed protection. At best, the agency's actions are inconsistent with the assurances made by the Transition Framework.

Given the economic context of southeastern Alaska, the Forest Service's actions are difficult to understand. While there may be legitimate questions about the readiness of second growth supply on the Tongass National Forest and the viability of young growth timber economics, the analysis in this paper clearly demonstrates that the old growth program itself is not a self-supporting endeavor. It is possible that, with the right support, some timber industry could be a vital part of the region's economic geography, but this should not come at the cost of more strategic and promising investments in southeast Alaska's overall economic health.

The allocation of scarce Tongass National Forest budget and staff resources to a minor economic sector represents a large opportunity cost for the regional economy—these resources could be repurposed, using the logic of the Transition Framework itself, to larger and more vibrant industries that support more jobs and communities in southeast Alaska.

In short, the Tongass National Forest has not lived up to the expected "transition," and the casualties of this failure to seize a more promising economic trajectory are the region's businesses and communities, as well as the U.S. taxpayer.

Appendix: U.S. Forest Service Budget Acronyms

National Forest Systems - NFNF	
Inventory & Monitoring	NFIM
Landowner Management	NFLM
Minerals & Geology Management	NFMG
Forest Planning	NFPN
Grazing Management	NFRG
Recreation, Heritage, & Wilderness	NFRW
Timber Sale Management	NFTM
Vegetation & Watershed Management	NFVW
Wildlife & Fisheries Habitat Mgt	NFWF
Capital Improvements & Maintenance - CMCM	
Facilities Capital Improvements & Maint	CMFC
Infra Improvements - Deferred Maint	CMII
Legacy Roads & Trails	CMLG
Roads Capital Improvements & Maint	CMRD
Trails Capital Improvements & Maint	CMTL
Deferred Maint Projects for Recreation Facilities	FDRF
Perms & Trust Funds (Not All-Inclusive)	
Cooperative Work - NONAGT Based	CWF2
Cooperative Work - Other	CWFS
K-V Sale Area Projects	CWKV
Regional K-V Sale Area Projects	CWK2
Reforestation Trust Funds	RTRT
Conveyance of Admin Sites	EXSC
Regional Recreation Enhancement	FDAS
Unit Recreation Enhancement	FDDS
Gifts & Bequests	GBGB
Maps - (MRMS, MVIS & MSEQ)	MAPS
Quarters Maintenance	QMQM
Secure Rural Schools (Title II)	SRS2
Stewardship Contracting	SSCC
Salvage Sale	SSSS
Timber Pipeline - Botanical Products	TPBP
Timber Pipeline - Recreation Backlog	TPCD
Timber Pipeline - Sale Prep	TPPS
Cost Recovery - Major Projects	URMJ
Cost Recovery - Minor Projects	URMN

References

Alaska Forestry Association, *Alaska Timber Industry History: Southeast Alaska*, available at www.akforest.org/Alaska%20Timber%20Industry%20History.pdf.

Alaska Timber Jobs Task Force, *Report to Governor Sean Parnell*, Administrative Order 258: Final Report, June 2012, available at http://forestry.alaska.gov/aktimber_jobs_taskforce.htm.

John H. Beuter, *Overview of Below-Cost Timber Sale Issue*, American Forest Resource Alliance, Technical Bulletin No. 90-02, November 30, 1990.

Thomas J. Barlow, Gloria E. Helfand, Trent W. Orr, and Thomas B. Stoel, Jr., *Giving Away the National Forests: An Analysis of U.S. Forest Service Timber Sales Below Cost*, Natural Resources Defense Council (NRDC), June 1980.

Steve Colt, Darcy Dugan, and Ginny Fay, Institute of Social and Economic Research, Univ. of Alaska, *The Regional Economy of Southeast Alaska: Final Report*, for the Alaska Conservation Foundation, March 1, 2007.

CRS Report 84-799 ENR. Ross W. Gorte, *Summary of Recent Reports on Forest Service Timber Sale Costs and Revenues*, November 8, 1984.

CRS Report 94-698 ENR. Ross W. Gorte, *What Are Below-Cost Timber Sales?*, September 2, 1994.

CRS Report 97-706 ENR. Ross W. Gorte, *Forest Roads: Construction and Financing*, July 16, 1997.

CRS Report RL 32485. Ross W. Gorte, *Below-Cost Timber Sales: An Overview*, July 21, 2004.

CRS Report 40537. Clinton T. Brass, Carol Hardy Vincent, Pamela J. Jackson, Jennifer E. Lake, Karen Spar, and Robert Keith, *American Recovery and Reinvestment Act of 2009 (P.L. 111-5): Summary and Legislative History*, April 20, 2009.

CRS Report RL30335. Ross W. Gorte, Carol Hardy Vincent, and M. Lynne Corn, *Federal Land Management Agencies' Permanently Appropriated Accounts*, Oct. 5, 2010.

CRS Report RL33730. Carol Hardy Vincent, *Recreation Fees Under the Federal Land Recreation Enhancement Act*, October 21, 2010.

E&E News, *Agency Awards Controversial Old-Growth Logging Contract in Tongass*, October 1, 2014.

Headwaters Economics, Economic Profile System, available at http://headwaterseconomics.org/tools/eps-hdt.

Juneau Economic Development Council (JEDC), Southeast Alaska Cluster Initiative, available at http://www.jedc.org/seclusterinitiative.

McDowell Group, 2012, *Economic Impacts of Visitors to Southeast Alaska, 2010-11*, available at http://www.alaskawild.org/wp-content/uploads/mcdowell_report_final.pdf.

McDowell Group, 2013, *Economic Value of the Alaska Seafood Industry*, available at http://pressroom.alaskaseafood.org/wp-content/uploads/2013/08/AK-Seafood-Impact-Report.pdf.

McDowell Group, 2014, *Economic Impacts of Alaska's Visitor Industry, 2012-13 Update*, available at http://commerce.alaska.gov/dnn/Portals/6/pub/TourismResearch/AVSP/Visitor%20Industry%20Impacts%202013%201_30.pdf.

Joseph R. Mehrkens, *Tongass Timber Economics 101*, Greater Southeast Alaska Conservation Community, available at http://www.gsac.net/issues/tongass-timber-economics-101.

Resource Development Council, *Alaska's Forest Industry*, available at http://www.akrdc.org/issues/forestry/overview.html.

Sealaska, *Timber*, available at http://www.sealaska.com/page/timber.

Southeast Conference, *Southeast Alaska by the Numbers, 2014*, available at http://www.seconference.org/sites/default/files/Southeast%20Alaska%20by%20the%20numbers%202014%20FINAL.pdf.

State of Alaska Department of Commerce, Community & Economic Development, *Forest Products*, available at http://commerce.alaska.gov/dnn/ded/DEV/ForestProducts/SourcesofTimberSupply.aspx.

TCW Economics, *Economic Contributions and Impacts of Salmonid Resources in Southeast Alaska*, 2010, available at http://www.americansalmonforest.org/uploads/3/9/0/1/39018435/econreportfull.pdf.

U.S. Department of Agriculture, Forest Service, *Timber Products Outputs and Timber Harvests in Alaska: Projections for 2005-2025 (Draft)*, available at http://www.fs.fed.us/pnw/pubs/brackley/index.shtml.

U.S. Department of Agriculture, Forest Service (Rhonda Mazza, tech. ed.), *Economic Growth and Change in Southeast Alaska*, Report PNW-GTR-611, July 2004, available at www.fe.fed.us/pnw/pubs/pnw_gtr611.pdf.

U.S. Department of Agriculture, Forest Service, *Economic Analysis of Southeast Alaska: Envisioning a Sustainable Economy with Thriving Communities*, R10-MB-725, May 2010.

U.S. Department of Agriculture, Forest Service, *USDA Pursues Jobs, Community Stability While Developing New Approach to Forest Management in Southeast Alaska*, Release No. 0288.10, May 26, 2010, available at http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2010/05/0288.xml.

U.S. Department of Agriculture, Forest Service, *USDA Investment Strategy in Support of Rural Communities in Southeast Alaska 2011-2013*, R10-MB-734, November 2011, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5352925.pdf.

U.S. Department of Agriculture, Forest Service, *Trajectory to Young Growth on the Tongass National Forest*, January 2013, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5445758.pdf.

U.S. Department of Agriculture, Forest Service, *Leaders Intent: Forest Stewardship and Young Growth Management on the Tongass National Forest*, January 2013, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5408229.pdf.

U.S. Department of Agriculture, Forest Service, *USDA Economic Diversification in Southeast Alaska, Briefing Paper*, December 2013, available at http://www.fs.usda.gov/detail/r10/home/?cid=FSBDEV2_038855.

U.S. Department of Agriculture, Forest Service, *Recreation Program Fee Accomplishment Report*, 2013, available at: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3801961.docx.

U.S. Department of Agriculture, Forest Service, *Leaders Intent: Recreation, Wilderness and heritage Program Management in the Alaska Region,* February 6, 2014, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3792642.pdf.

U.S. Department of Agriculture, Forest Service, *State of the Tongass National Forest FY2013*, R10-MB-786, April 2014, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3799223.pdf.

U.S. Department of Agriculture, Forest Service, *Fiscal Year 2015 Budget Justification*, available at http://www.fs.fed.us/aboutus/budget/.

U.S. Department of Agriculture, Forest Service, Tongass National Forest, *5-Year Timber Sale Plan*, no longer available online; see http://www.fs.usda.gov/projects/tongass/landmanagement/projects.

U.S. Department of Commerce, Census Bureau, Nonemployer Statistics, 2014.

U.S. Department of Commerce, Census Bureau, County Business Patterns, 2014.

U.S. Department of Commerce, Bureau of Economic Analysis, 2014.

HEADWATERS
ECONOMICS

Tonka Timber Sale DXPRE Post Harvest Monitoring Results

Manual/ Handbook Direction

2409.12 Timber Cruising Handbook:
Ch. 70 Designating Timber for Cutting
71.4 -Designating Without Marking Individual Trees;
Use designation by clear cut units, overstory or understory removal, or similar designations to reduce sale layout costs when such methods will accomplish the sale objectives.

2409.19 Renewable Resources Handbook:
60.5 – Definitions
Designation by Prescription;
A method of designating trees for removal by describing the desired end results of the treatment; for example, retain 60 percent basal area. Designation by prescription may be used for noncommercial material or for commercial material when, **for payment purposes, the quantity of products removed is determined post-harvest**. See section 61.3 for further direction.

61.3 - Designation without Marking;
Title 16, United States Code, section 2104 Note (c) (4) (sec. 60.1) allows for the use of designation of trees by description and designation of trees by prescription. **These methods must be used in a manner that ensures that the amount of material removed is verifiable and accountable.**

Designation by Prescription;
Designation by prescription (DxP) may be used for noncommercial material or for low value commercial material when, for payment purposes, the quantity of products removed can be determined post-harvest. When leave tree marking, the authorized officer shall ensure that the contractor marks leave trees with non-tracer paint and shall inspect and approve the marking prior to cutting. Clearly identify the boundaries of the area from which material is to be removed in accordance with FSH 2409.12, section 71.22. Washington Office special provision or regional special provisions approved by the Washington Office must be used for all designation of trees by prescription. Examples of appropriate use of DxP include:

- Thinning a stand to a 120 basal area factor.
- Leaving 10 scattered wildlife trees greater than 21 inches DBH, identified by species, per acre.
- Thinning to a 15' x 15'+ 2' spacing, always retaining healthy larger trees when selecting the leave tree.

In DxP, the contractor selects the trees to be cut or left. This type of tree designation requires close on-the-ground monitoring by the contract administrator.

Post-Harvest Monitoring Basal Area Results:

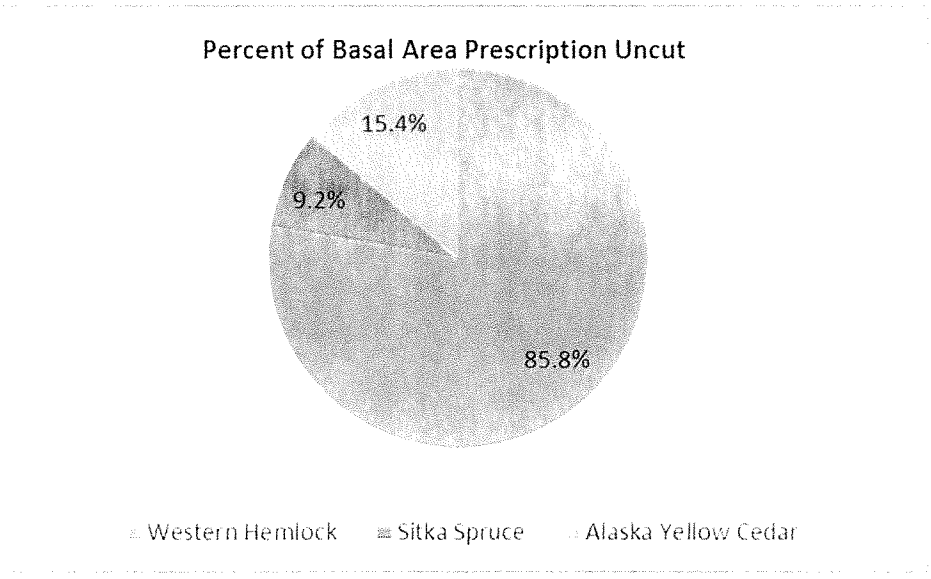
A total of 358 post-harvest Basal Area recon plots have been established in the Tonka Stewardship Helicopter Units using the same basal area factor as the Tonka cruise(1084 Acres = one plot per 3 acre grid).

The post-harvest helicopter basal area cruise results confirm the purchaser removed only 14.2% of the prescribed Western Hemlock (WH) basal area (BA), 90% of Sitka Spruce (SS) basal area, and 84.6% of Alaska Yellow Cedar (AYC) basal area that was identified in the harvest prescription, cruise, appraisal and timber sale contract.

The Contract basal area provisions are written with a plus/minus 10% tolerance in basal area. In Tonka, neither WH nor AYC met the basal are targets in NEPA, prescription, appraisal or contract. It is important to note that on a unit-by-unit level, over harvest and under harvest of basal area occurred in both SS and AYC and those basal area departures are very significant at the unit level. In some cases, exceeding 100% of prescribed basal area for one or both species.

Cut/Removed BA Percentages				Uncut BA Percentages		
WH	**SS**	**AYC**		**WH**	**SS**	**AYC**
14.2%	**90.8%**	**84.6%**		85.8%	**9.2%**	**15.4%**

Table 1. Cut/ Removed and Uncut Basal Area Percentages



Implemented Contract Volume Results:

For the Helicopter Units as a whole, the volume results show that the purchaser removed 12.5% of prescribed and contracted deficit Western Hemlock (WH), over cut the Sitka Spruce (SS volume by 1%), and harvested 96.7% of Alaska Yellow Cedar (AYC) prescription volume.

The uncut, yet appraised for mandatory removal volume in WH highlighted in Table 2, reflects 87.5% of the WH volume in helicopter units. The 4426.3 Net MBF/ 10,988.71 Gross MBF correlate to an estimated 35,353 trees, or 25% of the total estimated number of trees in the total sale volume. It is important to note that on a unit-by-unit level, over harvest and under harvest of RX volume occurred in both SS and AYC.

	Rx Volume				Uncut (-)/ Overcut (+) Volume		
Species	WH	SS	AYC		WH	SS	AYC
NMBF	5,060.50	2,244.48	768.34		-4426.3	+20.06	-25.35
GMBF	12,563.26	3,496.60	1868.32		-10988.71	+30.97	-61.64

Table 2: Helicopter Prescription Volume per Species compared to uncut/overcut per species volume.

RV Appraisal and Advertised Rate impacts Results/ Volume Adjustment Results:

The Appraisal of Record (AOR) appraised the Tonka Stewardship (original volume) at $837,021.00. Adjusting Net/Gross, Grade, and Helicopter Setting Volumes, including adjusting the number of days to logs the sale and the Camp & Tow Costs to reflect actually removed volume increased sale value to $2,108,172.00.

The Re-Appraised Residual Value (RV) Appraisal shows the dollar value lost to the government of difference $1,271,151 for not harvesting the contracted deficit WH basal area/volume. We also lost the additional target volume associated with the contract total over run.

The Tonka AOR helicopter volume logging cost originally appraised to $3,104,406.67, while helicopter actually removed/harvest logging cost appraised to $1,396,773.65. Camp Costs, number of days to log, and Tow Costs were adjusted to reflect the volume uncut and reduced the camp costs by $32,890, days to log by 143 Days, and $706,887 in reduced tow costs.

Advertised Rates:

The original indicated advertised rates per MBF for SS ($57.72), AYC ($78.55), and WH ($2.00) as noted in the Table 3 below set the foundation for the advertised rates and contract value.

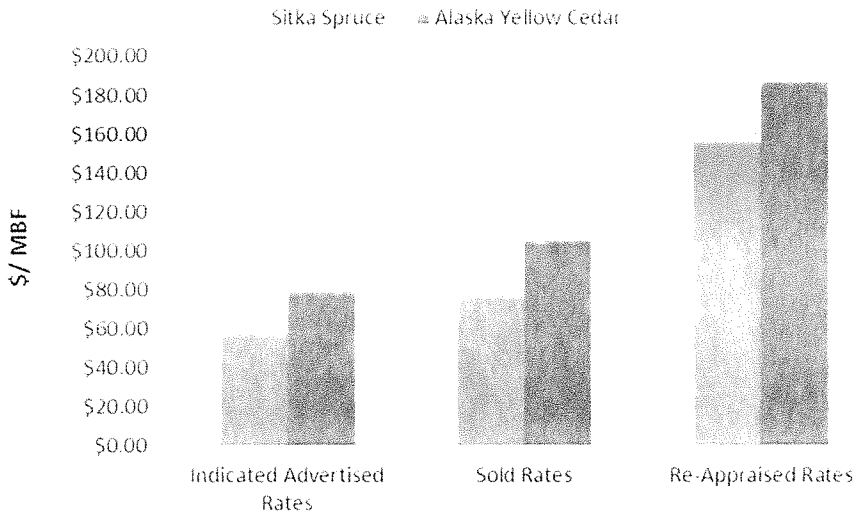
The sale was awarded to Viking Lumber Company at a total bid value of $1,111,155.61, locking rates per MBF accordingly at WH $2.66/MBF, SS $76.89/MBF, and AYC $104.64/MBF as noted below in Table 3.

Updating the re-appraised RV volumes to what was cut/removed in the helicopter units drastically reduced the volume of deficit WH and in turn increased the appraised rates for SS to $155.67/MBF and AYC $186.23/MBF as highlighted below.

This not only compounds the value lost in the appraisal, but also daylights the value lost by way of additional scaled volume after it was sold. Currently known sale over-run is estimated to be 8,000 MBF. Realizing the additional volume is surly not associated with WH volume and noting that the Re-Appraisal Advertised Rates of SS and AYC are within $30.00 the difference in the additional volume at Sold vs Re-advertised rated daylights an additional value loss of $620,000.00-$640,000.00.

Species	Sold Contract Volume	Re-Appraised helicopter Cut Volume	Indicated Advertised Rates	Sold Rates	Re-Appraised Rates	Value at Indicated Advertised Rates	Value at Sold Rates	Value at Re-Appraised Rates
WH	17,811.00	13,385.77	$2.00	$2.66	$2.00	$35,622.00	$47,377.26	$35,622.00
SS	10,867.00	10,886.65	$57.72	$76.89	$155.67	$627,243.24	$835,563.63	$1,691,665.89
AYC	2,073.00	2,048.37	$78.55	$104.64	$186.23	$162,834.15	$216,918.72	$386,054.79
HU	4,453.00	4,453.00	$2.00	$2.00	$2.00	$8,906.00	$8,906.00	$8,906.00
SSU	1,195.00	1,195.00	$2.00	$2.00	$2.00	$2,390.00	$2,390.00	$2,390.00
Total	36,399.00	31,968.79				$836,995.39	$1,111,155.61	$2,124,638.68

Table 3. Excel version: Appraised Rates and Value by volume of each species.



Lessons Learned:

Pre-Sale

- Need to cruise Rx take volume on the ground during implementation. This includes describing tree characteristics according to the intent of the RX/ NEPA and taking into account industry preferences.

Administration:

- Can't say enough about DXPRE and the need for basal area/acre plot inspection. The cost of not inspecting and not following the contract and RX was close to 2 million dollars (table 3) more than double the original stumpage.
- We can no longer rely on cutter reports on small pieces of paper, tallied on a tree by tree basis. All inspection need to be BA/Acre, like the cruise and RX.
- We need to hold the purchaser accountable to meet the intent of the Rx on all acres (Burt Burkhart of Columbia helicopter's) –has openly stated he is not held to the Rx or contract and only cuts what purchaser tells him to.
- Need to hold Sale Administration accountable not to accept a unit until leave Rx is met. S.O. Contracting Officer gets in the way of District Timber Staff and sale administration supervision in the administration of the contract and daily tasks.
- Sale administration needs to become more transparent in day to day operations and have transparent & informative inspection reports that can be routed for others to review (digital inspection forms posted in the O-drive) be accountable to everyone and meet the intent of the Timber Sale Contract and NEPA requirements.

- Contract modifications need to be timely, transparent and formal. Verbally altering the RX, logging system or contract roads or other "informal" altering of the contract should not occur.

NEPA

- Prescription is developed utilizing Timber Sale Cruise- We need to cruise the prescription (kind of cart in front of horse).
- We need prescription that identifies the removal specifics by unit (such as BA, species diameters etc.
- Prescriptions in helicopter units require a comprehensive look at the unit level basal area and species composition. The currently practiced 1 plot per 10 acres grid does not reliably capture the variability of the harvest unit or BA or species specifics.
- Stand exam current plots per acre (1/10) do not capture basal area and species variability of the individual harvest units and should be used only for sale area level analysis is not unit specific prescriptions.
- Stand exams need to estimate defect and net volumes. Planning volumes need to estimate net harvest volume; not estimated gross volume to reduce volume fall down.

Public Employees for Environmental Responsibility
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May 21, 2017

VIA USDA OIG HOTLINE AND U.S. MAIL

Phyllis K. Fong, Inspector General
United States Department of Agriculture
Office of Inspector General
PO Box 23399
Washington, D.C. 20026-3399

RE: KOSCIUSKO FOREST TIMBER SALE – 17-GN-11100100-004

Dear Ms. Fong,

Public Employees for Environmental Responsibility ("PEER") submits this request to the United States Department of Agriculture ("USDA"), Office of Inspector General ("OIG"), to employ its statutory authority to investigate illegal actions, fraud, and abuse occurring in the timber program of the Tongass National Forest. Specifically, we request an investigation of the Good Neighbor Agreement ("GNA") entered into between the United States Forest Service ("USFS"), the Alaska Department of Forestry ("DOF"), and their subcontractor Alcan Timber ("Alcan") for the Kosciusko Forest Timber Sale, Supplemental Project Agreement 17-GN-11100100-004 (hereinafter "SPA", *see* Att. A).

This timber sale is not permitted under the claimed legal authority, because it does not prescribe the restoration projects or services required under the GNA authority granted through the Fiscal Year ("FY") 2014 Appropriations Act and the Agricultural Act of 2014 ("2014 Farm Bill"). It also violates federal regulations and the USFS's own procedural manual regarding the conduct of timber sales.

As shown below, the misuse of the GNA authority combined with these other violations results in allowing Alcan to buy federal timber at well below fair market value. It also appears to allow DOF to pocket much of the proceeds from the sale, and not use those proceeds for restoration activities in the project area as the GNA requires, depriving the U.S. taxpayer of most of the value of federal timber.

The Kosciusko GNA does not meet the requirements of the authorizing statute because it does not involve any authorized restoration services, but instead is a straight timber sale illegally invoking Good Neighbor authority.

Under the Good Neighbor authority,[1] Congress authorized cooperative agreements between federal, state, and local governments to allow for intergovernmental cooperation on forest restoration projects on federal lands when similar restoration projects are being carried out on adjacent state lands. As such, the GNA authority is intended to facilitate joint federal-state projects to improve forest health and fish and wildlife habitat. However, here GNA authority has been misused to support a project that does not serve these purposes and is not only *not* restorative, but in fact is environmentally damaging.

Additionally, while the GNA authority is designed to not cost the federal government money, this contract disposes of valuable federal timber at far below its market value and creates a windfall to the private timber purchaser. It also appears that the State of Alaska will not be required to return most of the proceeds of the sale to the U.S. Treasury, as required by regulation and U.S. Forest Service policy.

The GNA authorizing legislation does not provide funds to implement projects under the Good Neighbor authority. However, it does allow USFS payment to the state for its projected costs of administering the restoration project and, if there is a timber sale connected with the restoration work, the state partner is permitted to retain funds from that sale to pay the costs of administering authorized restoration services, including payment for time and materials associated with the work.[2]

By law, such income *may only be used for restoration activities identified in the GNA* – all other funds generated from the sale of timber must be returned to the U.S. Treasury. Yet nothing within this contract provides for any restoration projects that could justify the DOF retaining funds from the timber sale. However, there is also nothing in the contract providing for such funds to be returned to the Treasury, and the SPA is written so loosely that DOF can increase its administration costs at any time. As discussed further below, we are concerned that the bulk of the proceeds from the timber sale may be illegally retained by the DOF at the expense of U.S. taxpayers, and ask that this matter be investigated.

It also appears that this project has been carried out illegally under the GNA authority as a way to circumvent traditional USFS timber sale protocols in order to allow for a higher grading of the timber prescription, allowing the contractor to harvest more profitable tree species than the harvest prescription allows.[3] This sort of over-harvest and improper high-grading due to abandonment of the USFS's designation by prescription[4] has been seen recently in the Heceta stewardship project and the Tonka and Big Thorne timber sales, where it attracted attention from

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[1] *Codified in*, 16 U.S.C. § 2113a.

[2] *See* USFS, *Good Neighbor Timber Sales Interim Implementation Instructions, Enclosure with Forest Management Director's Letter to Regional Foresters*, July 6, 2015 (hereinafter "Implementation Instructions"), Att. B, § 2.3 – Determination of Appraised Value.

[3] *See* 16 U.S.C. § 2113a(b)(2)(A); 16 U.S.C. § 472a(g).

[4] "Prescription by designation" is a USFS process whereby the USFS lays out a project area for a timber harvest and sets the prescribed cut based upon agency designation of specific trees and species within a harvest unit.

local media and the USFS Washington Office.[5] It appears that USFS Tongass National Forest ("Tongass NF" or "Forest") has elected to categorize this Kosciusko project as a GNA in part to avoid increased scrutiny surrounding the agency's prescription by designation abuses with stewardship and conventional timber sale contracts. By turning over the sale administration to the State, as is permitted under GNA authority, accountability is being avoided by the USFS.

Additionally, this sale allows Alcan to lay out and select the trees to be cut in the two age prescription units; this means that the contractor – not USFS – selects what trees they wish to harvest regardless of the USFS prescription and NEPA documents. These two age cuts will be up to 2-acre patch clear cuts within the broader harvest unit that was already laid out by USFS within the project planning process, allowing for high-grading of the selected timber, contrary to the USFS prescription.

Furthermore, Alcan has entered additional contracts with both University of Alaska and Sealaska[6] on Kosciusko Island, both of which have land adjacent to USFS land. While DOF's Edna Bay Parlay sale has not yet been put out to bid, it can be anticipated that Alcan will be the purchaser of this sale, since Alcan is mobilized on this remote island already. It appears that this GNA is an attempt to give Alcan harvest rights across the entirety of Kosciusko Island, allowing Alcan to profit from reduced timber prices and ease of access, while not serving the authorized restoration purposes of GNA.

Moreover, this project is antithetical to the USDA's official strategic goals, as it is environmentally damaging and fails to support local communities. The project contains a large acreage of environmentally damaging clearcuts that are not justified by any restorative purpose, and 100% of the timber from this sale is slated for export, rather than processing in local mills and processing plants that could benefit the local economy.

Compounding the basic fact that this sale is being conducted under a claimed authority that does not in fact apply, as described below, there are numerous other problems with the administration of this sale. This is particularly concerning given that there is a long history of mismanagement in the Tongass National Forest,[7] most recently demonstrated by the USFS Washington Office's review of the Tongass NF's poor management of timber appraisal and sale administration.[8] Following allegations of misconduct by the Tongass NF, the Washington Office

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[5] *See* Katie Moritz, *Environmental groups sue over Big Thorne sale*, JuneauEmpire.com August 26, 2014, http://juneauempire.com/local/2014-08-26/environmental-groups-sue-over-big-thorne-sale; USDA Forest Service, *Washington Office Activity Review of Timber Sale Administration, Sale Preparation, Stewardship Contracting, NEPA, and Timber Theft Prevention – Region 10*, June 12-20, 2016 (hereafter "WO Review"), Att. C.

[6] Sealaska Corporation is the largest of thirteen Alaska Native Regional Corporations created under the Alaska Native Claims Settlement Act of 1971, 43 U.S.C. §1601 *et seq*, in settlement of aboriginal land claims. It is the largest private landowner in southeast Alaska and its principal economic enterprises have been the harvesting of timber and marketing of wood products to Pacific Rim countries and the Pacific Northwest.

[7] *See generally*, KATHIE DURBIN, TONGASS: PULP POLITICS AND THE FIGHT FOR THE ALASKA RAIN FOREST, (1999); Jeff DeBonis, *Stealing the Tongass, Playing by Alaska Rules in the U.S. Forest Service*, PEER (Nov. 1996), https://www.peer.org/assets/docs/whitepapers/1996_stealing_tongass.pdf; Jeff DeBonis, *Unindicted Co-Conspirator: Timber Theft and the U.S. Forest Service*, PEER (Mar. 26, 1996), https://www.peer.org/assets/docs/whitepapers/1996_unindicted_co-conspirator.pdf.

[8] *See* WO Review, Att. C; Joe Viechnicki, KTOO, *Tongass timber sale short on timber*, July 11, 2017, https://www.ktoo.org/2017/07/11/tongass-timber-sale-short-timber/ ; Scott Streater, E&E News, *Green group asks*

commenced a programmatic review of the forest, concluding in 2016 that the forest had been committing a series of ongoing errors in its timber sale administration; including improper project certification, failure to follow gate certification requirements, and improper delegation of authority – issues that all re-appear in this Kosciusko GNA.

The Tongass NF claims it has resolved its issues with the practices admonished by the Washington Office,[9] but results from multiple Freedom of Information Act requests submitted to the Tongass NF by PEER have demonstrated that seemingly nothing has been done to address the issues raised by the Washington Office's review – issues that were raised internally years prior to this review as well.[10] On the contrary, as evidenced by the details of this sale and the internal review of the timber sale administration program by Tongass NF after receiving programmatic recommendations from the Washington Office, it appears that the Forest's management is still maladministering timber sales in many of the same ways indicated by the Washington Office – at the expense of the U.S. taxpayer.[11]

I. The Kosciusko Project Violates the Good Neighbor Authority

In the 2014 Farm Bill, Congress permanently authorized the Secretary of Agriculture to enter into cooperative GNAs with state agencies to perform authorized restoration services on National Forest System ("NFS") lands.[12] "Restoration services" are defined in the statute as limited to "activities to treat insect and disease-infected trees," "activities to reduce hazardous fuels," and "any other activities to restore or improve forest, rangeland, and watershed health, including fish and wildlife habitat."[13] GNAs must "carry out authorized restoration services under this section."[14] The statutory requirements for carrying out these projects are reflected in the USFS Implementation Instructions for Good Neighbor timber sales.

The primary objective of these agreements is to coordinate state and federal cooperation *during restoration projects*.[15] They are meant to allow USFS to partner with state agencies in order for states and local governments to perform the enumerated services on NFS lands through subcontracts that utilize state contracting procedures and provide compensation for state labor costs. The overarching objective of this authority is to better facilitate cooperation on restoration projects, not to establish cooperative timber sale agreements or to allow state forestry agencies to log on NFS lands.[16]

IG to probe Tongass timber sales, Apr. 3, 2017, *available at* https://www.peer.org/assets/clips/FY15_4th_quarter_clips/E&ENEWS_FOREST_SERVICE_Green_group_asks_IG_to_probe_Tongass_timber_sales.pdf.

[9] *See* Forest Service Statement to Press, Apr. 4, 2017, Att. D.

[10] *See* District Ranger Request for TM Program Review, Jan. 30, 2014, Att. E.

[11] See 2017 Tongass NF Internal Review – Sale Administration, at 7, Att. F.

[12] *Codified in*, 16 U.S.C. § 2113a.

[13] 16 U.S.C. § 2113a(a)(3)(A)(i), (ii) and (iii).

[14] 16 U.S.C. § 2113a(a)(4) and (b)(1)(A).

[15] These projects consist of removal of hazardous fuels, insect and disease, and forest, rangeland and watershed restoration projects. Implementation Instructions, § 0.2 – Objectives; *See* 16 U.S.C. § 2113a(a)(4).

[16] *Id.*

Despite the clear requirements of the statute, the SPA between DOF and USFS, as well as the contract between DOF and its contractor, Alcan, do not contain any description of any restoration projects to be performed – directly violating the statute that is claimed to authorize the agreement. On the contrary, the SPA Scope of Work states that the project "consists of preparing, offering, awarding, and contract administration of the Kosciusko GNA-Timber Sale."[17] The "Project Areas and Treatment Activities" discussion within the SPA only describes nine tasks relating to layout, providing maps with unit boundaries, determining total sales volumes, appraising timber value, preparing contracts, advertising and conducting the bidding process, and administering the timber sale contract.[18] None of these are restorative as defined in the statute.[19] Moreover, the requirement that the project be near areas where similar or complementary activities are occurring on non-Forest Service land is not met, since there are no such activities.[20] Clearly, the intention here is *not* to coordinate state and federal restoration projects, as intended by the GNA, but to allow the State to conduct a timber sale on federal land.

The Kosciusko Environmental Assessment ("EA"), as required for this project under the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq*. ("NEPA"), describes in detail the proposed projects to be completed and possible alternative actions.[21] While the EA discusses *possible* restorative actions in a basically non-restorative timber sale, no such actions are *actually included* in the final contract.[22] For example, the EA discusses how "[k]arst systems *may* be improved, such as by removing blockages and remedying diverted water flow[; i]nvasive plant infestations *may* be treated manually or mechanically, or monitored[; i]nstream restoration activities *may* occur on up to one mile of stream segments."[23] However, no such activities are outlined within the final contract with Alcan,[24] whose sub-contractors, Southeast Alaska Resources, themselves have expressed hesitancy in proceeding due to a lack of restorative action in the final contract.[25]

Upon review of the documentation surrounding the Kosciusko SPA, it appears that this agreement is specifically meant to enable DOF and its subcontractor to log and sell (for overseas export) approximately 75,000 cubic feet ("CCF") of timber from nearly 1,500 acres of USFS land on Kosciusko Island in the Alexander Archipelago of southeastern Alaska. It is also quite apparent that there is no restoration planned of any kind on either federal or state lands, nor is there any restoration project outlined in the SPA or the signed contract between the purchaser, Alcan Timber of Ketchikan, and the State of Alaska. Furthermore, it appears that the Tongass NF did not even consider possible restoration projects until *after* this timber sale project had been approved, the SPA had been signed by the Forest Supervisor, the Alcan contract had been signed

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[17] *See* SPA, Att. A, Appendix A at 13.
[18] *See Id*. at Appendix C.
[19] 16 U.S.C. § 2113a(a)(3)(A)(i), (ii) and (iii).
[20] *See* Implementation Instructions, § 1.12 –Selection of Project Areas
[21] *See* USDA, *Kosciusko Vegetation Management and Watershed Improvement Project, Final Environmental Assessment, Draft Decision Notice, and Finding of No Significant Impact,* December 2015, (hereafter "EA"), available at http://a123.g.akamai.net/7/123/11558/abc123/forestservic.download.akamai.com/11558/www/nepa/99488_FSPLT3_2595790.pdf
[22] *See generally* Kosciusko GNA YG Timber Sale Contract, SSE-1362 K, Att. G.
[23] *See* EA at 3 (emphasis added).
[24] *See* generally SPA, Att. A.
[25] *See* E-mail from Clarence Clark, Jan. 2, 2018, Att. H.

by the Alaska Department of Natural Resources Commissioner, and a Freedom of Information Act request was filed seeking records surrounding this project.[26] It appears that the Tongass NF is now attempting to use a miniscule post-hoc restoration project, specifically designed only to mitigate environmental damage *caused by this project's own clear-cut logging* as an after-the-fact justification for this entire commercial timber sale.[27]

Moreover, according to the USFS Implementation Instructions, in a GNA sale, it is appropriate to consider the costs of authorized restoration services performed by the State to recognize that the sale is: "(a) conducted under [GNA authority], (b) *primarily for watershed improvement as cited in the legislation*, and (c) *used to pay for the State's performance of authorized restoration activities*."[28] The USFS Implementation Instructions further note that "*there would not be a timber sale unless the watershed restoration work could be accomplished*, as required under the Good Neighbor legislation."[29]

With regard to appraisals for timber sales, GNAs differ from other timber sales in that restoration work is generally not included in the appraised value of regular timber sale contracts administered under the National Forest Management Act of 1976, Public Law 94-588, and are usually stewardship work items under Stewardship authority contracts.[30] In GNA sales, restoration costs are included in the appraised value of the timber so that the State may be reimbursed for its restoration costs. However, here of course, such restoration costs were not considered because there were no restoration efforts planned. This is further evidence that USFS and DOF intend to administer this contract as a standard timber sale under the banner of GNA authority.

Such misuse of the GNA authority blatantly violates federal law, as it greatly exceeds the GNA authority granted to the USFS by Congress. This contract also contravenes the primary policy objective of the entire GNA contracting scheme, which is to facilitate restoration projects.

II. The Kosciusko Sale Violates Federal Regulations and USFS Implementation Instructions Regarding Timber Sales

Apart from the fact that Good Neighbor authority does not authorize straight timber sales at all, this sale violates numerous regulations and requirements regarding timber sales. This is prominently evidenced by the Tongass NF's unexplained decrease in appraised value for the timber for this project by nearly $2 million, likely evidencing a failure to follow prescribed appraisal protocols and failure to correct problems highlighted within the 2016 Washington Office Review of the Tongass's timber sale administration program.

a. Violation of regulations regarding appraised value and program income

[26] *See* E-mail from Tyler Gunn, Kos GNA Restoration Possibilities, Dec. 7, 2017, Att. I.
[27] *Id.*
[28] *See* Implementation Instructions, § 2.3 – Determination of Appraised Value, Att. B; *see also* 16 U.S.C. §2113a(a)(4) (emphasis added).
[29] *See* Implementation Instructions, § 2.3 – Determination of Appraised Value.
[30] *Id.*

According to the USFS, under the Good Neighbor Authority, determination of appraised values follow normal Forest Service appraisal methods or methods established by the State when acceptable to the responsible line officer.[31] This would require USFS and DOF to work together to establish an appraised value that will be the lowest rate that the State may use to advertise the NFS timber for sale. That rate will be either the established regional minimum stumpage rate (as defined in 36 C.F.R. § 223.61 and the Forest Service Handbook ["FSH"] 2431.31b) or the market rate ("fair market value") as required under 36 C.F.R. § 223.60, whichever is higher.

Given the vast unexplained discrepancy in appraised value between the Forest Service's initial 2015 appraisal and DOF's later 2017 appraisal used for the GNA contract, it appears that the USFS has inappropriately lowered the assessed value of its timber and failed to adhere to the necessary appraisal protocols.

The USFS initially appraised the timber sold within the Kosciusko project at $2,894,960.00 in a 2015 appraisal;[32] yet when this sale was initiated, the same timber was then re-appraised at $926,750 for the purposes of the DOF contract – showing an unexplained drop in valuation of nearly $2 million – all without being submitted for review to the pre-sale timber administrator tasked with managing timber appraisal of the sale.[33] Following that unexplained drop in valuation, DOF accepted a $2.6 million bid for the project, which was nearly $300,000 below the initial appraisal value, providing Alcan the timber at significantly below market rates. Through Alcan's future payment of $2.6 million to DOF for access to this timber, and DOF's subsequent payment to USFS for the revised appraisal price of $926,750, DOF could receive a windfall of $1,673,250 in what is called "Program Income" in GNA sales.[34]

In GNA sales, when a State sells USFS timber, the state is expected to set the bid price to cover the appraised value of the timber *plus* the state's cost for the restoration work to be conducted under the GNA. The "bid premium" above the appraised value is called "Program Income."[35] The USFS and the State may agree to use any amount of this income above the Minimum Rate (the Program Income) for restoration work on the instant project, including the State's indirect costs, and its costs in administering the sale.[36] The amount that the state pays the Forest Service for the timber does not include such Program Income.[37] However, Program Income is Federal money and must be expended on restoration activities specified in the SPA, or be returned to the U.S. Treasury.[38] The Forest Service's Implementation Instructions require that how the state handles amounts above the Minimum Rate value be fully addressed in the GNA SPA.[39]

The problem here is that because of the highly deflated appraisal amount for this sale, the purchaser paid $1.6 million more than the revised appraised value, *and this large amount*

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[31] *Id*.
[32] *See* Kosciusko RV Appraisal, 2400-17 Summary, Att. J.
[33] *See* Timber Sale Bid Opening, Completion of Gate 5, Att. K; E-mail from Charles Strueli, Dec. 12, 2017, Att L.
[34] *See* Kosciusko GNA YG Timber Sale Contract, SSE-1362 K, At. G
[35] *See* Implementation Instructions, § 3.5 – Program Income.
[36] *Id*.
[37] *See* Implementation Instructions, § 2.3 – Determination of Appraised Value
[38] *See* Implementation Instructions, § 3.5 – Program Income
[39] *See* Implementation Instructions, § 2.3 – Determination of Appraised Value

becomes "Program Income," which must be used for restoration projects or returned to the Treasury. However, here there are no restoration projects, and thus legally *all* of this money must be returned to the Treasury. Yet, despite the Forest Service requirement that the GNA Master Agreement or SPA must detail how Program Income is treated, there is nothing in these contracts that details how that money is to be disbursed, and we have seen no evidence that DOF is or will be returning this money to the Treasury as required by law. Thus, there is a serious concern that DOF may pocket this $1.6 million through a variety of means, including potential modification of its administration costs. If this is the case, the Forest Service will receive only a third of the original value of the timber that was sold, and the U.S. Treasury will receive nothing, resulting in a tremendous loss for the USFS and the U.S. taxpayer.

This is not an isolated incident. The maladministration on the recent Big Thorne and Tonka sales has resulted in nearly $4 million in lost income for the USFS, due primarily to timber theft and the high grading of the timber prescription.[40] While PEER's request for an audit of these two sales was denied in 2017, this denial was based upon a brief statement that the office currently lacked the resources to complete such an audit – not that this complaint was without merit.[41] A troubling trend of improper appraisal practices in various forms continues despite chastisement by the Washington Office for such behavior in the past.[42] Given the Tongass NF's past and ongoing conduct, it is apparent that if such behavior is not investigated and fully audited, the Tongass NF will continue to abuse its appraisal and contracting authority.

b. Insufficient authority

GNA contracts made to implement projects that include the sale of NFS timber must be approved by a line officer with delegated authority to dispose of the planned volume of timber.[43] It is evident from the Kosciusko SPA, signed by Earl Stewart – Tongass Forest Supervisor – that the project authorizes the harvest of 73,219.81 CCF of timber.[44] However, the authority granted to Earl Stewart as Forest Supervisor is limited to authorization of timber harvests up to 50,000 CCF.[45] Such a sale in exceedance of the line officer's disposal authority would require approval from the Regional Forester, and thus violates Forest Service policy, specifically its delegated authority requirements.

Furthermore, it appears that Earl Stewart himself did not even sign the SPA on this project; rather a Mr. Francis Sherman, a deputy forest supervisor on a 120-day detail, signed in his stead under Earl Stewart's name. This demonstrates a blatant disregard for the recommendations of the Washington Office to discontinue the practice of having staff sign "for"

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[40] Scott Streater, *Green group asks IG to probe Tongass timber sales*, E&E News PM (Apr. 3, 2017), *available at* https://www.peer.org/assets/clips/FY15_4th_quarter_clips/E&ENEWS_FOREST_SERVICE_Green_group_asks_IG_to_probe_Tongass_timber_sales.pdf.

[41] *See* USDA IG Denial Letter, May 3, 2017, Att. M.

[42] *See* WO Review at 17-18, Att. C.

[43] *See* Implementation Instructions, § 0.3 – Policy.

[44] *See* Timber Sale Bid Opening, Completion of Gate 5, Att. K.

[45] *See* Forest Service Manual ("FSM") Chapter 1230 – Delegations of Authority and Responsibility; Forest Service Manual Chapter 2450 – Timber Sale Contract Administration; see also FSM 2404.28 - Specific delegations of timber sale disposal authority.

a Line Officer,[46] and a disregard of USFS timber sale administration compliance requirements by the Tongass NF's management. Such behavior is particularly troubling given that the press office of the Tongass Forest has been informing the media that necessary changes are being made in accordance with the Washington Office Review.[47] This pattern of improper signatures, faulty paperwork, and sparse records appears to be how Forest officials avoid accountability by having the potential malfeasance of forest professionals instead appear as disorganization and ineptitude.

c. Violation of Forest Service requirements for gate certifications

Timber sale gate certifications, essentially quality assurances for each step of the sale, are required for GNA timber sales.[48] The Responsible Official for the project approves work completed in each gate by signing the Gates 1-4 Certification Reports (Plan, Design, Prepare, and Advertise) generated by the Natural Resource and Timber Information Manager, and this authority cannot be re-delegated.[49] Of note, the Tongass NF also failed to follow the Forest Service Manual requirements for completing and certifying completion of each gate sequentially in the Big Thorne timber sale.[50] Under the Kosciusko GNA, it appears that the Tongass NF has once again performed the gate certifications out of order; allowing Gate 2 Design be completed nine months before even initial Gate 1 Planning – only to sign off on Gate 2 at the same time as Gate 1.[51]

The Tongass NF has asserted that they have corrected procedural errors and will comply with the recommendations of the Washington Office Review; yet to this date, have failed to produce adequate documentation of how these issues were corrected and, based on the facts of this sale, appear to have done nothing to address these recurring issues. This lack of appropriate documentation demonstrates that management practices criticized by the Washington Office are still ongoing and uncorrected – in flagrant disregard of the recommendations for program compliance from senior management. Furthermore, the late dating of gate signatures after such activities have been completed raises questions as to the validity of other gate certification and contract datings related to this sale, and more broadly across the Forest's timber management practices.

III. The Kosciusko Project is Antithetical to the USDA Strategic Goals

In addition to failing to meet the statutory requirements of the GNA authority and USFS regulations and guidelines discussed above, the Kosciusko project is inconsistent with the clear policies and goals of the broader U.S. Department of Agriculture and USFS. As announced by Agriculture Secretary Sonny Perdue, USDA Strategic Goal 6 is to: "[f]oster productive and

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[46] *See* WO Review at 8, Att. C. The Review states that Line Officer approval that cannot be re-delegated must be signed by the Line Officer or their designated Acting, and recommends that the practice of signing documents "for" the Line Officer be discontinued. *See also* FSM 2404 – Timber Management – Authority; FSM Chapter 1230.
[47] *See* Forest Service Statement to Press, April 4, 2017, Att. D.
[48] *See* Implementation Instructions, § 2.6 – Timber Sales Gates 1-6.
[49] *Id.*
[50] *See* WO Review, p. 9, Issue 4, Finding 1 ("For the Big Thorne project, Gates 1-6 were not implemented sequentially"), Att. C.
[51] *See* Timber Sale Bid Opening, Completion of Gate 5, Att. K.

sustainable use of our National Forest System Lands."[52] The first objective to achieve this strategic goal is to "contribute to the economic health of rural communities through use and access opportunities."[53] The Kosciusko agreement falls well short of this objective.

- *The harvested timber is for export*. While the GNA allows for the sale of timber harvested incidental to a restoration project, such harvests from the Kosciusko project do not meet this objective. First and foremost, economic arguments supporting expanded harvest of USFS timber rely upon the ability of such harvests to support jobs at local lumber mills and processing plants, thus supporting the broader community surrounding where these resources are extracted.

  However, it is clear that the harvest of the Kosciusko sale does not contribute to the local community because the timber is exclusively being exported to East Asia. The DOF has applied for and received approval from the Alaska Regional Forester of the USFS to allow export of *all* of the trees cut in this project[54], an exceedingly large volume compared to recent sales in the Tongass NF.[55] The local community will neither use, process, nor access the harvested and exported timber. No local mills will be involved in processing the harvested timber.

  Because the trees are being exported, the harvest will have a minimal positive economic impact on the local community, while negatively impacting Alaska's robust $4.17 billion tourism industry through destruction of the Tongass' iconic forested vistas.[56] It clearly violates the objective of the USDA to contribute to the economic health of rural communities.

- *The clear-cut of second growth negatively affects access to recreational and subsistence activities for local communities*. The clear-cutting of 396 acres of forested USFS land on Kosciusko Island jeopardizes habitat for native wildlife populations, as nearly all old growth forests on the island and the nearby Prince of Wales Island have been extensively logged. People within the Edna Bay, Prince of Wales Island and Ketchikan communities and elsewhere use this forest for a variety of recreational activities and subsistence hunting purposes, which they could no longer do after large swaths of it are clear-cut.

  This project is also particularly troubling given the requirement under the Multiple-Use Sustained-Yield Act of 1960, 16 U.S.C. §§ 528 *et seq*., for the USFS to manage "all the various renewable surface resources of the national forests so that they are utilized in the

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[52] USDA, *USDA Strategic Goal #6*, https://www.usda.gov/our-agency/about-usda/strategic-goals (last visited on May 10, 2018).
[53] *Id.*
[54] *See* Letter from Rebecca Nourse, June 21, 2017, Att. N;
[55] In 2013, the Heceta 2nd Growth Timber Sale was 137 acres and the 2014 Dargon Point Timber Sale was 57.7 acres, compared to Kosciusko GNA's 1,461 acres of harvest area. *See* Heceta 2nd Growth Timber Sale, https://aws.state.ak.us/OnlinePublicNotices/Notices/View.aspx?id=168949; *see also* Dargon Point Timber Sale, http://www.sitkawild.org/dargon_point_timber_sale_local_wood_local_benefits.
[56] *See* Alaska Division of Economic Development, *Economic Impact of Alaska's Visitor Industry (2014-15 Update)*, https://www.commerce.alaska.gov/web/ded/DEV/TourismDevelopment/TourismResearch.aspx.

combination that will best meet *the needs of the American people*,"[57] and in a manner that maintains "in perpetuity [] a high-level annual or periodic output of the various renewable resources … *without impairment of the productivity of the land*."[58] This sale demonstrates a failure to balance competing interests on the island and a lack of restoration activities to ensure sustained yield, instead heavily favoring timber harvest for short-term profit.

The second objective to achieve USDA Strategic Goal 6 is to "ensure lands and watersheds are sustainable, healthy and productive."[59] The Kosciusko agreement falls well short of this objective.

- *The agreement does not ensure healthy, sustainable, and productive lands and watersheds*. Despite the EA's passing references to possible restorative features, the contract agreements between USFS, DOF, and Alcan all exclusively describe the manner and means by which timber will be harvested and sold across 1,461 acres of fragmented parcels. This project masquerades as restoration work, but instead it is a standard USFS timber sale that does not in any way "ensure lands and watersheds are sustainable, healthy and productive." In fact, the SPA signed by USFS does not even contain any reforestation requirements, stating, "that reforestation requirements will be met through natural regeneration."[60] This lack of any actual restoration in this timber sale violates the objectives of the USDA's Strategic Goals.

- *Clearcutting does not have a net-positive effect on watershed and land sustainability*. The effects of a clear-cut harvest on both soil and waterway health are detrimental,[61] and inclusion of this practice on nearly 400 acres of public rainforest land clearly violates the primary objective of the GNA authority as well as the USDA Strategic Goal. The SPA and contract agreements make no mention of any efforts, other than minimal mitigation associated only with harvest activities, aimed towards maintaining sustainable land and watersheds in the area. Aside from the removal of healthy trees from the forest, clearcutting has an impact on mycelial and ectomycorrhizal fungal networks vital to a sustainable and productive forest.[62] However, there was no mention of such possible impacts in the project's NEPA documents. Furthermore, clearcutting methods like those employed in this SPA remove vast amounts of nutrients from forests, thereby diminishing nutrient availability and reducing soil depth.[63] This clearcut, with its lack of reforestation or restoration efforts, clearly violates of the Multiple-Use Sustained-Yield Act's

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[57] 16 U.S.C. § 531(a).
[58] *Id*. § 531(b) (emphasis added).
[59] USDA, *USDA Strategic Goal #6*, https://www.usda.gov/our-agency/about-usda/strategic-goals (last visited on Feb. 26, 2018).
[60] *See* Kosciusko GNA YG Timber Sale Contract, SSE-1362 K, at 6, Att. G.
[61] Hornbeck, J W & Kropelin, W, *Nutrient removal and leaching from a whole-tree harvest of northern hardwoods*, 11 J. Environ. Qual. 309–316 (1982); R. A. Dahlgren & C. T. Driscoll, *The effects of whole-tree clear-cutting on soil processes at the Hubbard Brook Experimental Forest, New Hampshire, USA*, 158 Plant Soil 239 (Jan. 1994) *available at* https://doi.org/10.1007/BF00009499.
[62] *See* Randy Molina, *The Role of Mycorrhizal Symbioses in the Health of the Giant Redwoods and Other Forest Ecosystems*, USDA Forest Service Gen. Tech. Rep.PSW-151, 78 (1994), *available at* https://www.fs.fed.us/psw/publications/documents/psw_gtr151/psw_gtr151_12_molina.pdf.
[63] *See supra* n. 61.

requirement that harvest must be "without impairment of the productivity of the land,"[64] and does not support the USDA's own policy objectives for National Forest management.

CONCLUSION

PEER respectfully submits this request for investigation of the Kosciusko GNA timber sale, which, as shown above, clearly violates federal law, USDA regulations and USFS policies. Such mismanagement of the Tongass National Forest is not news, as knowledge of its illegal timber theft problems and faulty timber sale administration has been widely reported for over 20 years.[65] The Tongass NF has been chastised for its irresponsible timber management in the past. As such, the Inspector General should investigate and stop this fraud and abuse being committed by the USFS with the public property of NFS lands.

PEER requests the IG investigate this fraud, abuse, and violation of federal law and regulation. We request that the IG report that this sale is illegal and should be invalidated. Specifically, we request that the IG:

- Conduct a performance review for (a) compliance with the Congressional requirements for Good Neighbor Agreements and (b) compliance with USFS protocols and rules;
- Develop recommendations to prevent the recurrence of any problems that are found;
- Undertake a performance review of whether GNA goals are being met agency-wide and whether such sales are furthering Secretary Perdue's strategic goals;
- Perform a full and complete financial audit of the Kosciusko Island sale to ensure the U.S. Treasury is provided the financial compensation it is due; and
- Recommend that any abuses that are found be corrected.

Respectfully submitted,

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[64] 15 U.S.C. § 531(b).

[65] *See* Joe Viechnicki, *Tongass timber sale short on timber*, KTOO (July 11, 2017), https://www.ktoo.org/2017/07/11/tongass-timber-sale-short-timber/; Scott Streater, *Green group asks IG to probe Tongass timber sales*, E&E News (Apr. 3, 2017), https://www.peer.org/assets/clips/FY15_4th_quarter_clips/E&ENEWS_FOREST_SERVICE_Green_group_asks_IG_to_probe_Tongass_timber_sales.pdf; Jeff DeBonis, *Stealing the Tongass, Playing by Alaska Rules in the U.S. Forest Service*, PEER (Nov. 1996), https://www.peer.org/assets/docs/whitepapers/1996_stealing_tongass.pdf; Jeff DeBonis, *Unindicted Co-Conspirator: Timber Theft and the U.S. Forest Service*, PEER (Mar. 26, 1996), https://www.peer.org/assets/docs/whitepapers/1996_unindicted_co-conspirator.pdf.

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List of Attachments:

A. Kosciusko Forest Timber Sale, Supplemental Project Agreement 17-GN-11100100-004.

B. USFS, *Good Neighbor Timber Sales Interim Implementation Instructions, Enclosure with Forest Management Director's Letter to Regional Foresters*, July 6, 2015.

C. USDA Forest Service, *Washington Office Activity Review of Timber Sale Administration, Sale Preparation, Stewardship Contracting, NEPA, and Timber Theft Prevention – Region 10*, June 12-20, 2016.

D. Forest Service Statement to Press, Apr. 4, 2017.

E. District Ranger Request for TM Program Review, Jan. 30, 2014.

F. 2017 Tongass NF Internal Review.

G. Kosciusko GNA YG Timber Sale Contract, SSE-1362 K.

H. E-mail from Clarence Clark, Jan. 2, 2018.

I. E-mail from Tyler Gunn, Kos GNA Restoration Possibilities, Dec. 7, 2017.

J. Kosciusko RV Appraisal 2400-17 Summary.

K. Timber Sale Bid Opening, Completion of Gate 5.

L. E-mail from Charles Strueli, Dec. 12, 2017.

M. USDA IG Denial Letter, May 3, 2017.

N. Letter from Rebecca Nourse, June 21, 2017.

Preliminary List of Activities for Proposal and Review in 2020

Preliminary list of activities within the Central Tongass project area being considered for proposal and review in 2020[1] (after the Central Tongass Record of Decision is signed).*

Location	Timeframe	Project Description
Etolin Island, Anita Bay	2021	**Anita Bay LTF** Reconstruct the existing bulkhead to replace a rotting log substructure and expand the lower level to increase the width working within the existing footprint.
Mitkof Island	2020	**Raven's Roost Cabin** Build public recreation cabin in new location; decommission old cabin.
Mitkof Island	2020	**Dispersed Recreation Sites** Improve parking areas and log transfer facilities on Mitkof Island at locations that are known public use areas on NFS lands (for example, Snake Ridge, Woodpecker undeveloped campsite and LFT, South Blind Slough LTF, end of Dry Straits road). No infrastructure would be provided at these sites (e.g., fire rings, picnic tables, trash cans).
Mitkof Island	2020	**Old-growth Timber Harvest** Old-growth timber harvest, new NFS road building, reconstruction and temporary road construction.
Mitkof Island	2020-2021	**South Blind Slough LTF Reconstruction and Improvements** Remove and replace rotting log bulkhead, improve ramp and add rock lift to existing footprint to better implement BMPs. Expand upland sorting capacity an estimated 2 acres working with the existing easement.
Mitkof Island	2020-2021	**Woodpecker LTF Improvements** Expand upland sorting and operability capacity by an estimated 2.5 acres within the existing easement.
Thomas Bay	2020	**Young-growth Timber Harvest** Young-growth timber harvest, and temporary road construction.
Zarembo Island	2020-2021	**Bridge and AOP culvert reconstruction** Reconstruct 80 foot bridge on NFS road 6590 at MP 1.177 (St John's Creek) to retain stream course and address scour issues; reconstruct a bridge on Outback Creek to address scour issues and stream constriction; replace existing culverts with AOP structures on NFS road 6590 at MP 42.44 and NFS road 6590 at MP 5.36 to provide aquatic fish passage (survey and designs complete); install AOP structure on NFS road 6585 at MP 10.174 (surveyed complete and needs design).

* These activities have NOT been NEPA-cleared. The Central Tongass IDT will use the Implementation Framework and Implementation Checklist outlined in the Central Tongass, Appendix A - Implementation Plan and Activity Guides to introduce projects and review proposed activity locations.

2019 Alaska Commercial Salmon Harvests — Ex-vessel Values

Source: ADF&G

PRELIMINARY DATA: 2019 Salmon Season

Updated 10/16/2019. Subject to change

Preliminary figures may not total exactly due to rounding.
Estimates based on fish tickets and reports from Area Managers.
DATA NOT FOR LEGAL INTERPRETATIONS.

Area	Species	Average Weight (in pounds)	Average Price per Pound	Number of Fish	Pounds of Fish	Estimated Exvessel Value
SOUTHEAST (including Yakutat)	CHINOOK	11.88	$5.07	177,246	2,106,034	$10,687,304
Updated 10/11/2019	SOCKEYE	5.67	$2.13	878,252	4,980,383	$10,623,867
	COHO	6.80	$1.71	1,652,014	11,232,259	$19,257,575
	PINK	3.68	$0.30	21,106,149	77,769,262	$23,694,520
	CHUM	7.99	$0.56	8,416,594	67,261,401	$37,582,818
	totals			32,230,255	163,349,339	$101,846,084
PRINCE WILLIAM SOUND (including hatchery fish)	CHINOOK	18.42	$8.59	18,399	338,836	$2,911,944
Updated 10/3/2019	SOCKEYE	5.35	$2.49	2,553,041	13,656,160	$33,989,146
	COHO	8.01	$1.19	504,159	4,038,880	$4,807,891
	PINK	3.40	$0.34	49,340,614	167,752,712	$57,746,792
	CHUM	6.04	$0.48	5,334,239	32,230,460	$15,449,375
	totals			57,750,452	218,017,048	$114,905,148
COOK INLET	CHINOOK	14.95	$3.54	3,393	50,736	$179,712
Updated 10/8/2019	SOCKEYE	5.34	$1.85	1,975,333	10,556,250	$19,556,087
	COHO	5.75	$0.76	158,584	911,207	$693,427
	PINK	3.11	$0.31	2,048,406	6,375,091	$1,953,714
	CHUM	6.91	$0.41	178,621	1,234,641	$506,282
*see supplemental tables	**totals**			4,364,337	19,127,925	$22,889,222
BRISTOL BAY	CHINOOK	11.40	$0.50	30,579	347,449	$173,725
Updated 9/24/2019	SOCKEYE	5.20	$1.35	42,967,737	225,108,917	$303,897,039
	COHO	6.00	$0.55	75,517	455,885	$250,737
	PINK	3.80	$0.05	5,680	21,588	$1,079
	CHUM	6.50	$0.25	1,379,169	9,002,884	$2,250,721
	totals			44,458,682	234,936,723	$306,573,301
KODIAK	CHINOOK	8.92	$0.60	7,723	68,889	$41,333
Updated 10/2/2019	SOCKEYE	4.96	$1.50	2,179,133	10,806,398	$16,209,597
	COHO	7.17	$0.52	396,326	2,842,352	$1,478,023
	PINK	3.17	$0.28	33,119,381	104,896,254	$29,370,951
	CHUM	7.04	$0.26	548,943	3,865,278	$1,004,972
	totals			35,702,563	118,613,893	$47,099,905
CHIGNIK	CHINOOK	9.13	$0.80	4,286	39,024	$31,219
Updated 10/3/2019	SOCKEYE	5.66	$1.40	638,772	3,614,393	$5,060,150
	COHO	6.37	$0.32	248,281	1,581,396	$506,047
	PINK	3.09	$0.27	2,452,838	7,583,891	$2,047,651
	CHUM	6.58	$0.35	157,517	1,037,197	$363,019
	totals			3,501,694	13,855,901	$8,008,086
ALASKA PENINSULA	CHINOOK	8.44	$0.58	26,006	219,493	$126,655
AND	SOCKEYE	5.17	$1.53	4,002,326	20,709,338	$31,751,763
ALEUTIAN ISLANDS	COHO	6.00	$0.25	560,495	3,362,106	$848,143
Updated 10/16/2019	PINK	2.77	$0.24	20,903,380	57,977,153	$13,777,438
	CHUM	5.89	$0.32	1,386,998	8,168,441	$2,630,082
*see supplemental tables	**totals**			26,879,205	90,436,531	$49,134,081
KUSKOKWIM	CHINOOK					
Updated 10/2/2019	SOCKEYE					
	COHO		No Buyer in the Kuskokwim Area			
	PINK					
	CHUM					
	totals					

YUKON	CHINOOK	12.17	$6.65	3,105	37,784	$251,295
Updated 10/1/2019	SOCKEYE					
	COHO	5.96	$1.00	57,389	342,297	$342,249
	PINK	3.09	$0.10	10,962	33,835	$3,384
	CHUM	6.56	$0.60	490,188	3,215,358	$1,923,447
*see supplemental tables	**totals**			561,644	3,629,274	$2,520,374
NORTON SOUND	CHINOOK	10.50	$3.00	1,371	14,792	$44,376
Updated 10/4/2019	SOCKEYE	6.0	$1.39	6,969	41,859	$58,299
	COHO	6.4	$1.57	139,820	899,549	$1,409,520
	PINK	3.4	$0.13	75,929	261,240	$33,125
	CHUM	6.7	$0.50	157,035	1,057,675	$528,266
	totals			381,124	2,275,115	$2,073,586
KOTZEBUE	CHINOOK	12.30	$0.80	16	197	$158
Updated 10/4/2019	SOCKEYE	4.90	$1.50	29	143	$215
	COHO					
	PINK					
	CHUM	8.1	$0.38	493,295	4,004,727	$1,538,603
	totals			493,340	4,005,067	$1,538,975
ALASKA TOTALS	CHINOOK	11.84	$4.48	272,124	3,223,234	$14,447,722
Updated 10/16/2019	SOCKEYE	5.24	$1.45	55,201,592	289,473,840	$421,146,163
	COHO	6.77	$1.15	3,792,585	25,665,932	$29,593,611
	PINK	3.27	$0.30	129,063,339	422,671,026	$128,628,652
	CHUM	7.07	$0.49	18,542,599	131,078,062	$63,777,586
	totals			206,872,239	872,112,094	$657,593,734

*Supplemental Tables: 2019 Salmon Season

		Average Weight (in pounds)	Average Price per Pound	Number of Fish	Pounds of Fish	Estimated Exvessel Value
LOWER COOK INLET	CHINOOK	12.86	$4.07	736	8,854	$36,057
updated 10/8/2019	SOCKEYE	4.47	$2.20	311,696	1,394,639	$3,065,187
	COHO	7.40	$0.95	12,712	93,086	$88,017
	PINK	3.11	$0.31	1,980,124	6,165,154	$1,909,627
	CHUM	7.25	$0.49	55,508	402,516	$198,396
	totals			2,360,776	8,064,249	$5,297,284
UPPER COOK INLET	CHINOOK	15.76	$3.43	2,657	41,882	$143,655
updated 10/4/2019	SOCKEYE	5.51	$1.80	1,663,637	9,161,611	$16,490,900
	COHO	5.61	$0.74	145,872	818,121	$605,410
	PINK	3.07	$0.21	68,282	209,937	$44,087
	CHUM	6.76	$0.37	123,113	832,125	$307,886
	totals			2,003,561	11,063,676	$17,591,938
NORTHERN DISTRICT OF ALASKA PENINSULA	CHINOOK	14.83	$1.29	3,566	52,879	$67,965
Updated 10/13/2019	SOCKEYE	5.27	$1.56	2,371,500	12,504,661	$19,444,748
	COHO	6.33	$0.32	37,583	238,084	$76,901
	PINK	3.25	$0.26	113,278	368,576	$96,604
	CHUM	5.94	$0.41	49,246	292,491	$119,336
	totals			2,575,173	13,456,691	$19,805,554
SOUTH ALASKA PENINSULA, NORTHWESTERN DISTRICT, & ALEUTIAN ISLANDS	CHINOOK	7.42	$0.35	22,440	166,614	$58,690
	SOCKEYE	5.03	$1.50	1,630,826	8,204,677	$12,307,015
Updated 10/15/2019	COHO	5.97	$0.25	522,912	3,124,022	$771,242
	PINK	2.77	$0.24	20,790,102	57,608,577	$13,680,834
	CHUM	5.89	$0.32	1,337,752	7,875,950	$2,510,746
	totals			24,304,032	76,979,840	$29,328,526
YUKON SUMMER SEASON	CHINOOK	12.35	$6.59	2,582	31,896	$210,079
Updated 10/1/2019	SOCKEYE					
	COHO					
	PINK	3.09	$0.10	10,962	33,835	$3,384
	CHUM	6.07	$0.60	227,089	1,377,335	$823,473
	totals			240,633	1,443,066	$1,036,936
YUKON FALL SEASON	CHINOOK	11.26	$7.00	523	5,888	$41,216
Updated 10/1/2019	SOCKEYE					
	COHO	5.96	$1.00	57,389	342,297	$342,249
	PINK					
	CHUM	6.99	$0.60	263,099	1,838,023	$1,099,974
	totals			321,011	2,186,208	$1,483,438

UNITED STATES OF AMERICA
DEPARTMENT OF AGRICULTURE
UNITED STATES FOREST SERVICE

Before the Chief
USDA Forest Service

In re Appeal of the Tongass National Forest Revised Land and Resource Management Plan (Plan Amendment), Final Environmental Impact Statement, and Record of Decision For this Revised Land and Resource Management Plan, Tongass National Forest, Alaska.	)	Appeal No. _____
THE WILDERNESS SOCIETY,	)	
Appellant.	)	

DECLARATION OF JOSEPH R. MEHRKENS

I, Joseph R. Mehrkens, declare as follows:

1. I am a retired resource economist residing at 15450 Glacier Highway, Juneau, Alaska 99801. I periodically consult on natural resource issues in Alaska.

2. I received a B.S. in Forestry from the University of Minnesota in 1970 and a Masters of Science in Forest Economics from Michigan State University in 1975.

3. Since 1979 I have worked as an economist for the Forest Service, The Wilderness Society, the Alaska Department of Commerce and Economic Development, and Environmental Economics – Alaska (my former consulting business).

4. From 1979 to 1987 I was the Regional Economist for the USDA-Forest Service, Alaska Region. My duties included economic assessments of the Tongass NF timber program – including the timber trade between Alaska and the Pacific Rim countries. I also prepared congressional reports on the annual supply and demand for Southeast Alaska timber.

5. From 1987 to 1991 I worked for The Wilderness Society as an economist and lobbyist to help gain passage of the Tongass Timber Reform Act of 1990. I testified before various congressional committees on the economic tradeoffs of the Tongass NF timber program – including taxpayer subsidies. I also analyzed the annual President's budget for the Tongass NF and made recommendations for change to the House and Senate Appropriations committees.

6. From 1991 to 2000 I was a part-time consultant on various projects including an expert witness on the Alaska Pulp of America consolidated income statements. During this time I also commercial fished and worked full time for the Alaska Department of Law (1995-1998).

7. From 2000 to 2004, I worked for the Alaska Department of Commerce, Community and Economic Development. I developed the framework for the Alaska Economic Information System – a web based system to access federal, state and local economic data. I also reinitiated the Alaska Annual Economic Performance Report.

8. From 2004 to present, I have been a part-time consultant. This work includes the determination of public subsidies for the Tongass NF timber program. The subsidy work was initially completed under two contracts to the Southeast Alaska Conservation Council (SEACC), but the final products were also shared with the Natural Resources Defense Council, The Wilderness Society, Earthjustice and other environmental organizations.

9. I retired in May of 2008.

10. Exhibit A is a series of Excel spreadsheets and charts I prepared under two contracts with SEACC in 2004 and 2007. More specifically, I was to provide an up-to-date analysis of the cost of the Tongass Timber Program in terms of timber sale planning, preparation, administration and road construction, specifically the cost of purchaser road credits and purchaser-elect roads.

11. Prior to my contractual work, SEACC published a report titled, "Taxpayer Losses and Missed Opportunities." The report documented the public subsidies from 1998 to 2002 in terms of total dollars lost and the cost per Tongass timber dependent job. The SEACC report evolved from a Freedom of Information Act (FOIA) request prepared by another former Alaska Regional Economist, Dr. Guy Robertson. Dr. Robertson provided Forest Service information on timber receipts and expenditures, including the costs of road building. The SEACC report simply subtracted timber and road expenditures from timber revenues to calculate the net dollar loss to taxpayers. The SEACC loss calculations excluded road maintenance costs, and the estimated loss per timber job for 2002 was based on partial information – only two quarters of employment data.

12. My first contract in 2004 was designed to revise the 2002 information concerning timber employment and update the subsidy information for FY2003 and FY2004. My update followed the same approach as economist Robertson and SEACC. In addition, I included the prior analyses of two General Accounting Office reports released in 1989 and 1997, and the work of forest economist Randle O'Toole, "$64 million Dollar Question: How the Taxpayers Paid the Pulp Mills to Clearcut the Tongass National Forest" (Table 17, page 28) (1993). This supplemental information gave me consistent expenditure and revenue data from 1982 to 2002.

13. Subsequent FOIA requests were made by SEACC to gain the same type of information as provided by Dr. Robertson for my analyses for FY 2003 and FY2004. Line item expenditures for the timber and road programs were taken from Forest Service budget and accounting documents. These expenditures were subtracted from timber receipts that are regularly published on the Forest Service web site. This yielded the public subsidy or net loss in total dollars. Tongass timber dependent employment numbers for 2002, 2003 and 2004 were taken from two draft Forest Service reports: the ANILCA Section 706(a) timber supply and demand report for fiscal years 2001 & 2002, and the same report for fiscal years 2001-2005. Based on my past experience, the employment numbers in these reports were reasonable and accurate.

14. Using the total dollar loss and the Forest Service job employment numbers, I estimated net loss per Tongass timber dependent job for fiscal years 2003 and 2004, by following the same methodology/conventions from 1998 to 2002. Simply, the net loss in total dollars is divided by the Tongass timber dependent job numbers reported by the Forest Service. The only exception is that I used road maintenance costs in my estimates. I also corrected the FY2002 net loss per job calculated by SEACC by using the more complete Forest Service employment information – an entire year versus just two quarters.

15. The subsidy analysis under my second contract with SEACC in 2007 was much the same. A SEACC FOIA provided the same type of information on timber and roads expenditures for FY2005, FY2006 and FY2007. Again timber receipts were taken from the Forest Service web site. Tongass timber dependent employment was taken from another Forest Service draft Section 706(a) report for 2006. The subsidy in total dollars lost and the net losses per job for FY2005 and 2006 were calculated as before.

16. The estimated subsidy for FY2007 and FY2008 had to go a couple of steps further. While the expenditures for 2007 were actual expenditures, the FY2008 program costs are the approved budget authorities for the timber and road programs, i.e., the maximum amount that can be expended. Simply stated, actual expenditures for FY2008 are not yet available. Also, the Tongass timber dependent job numbers for FY2007 and FY2008 are my independent estimates and are based on reduced logging in 2007 and the recent closure of the Ketchikan veneer mill in 2008. Nonetheless, my methodology is similar to the Forest Service methodology in the agency's 706(a) reports and similar to what I used as Regional Economist in the mid-1980s.

17. To make the dollar losses consistent over time, I had to fill in missing information about overhead costs in support of the timber and road programs. The overheads costs are expenditures for shared utilities, equipment, facilities, accounting, procurement, personnel, supervision, etc. The overhead costs (now known as cost pools) were once an explicit line item in the budgeting and accounting documents – that is until FY2004. From FY2004 to FY 2007 the cost pools were lumped together with all other programs, making a timber and roads estimate more difficult. However, the FOIA information for FY2004 did reveal the cost pool allocations for the roads program in the budget documents. Consequently, I used this explicit budget information to estimate the total road expenditures (including overheads) for 2004. However, I could not do the same for the timber program. For the timber program I had to use an independent estimate for the overhead costs. This estimate was based on the ratio of actual overhead costs to direct timber program costs during FY2002 and FY2003. This ratio ranged from 49% to 51% and I used the lower percentage to be conservative.

18. Again, for FY2006 and FY2007 there was no explicit information on overhead costs. However, the FOIA information for this period revealed the Regional Office and Tongass

NF assessments for the cost pools (overheads) as a percentage of direct program costs. The percentage applied to all resource programs – timber and non-timber alike. I assumed these percentages have been applied to timber and road programs and they are the basis for the overhead costs for my FY2006 and FY2007 analysis. I also used these percentages to revise the FY2005 timber overheads since it is based on real information and not an assumption about historic rates.

19. Exhibit A is based entirely on publically available information. This includes numerous Forest Service documents that are available as hard copy or online documents. All information sources are documented in the spreadsheet, which is part of an Excel Workbook file I created entitled, "Final Tongass Budget Analysis 91-07." The FOIA documents are available in hard copy from the Forest Service or SEACC. In my opinion, Exhibit A presents an accurate picture of Tongass costs, revenues, and jobs, and represents the best data available.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: 5/14/08

By: Joseph R. Mehrkens

Joseph R. Mehrkens

Tongass Timber Program Losses 1982-2008

J.R. Mehrkens

3/15/2008 last revised

User Notes: Make inputs to only the cells highlighted in yellow
Data Inputs in blue are estimates and in red are dummy variables.

	Loss	Expenditures	Revenues	SEACC Expenditures	SEACC Road Mtn	SEACC Losses	SEACC Subsidy/Job
1982	$ 60,521,237						
1983	$ 47,854,085						
1984	$ 46,526,812						
1985	$ 48,263,769						
1986	$ 51,113,761						
1987	$ 58,070,575						
1988	$ 41,225,329						
1989	$ 32,000,000						
1990	$ 28,800,000						
1991	$ 34,100,000						
1992	$ 41,693,445	$ 64,100,000					
1993	$ 31,434,675						
1994	$ 28,990,570						
1995	$ 24,225,892						
1996	$ 19,659,377					$ 19,659,377	$ 12,618.34
1997	$ 25,261,055					$ 25,261,055	$ 19,064.95
1998	$ 23,444,000	$ 28,436,000	$ 4,992,000	$ 26,435,000	$ 2,001,000	$ 21,443,000	$ 24,446.30
1999	$ 23,613,000	$ 29,069,000	$ 5,456,000	$ 28,141,000	$ 928,000	$ 22,685,000	$ 35,190.76
2000	$ 17,282,137	$ 22,865,000	$ 5,582,863	$ 21,359,000	$ 1,506,000	$ 15,776,137	$ 27,740.19
2001	$ 39,195,876	$ 41,051,000	$ 1,855,124	$ 37,395,000	$ 3,656,000	$ 35,540,000	$ 95,833.44
2002	$ 38,714,973	$ 39,957,000	$ 1,242,027	$ 36,122,000	$ 3,835,000	$ 34,880,000	$ 223,785.97
2003	$ 41,560,137	$ 43,024,000	$ 1,463,863				$ 208,844.91
2004	$ 47,860,202	$ 48,652,000	$ 791,798				$ 270,396.62
2005	$ 49,318,453	$ 49,896,400	$ 577,947				$ 268,035.07
2006	$ 48,030,234	$ 48,802,269	$ 772,036				$ 303,988.82
2007	$ 46,285,306	$ 46,505,708	$ 220,403				$ 674,878.15
2008	$ 44,289,000	$ 44,500,000	$ 211,000				$ 632,700.00
2009	$ -	$ -					#DIV/0!
2010	$ -	$ -					#DIV/0!

	Loss/MMBF	Harvest		Loss/mbf		Tongass Jobs		Loss/Job	Offer	Sold	Cut
1982	$ 163,262	370.7	1982	$ 163	1982	1,850	1982	$ 32,700	535.7	270.0	370.7
1983	$ 191,111	250.4	1983	$ 191	1983	1,857	1983	$ 25,800	518.8	231.2	250.4
1984	$ 178,332	260.9	1984	$ 178	1984	1,608	1984	$ 28,900	537.4	273.5	260.9
1985	$ 201,603	239.4	1985	$ 202	1985	1,502	1985	$ 32,100	479.2	191.6	239.4
1986	$ 180,998	282.4	1986	$ 181	1986	1,795	1986	$ 28,500	440.5	303.9	282.4
1987	$ 173,035	335.6	1987	$ 173	1987	2,098	1987	$ 27,700	470.0	514.3	335.6
1988	$ 104,026	396.3	1988	$ 104	1988	2,370	1988	$ 17,400	399.0	335.2	396.3
1989	$ 71,975	444.6	1989	$ 72	1989	2,569	1989	$ 12,500	368.4	295.1	444.6
1990	$ 61,108	471.3	1990	$ 61	1990	2,522	1990	$ 11,400	385.5	312.4	471.3
1991	$ 93,759	363.7	1991	$ 94	1991	2,387	1991	$ 14,300	396.1	405.5	363.7
1992	$ 112,776	369.7	1992	$ 113	1992	2,236	1992	$ 18,600	489.3	437.2	369.7
1993	$ 96,633	325.3	1993	$ 97	1993	2,060	1993	$ 15,300	318.1	348.2	325.3
1994	$ 105,114	275.8	1994	$ 105	1994	1,669	1994	$ 17,400	306.3	268.5	275.8
1995	$ 109,570	221.1	1995	$ 110	1995	1,519	1995	$ 15,900	326.0	251.2	221.1
1996	$ 163,556	120.2	1996	$ 164	1996	1,558	1996	$ 12,600	266.1	227.7	120.2
1997	$ 236,970	106.6	1997	$ 237	1997	1,325	1997	$ 19,100	187.9	202.4	106.6
1998	$ 195,693	119.8	1998	$ 196	1998	959	1998	$ 24,400	187.1	24.1	119.8
1999	$ 162,066	145.7	1999	$ 162	1999	671	1999	$ 35,200	115.3	61.4	145.7
2000	$ 117,646	146.9	2000	$ 118	2000	623	2000	$ 27,700	85.3	170.3	146.9
2001	$ 819,997	47.8	2001	$ 820	2001	409	2001	$ 95,800	67.9	47.8	47.8
2002	$ 1,145,413	33.8	2002	$ 1,145	2002	173	2002	$ 223,800	56.9	24.4	33.8
2003	$ 810,139	51.3	2003	$ 810	2003	199	2003	$ 208,800	88.8	36.5	51.3
2004	$ 1,030,659	46.4	2004	$ 1,031	2004	177	2004	$ 270,400	73.0	87.1	46.4
2005	$ 994,281	49.6	2005	$ 994	2005	184	2005	$ 268,000	110.4	65.1	49.6
2006	$ 1,112,810	43.2	2006	$ 1,113	2006	158	2006	$ 304,000	85.0	85.0	43.2
2007	$ 2,470,522	18.7	2007	$ 2,471	2007	69	2007	$ 674,900	32.6	30.4	18.7
2008	$ 2,214,450	20	2008	$ 2,214	2008	70	2008	$ 632,700	30.0	30.0	20.0
2009	#DIV/0!	0	2009	#DIV/0!	2009		2009		0.0	0.0	0.0
2010	#DIV/0!	0	2010	#DIV/0!	2010		2010		0.0	0.0	0.0

Sources: For FY82-FY88, H Rep 101-84, Part 1 Table 2. Net Outlays of Tongass Timber Program, p. 13, June 1989.
For FY89-FY91, O'Toole, $64 million Question: How Taxpayers Paid Pulp Mills to Clearcut the Tongass National Forest, Table 17, at 28 (March 1993)
For FY92-FY94 GAO '92-'94, Table 4.1: Timber Sales, Receipts and Outlays by Forest Fiscal 1995 through 1997, at 68.
For FY95-FY97 GAO/RCED-99-24, App. 3, Timber Sales Receipts and Outlays by Forest Fiscal 1995 through 1997 at 41.
For FY98-FY07 Timber and Road Expenditures minus Timber Value in Cut and Sold Reports.
For FY08, Budget Justification.
For FY91-FY07 expenditures various USDA, Forest Service, Alaska Region, budgt and accomplishment reports, on file with SEACC, Juneau, Alaska.

Notes: The SEACC Subsidy Report excludes road maintenance costs, which are included here.
The reported losses are underestimated since they do not include the 21 Sec 339 timber sales which were reappraised to lower stumpage rates on the remaining uncut timber under contract.
The FY2000 road maintenance costs are estiamted at: $ 1,232,000 . This estimate does not include indirects (overhead costs).
The FY02 SEACC job subsidy is overestimated because the FS employment of 195 jobs is based only on the first 2 quarters. Using a higher a higher employment estimate of 282, the calculated SEACC job subsidy is: $ 123,688 .

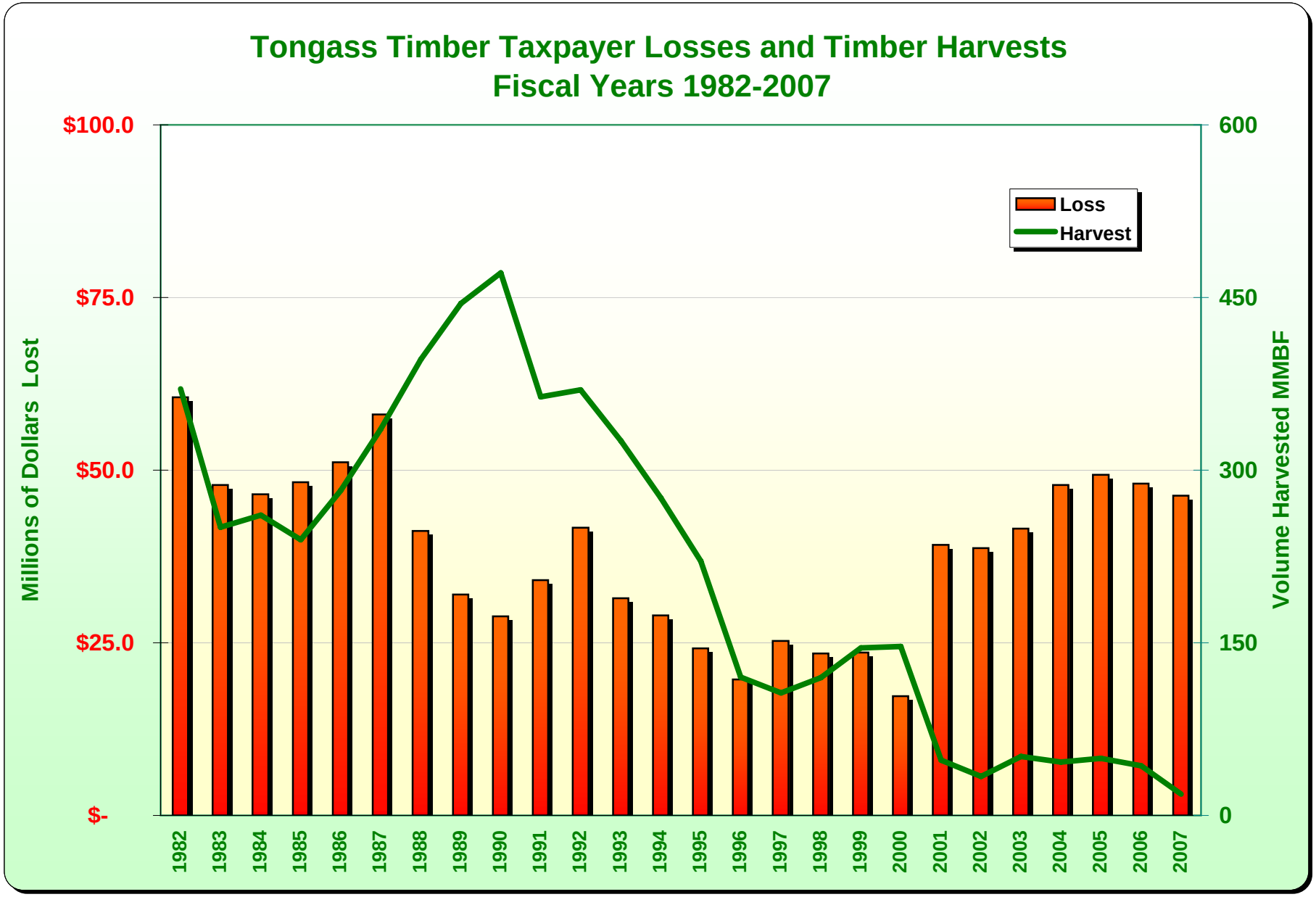
Average Losses	From 1982-2005	$ 37,530,390	From 1985-2005 or 20 yr	$ 35,515,582
Cumulative losses	From 1982-2005	$ 900,729,359	From 1985-2005 or 20 yr	$ 745,827,225

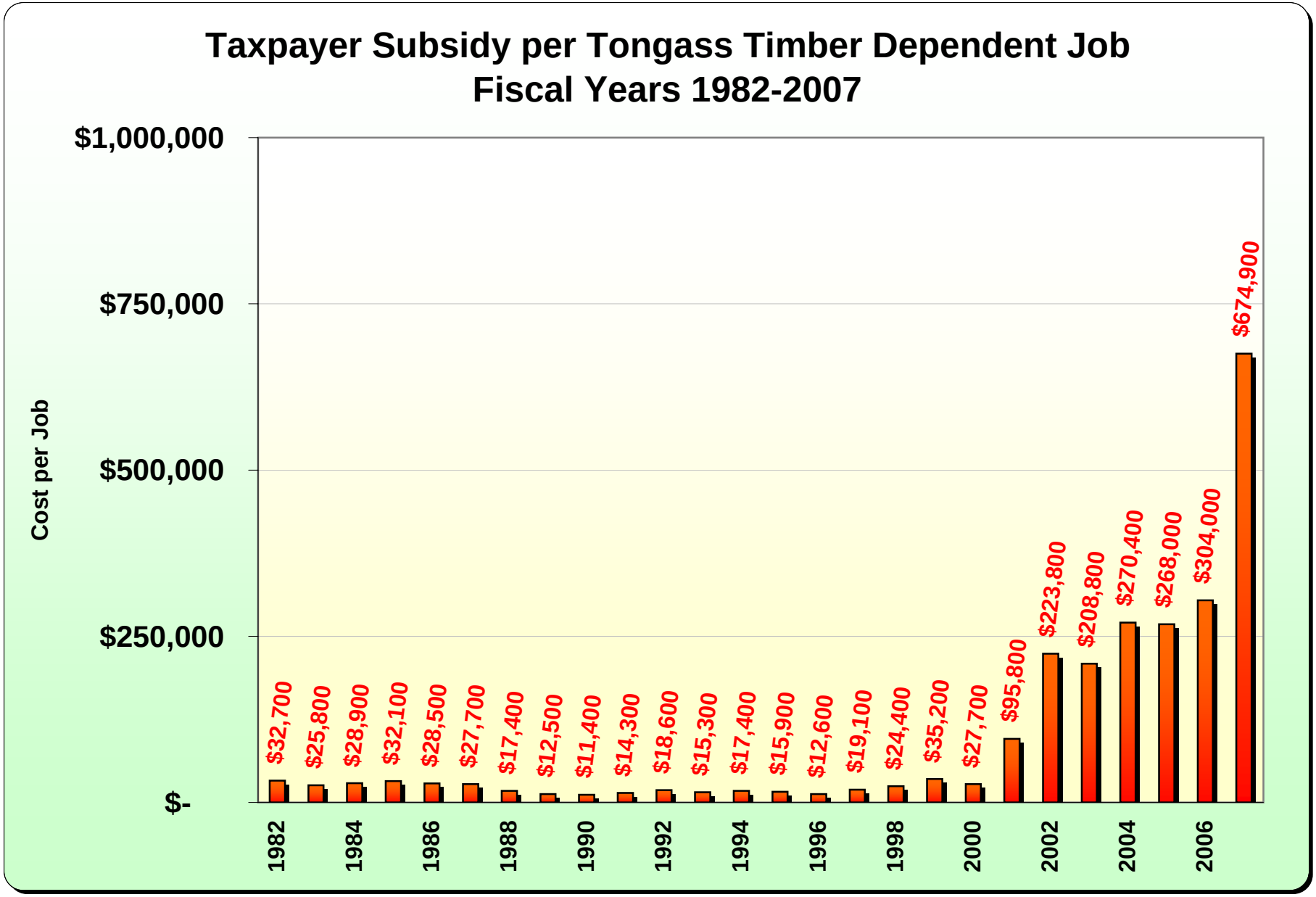
Graphics

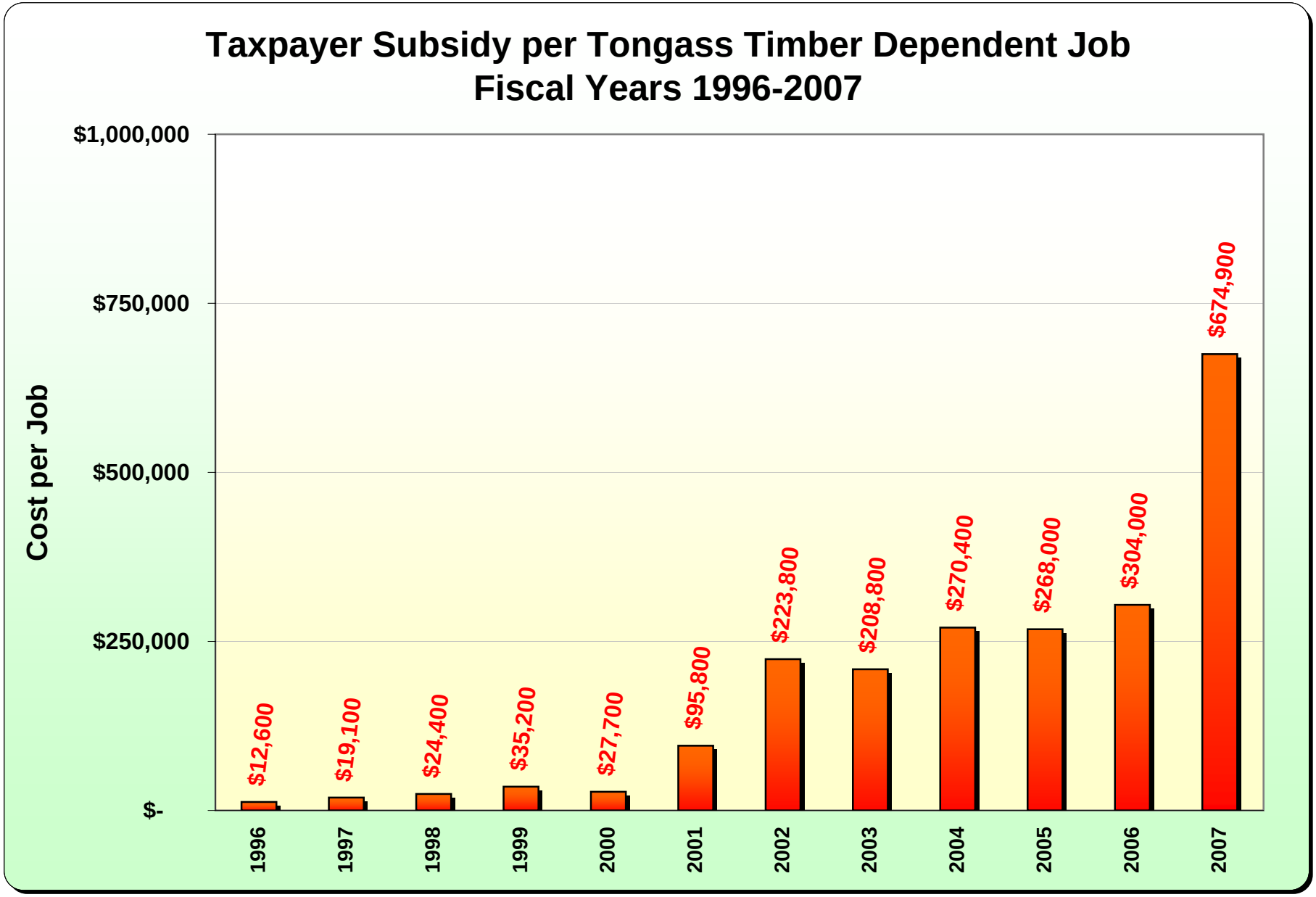
	Loss	Harvest	Loss/mbf	Harvest
1982	$ 60.52	370.7	$ 163.26	370.7
1983	$ 47.85	250.4	$ 191.11	250.4
1984	$ 46.53	260.9	$ 178.33	260.9
1985	$ 48.26	239.4	$ 201.60	239.4
1986	$ 51.11	282.4	$ 181.00	282.4
1987	$ 58.07	335.6	$ 173.04	335.6
1988	$ 41.23	396.3	$ 104.03	396.3
1989	$ 32.00	444.6	$ 71.97	444.6
1990	$ 28.80	471.3	$ 61.11	471.3
1991	$ 34.10	363.7	$ 93.76	363.7
1992	$ 41.69	369.7	$ 112.78	369.7
1993	$ 31.43	325.3	$ 96.63	325.3
1994	$ 28.99	275.8	$ 105.11	275.8
1995	$ 24.23	221.1	$ 109.57	221.1
1996	$ 19.66	120.2	$ 163.56	120.2
1997	$ 25.26	106.6	$ 236.97	106.6
1998	$ 23.44	119.8	$ 195.69	119.8
1999	$ 23.61	145.7	$ 162.07	145.7
2000	$ 17.28	146.9	$ 117.65	146.9
2001	$ 39.20	47.8	$ 820.00	47.8
2002	$ 38.71	33.8	$ 1,145.41	33.8
2003	$ 41.56	51.3	$ 810.14	51.3
2004	$ 47.86	46.4	1030.7	46.4
2005	$ 49.32	49.6	$ 994.28	49.6
2006	$ 48.03	43.2	$ 1,112.81	43.2
2007	$ 46.29	18.7	$ 2,470.52	18.7
2008	$ 44.29	20.0	$ 2,214.45	20.0

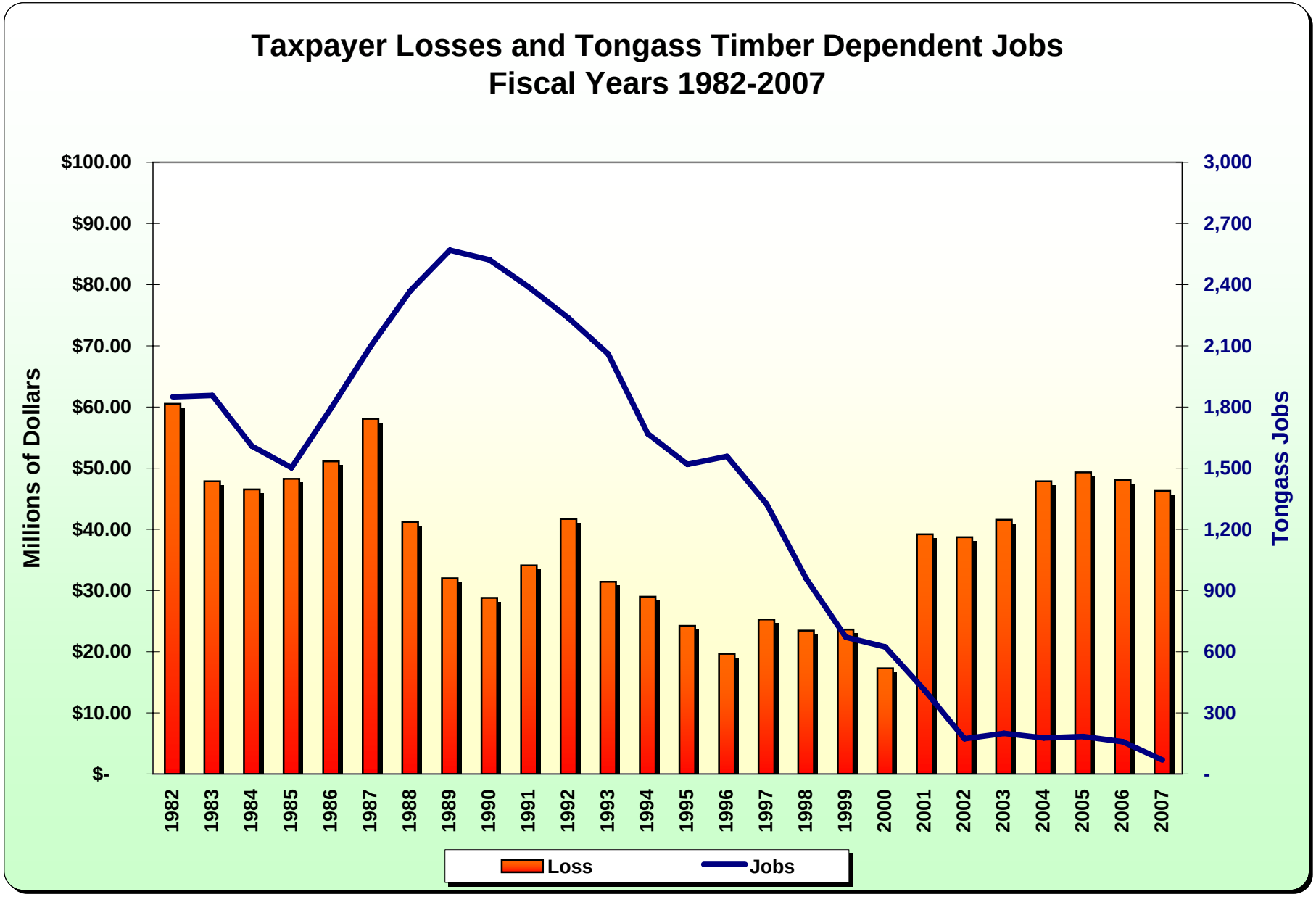
	Loss	Jobs
1982	$ 60.52	1,850
1983	$ 47.85	1,857
1984	$ 46.53	1,608
1985	$ 48.26	1,502
1986	$ 51.11	1,795
1987	$ 58.07	2,098
1988	$ 41.23	2,370
1989	$ 32.00	2,569
1990	$ 28.80	2,522
1991	$ 34.10	2,387
1992	$ 41.69	2,236
1993	$ 31.43	2,060
1994	$ 28.99	1,669
1995	$ 24.23	1,519
1996	$ 19.66	1,558
1997	$ 25.26	1,325
1998	$ 23.44	959
1999	$ 23.61	671
2000	$ 17.28	623
2001	$ 39.20	409
2002	$ 38.71	173
2003	$ 41.56	199
2004	$ 47.86	177
2005	$ 49.32	184
2006	$ 48.03	158
2007	$ 46.29	69
2008	$ 44.29	70

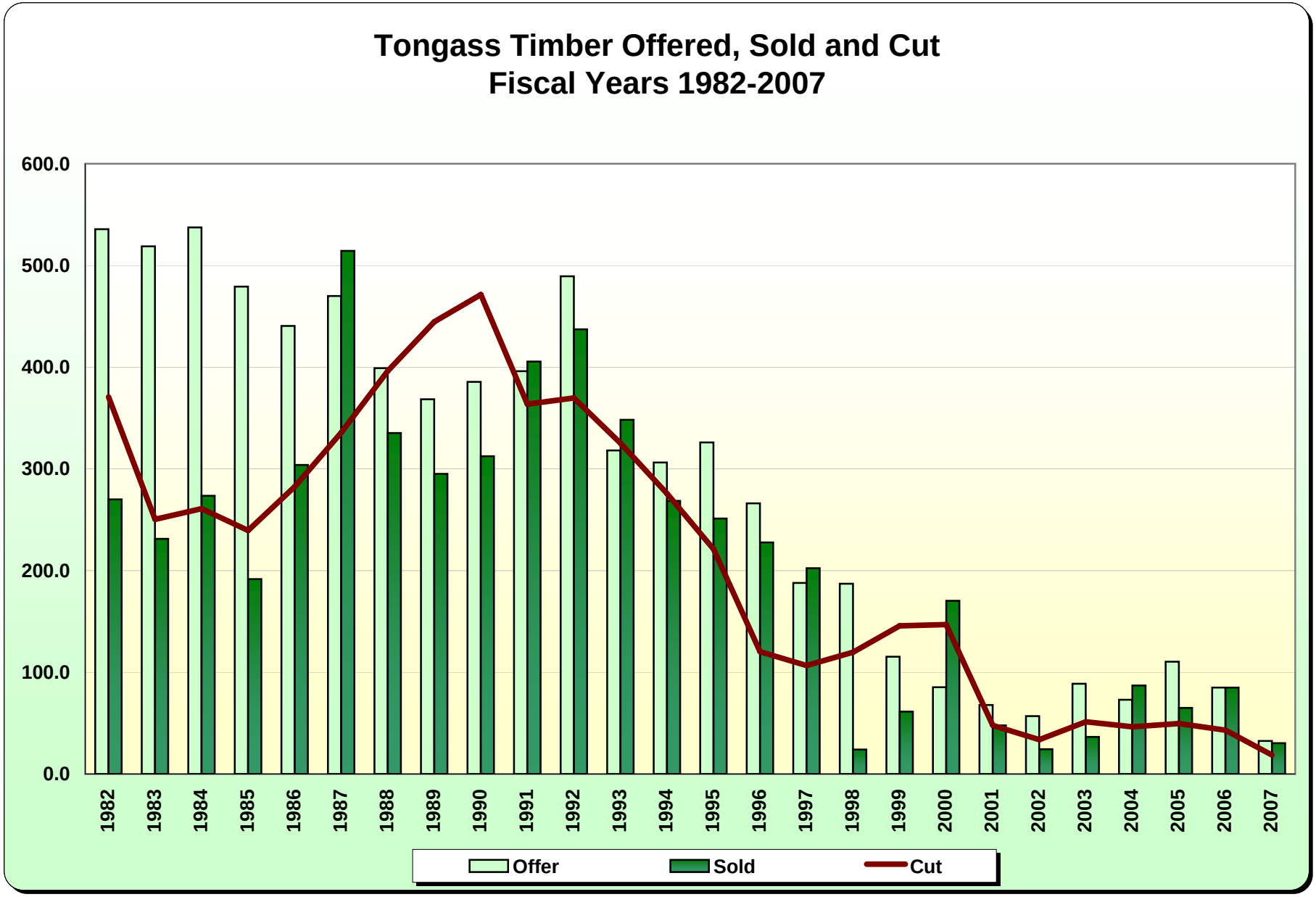
	Roads	
	Road Expenditures	Timber Demand
1991	$ 15.4	363.7
1992	$ 14.8	369.7
1993	$ 13.2	325.3
1994	$ 11.0	275.8
1995	$ 10.9	221.1
1996	$ 8.6	120.2
1997	$ 7.9	106.6
1998	$ 8.2	119.8
1999	$ 7.8	145.7
2000	$ 6.5	146.9
2001	$ 15.6	47.8
2002	$ 13.3	33.8
2003	$ 21.6	51.3
2004	$ 21.3	46.4
2005	$ 21.0	49.6
2006	$ 22.8	43.2
2007	$ 20.9	18.7
2008	$ 19.0	20.0


Tongass Timber Taxpayer Losses and Timber Harvests
Fiscal Years 1982-2007
Millions of Dollars Lost
Volume Harvested MMBF
$100.0
$75.0
$50.0
$25.0
$-
600
450
300
150
0
Loss
Harvest
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007


Taxpayer Subsidy per Tongass Timber Dependent Job
Fiscal Years 1982-2007
Cost per Job
$1,000,000
$750,000
$500,000
$250,000
$-
$32,700
$25,800
$28,900
$32,100
$28,500
$27,700
$17,400
$12,500
$11,400
$14,300
$18,600
$15,300
$17,400
$15,900
$12,600
$19,100
$24,400
$35,200
$27,700
$95,800
$223,800
$208,800
$270,400
$268,000
$304,000
$674,900
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006


Taxpayer Subsidy per Tongass Timber Dependent Job
Fiscal Years 1996-2007
Cost per Job
$1,000,000
$750,000
$500,000
$250,000
$-
$12,600
$19,100
$24,400
$35,200
$27,700
$95,800
$223,800
$208,800
$270,400
$268,000
$304,000
$674,900
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007


Taxpayer Losses and Tongass Timber Dependent Jobs
Fiscal Years 1982-2007
Millions of Dollars
$100.00
$90.00
$80.00
$70.00
$60.00
$50.00
$40.00
$30.00
$20.00
$10.00
$-
Tongass Jobs
3,000
2,700
2,400
2,100
1,800
1,500
1,200
900
600
300
-
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Loss
Jobs


Tongass Timber Offered, Sold and Cut
Fiscal Years 1982-2007
600.0
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400.0
300.0
200.0
100.0
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1982
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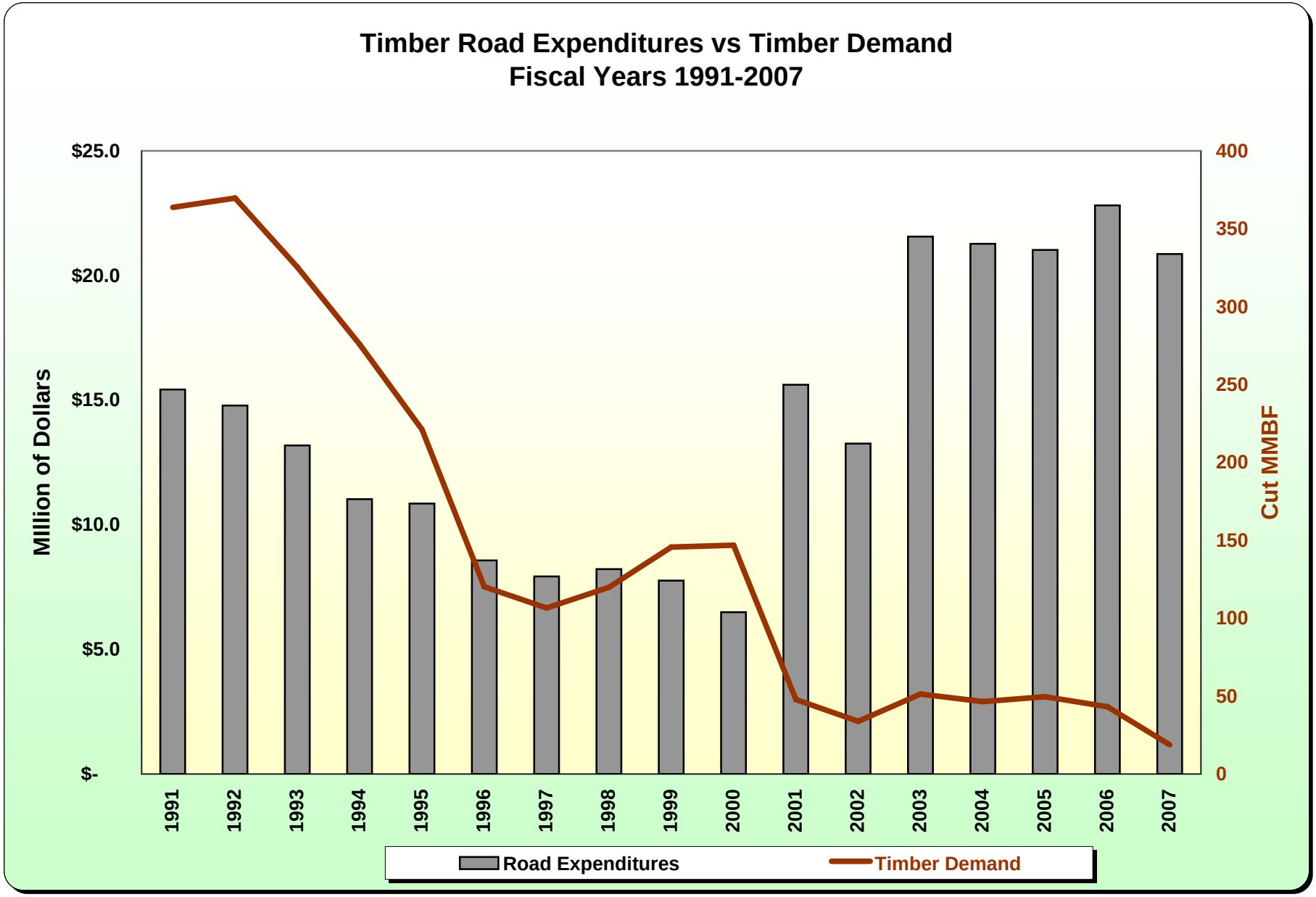
Offer
Sold
Cut


Timber Road Expenditures vs Timber Demand
Fiscal Years 1991-2007
Million of Dollars
$25.0
$20.0
$15.0
$10.0
$5.0
$-
Cut MMBF
400
350
300
250
200
150
100
50
0
1991
1992
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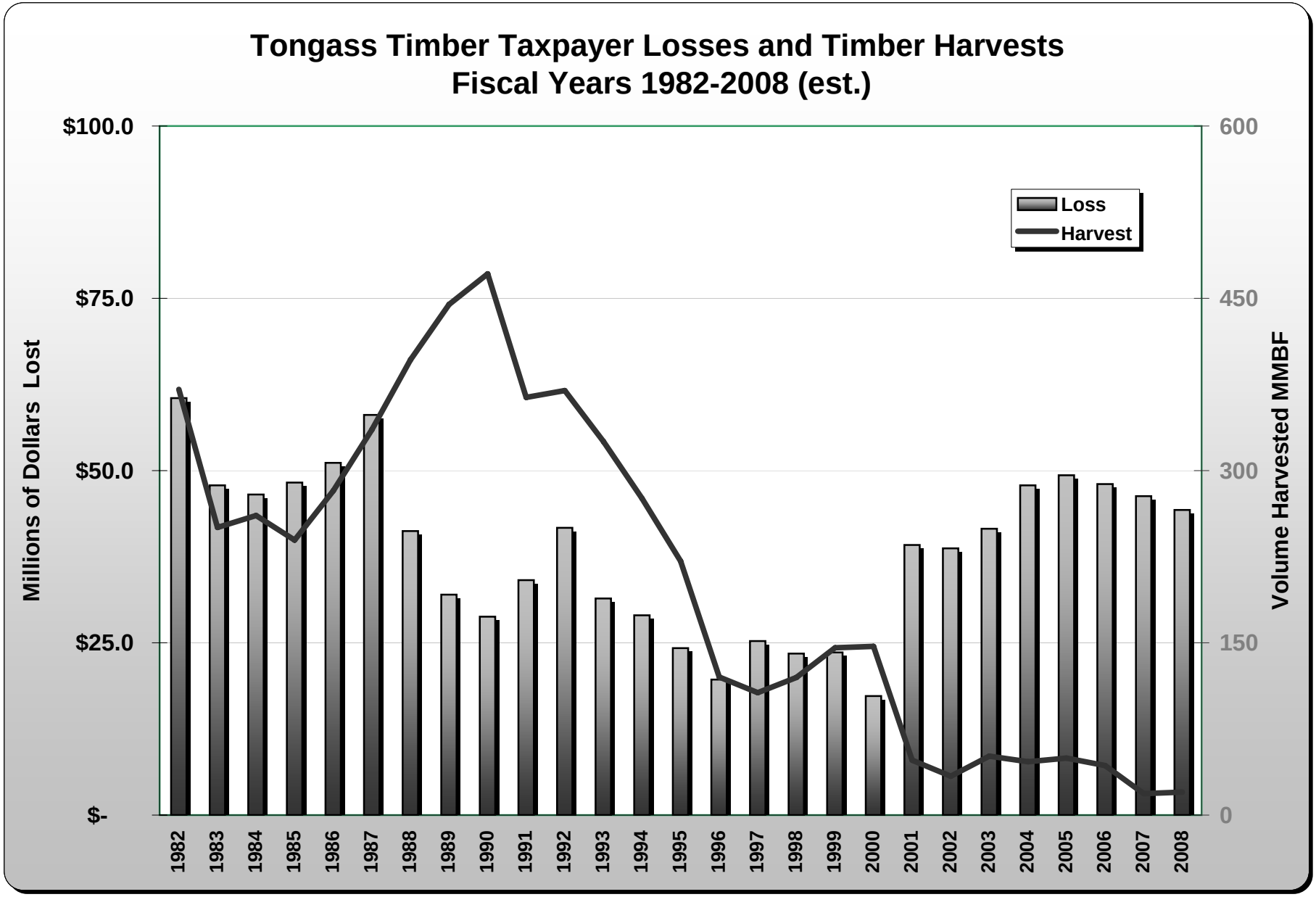
Road Expenditures
Timber Demand


Tongass Timber Taxpayer Losses and Timber Harvests
Fiscal Years 1982-2008 (est.)
Millions of Dollars Lost
Volume Harvested MMBF
$100.0
$75.0
$50.0
$25.0
$-
600
450
300
150
0
Loss
Harvest
1982
1983
1984
1985
1986
1987
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1990
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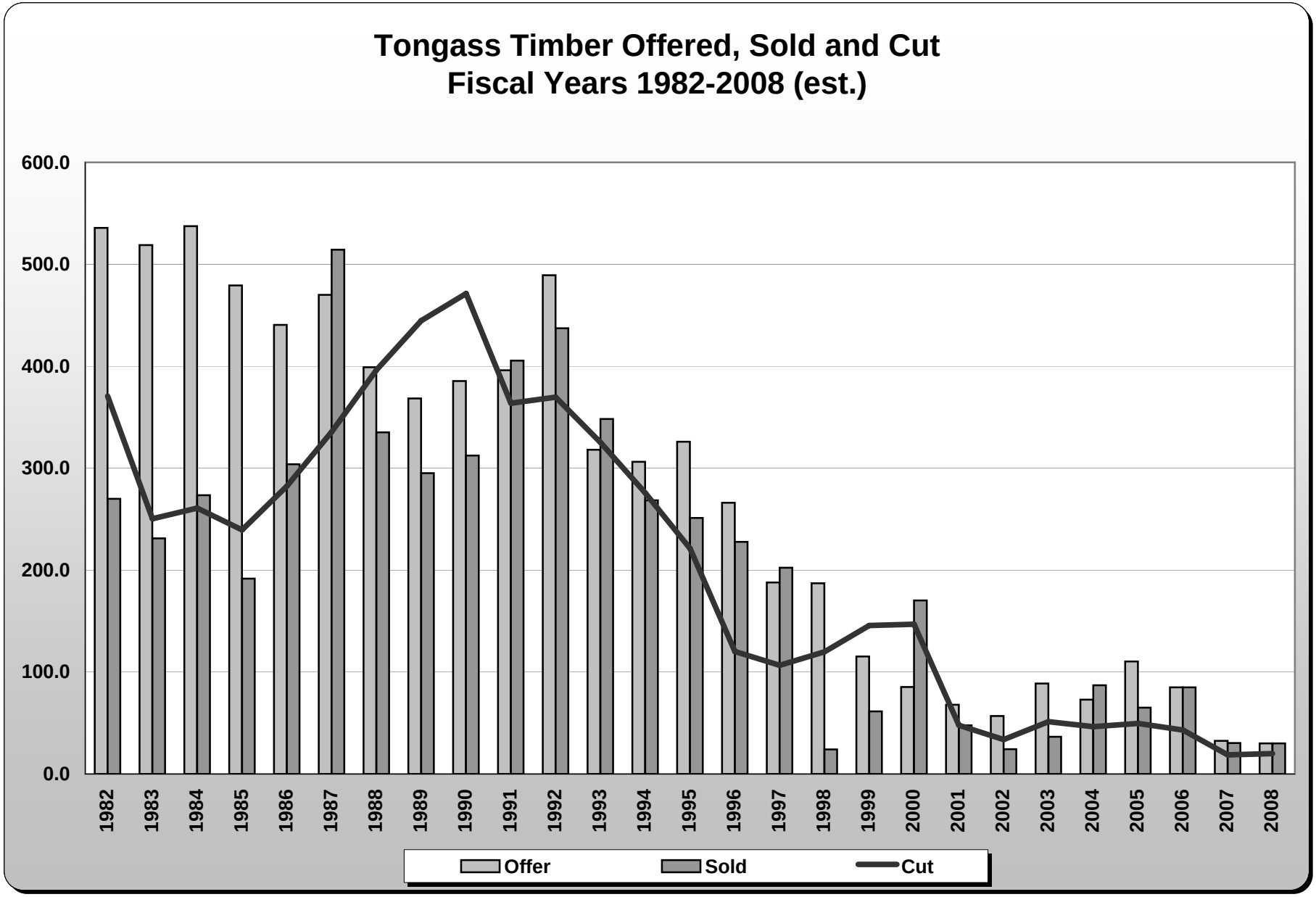
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600.0
500.0
400.0
300.0
200.0
100.0
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1982
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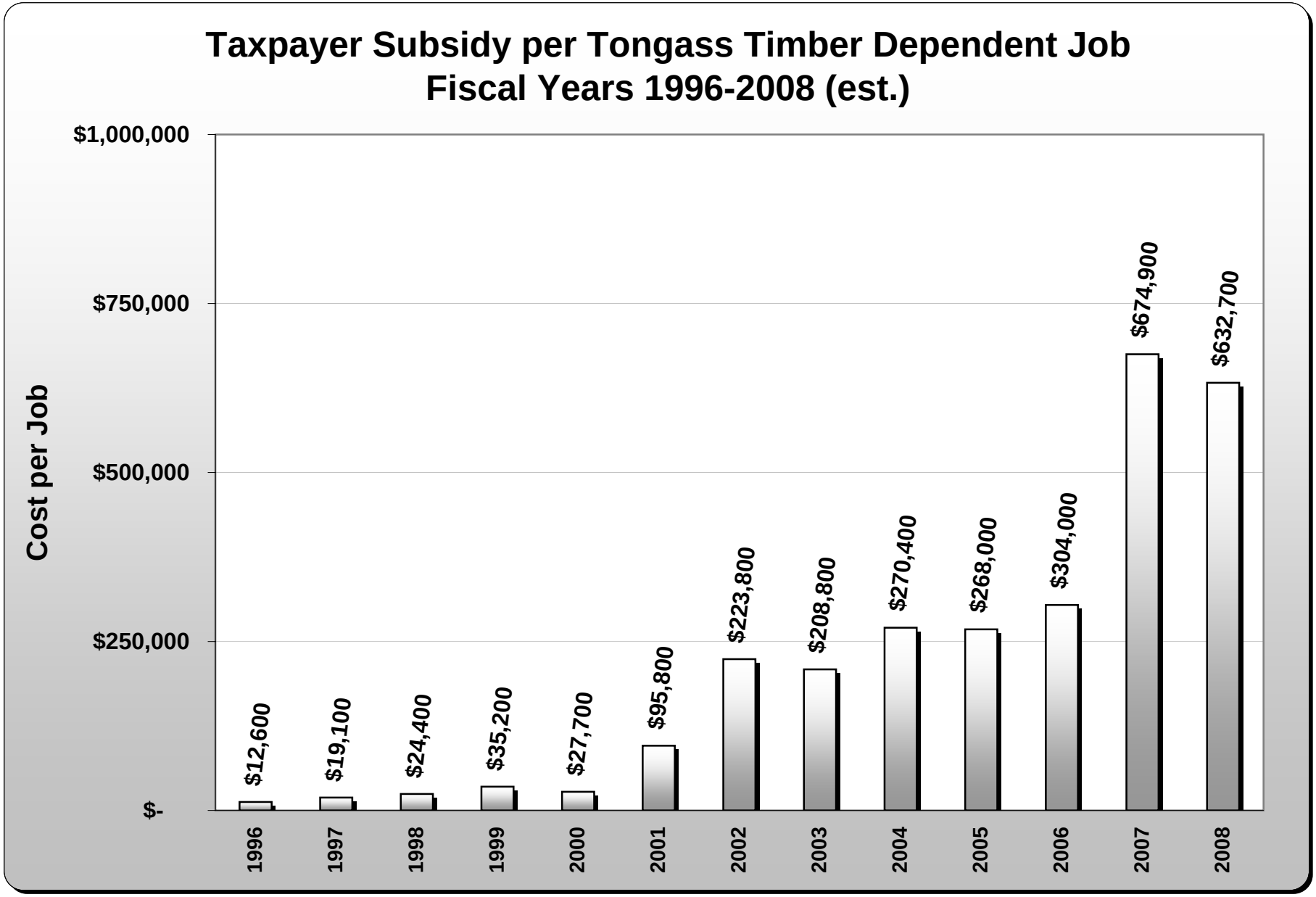
Offer
Sold
Cut


Taxpayer Subsidy per Tongass Timber Dependent Job
Fiscal Years 1996-2008 (est.)
Cost per Job
$1,000,000
$750,000
$500,000
$250,000
$-
$12,600
$19,100
$24,400
$35,200
$27,700
$95,800
$223,800
$208,800
$270,400
$268,000
$304,000
$674,900
$632,700
1996
1997
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2001
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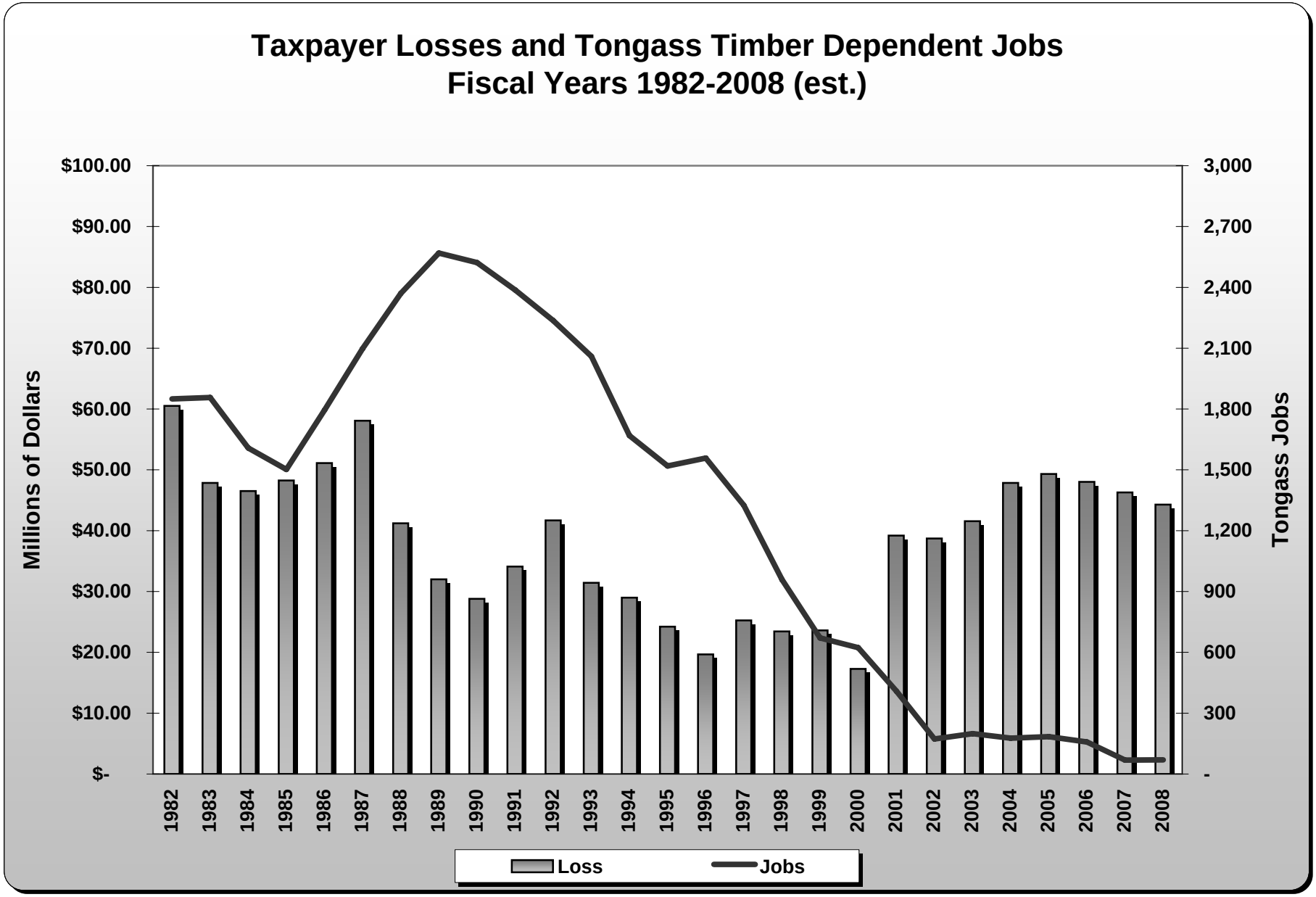
Taxpayer Losses and Tongass Timber Dependent Jobs
Fiscal Years 1982-2008 (est.)
Millions of Dollars
$100.00
$90.00
$80.00
$70.00
$60.00
$50.00
$40.00
$30.00
$20.00
$10.00
$-
Tongass Jobs
3,000
2,700
2,400
2,100
1,800
1,500
1,200
900
600
300
-
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
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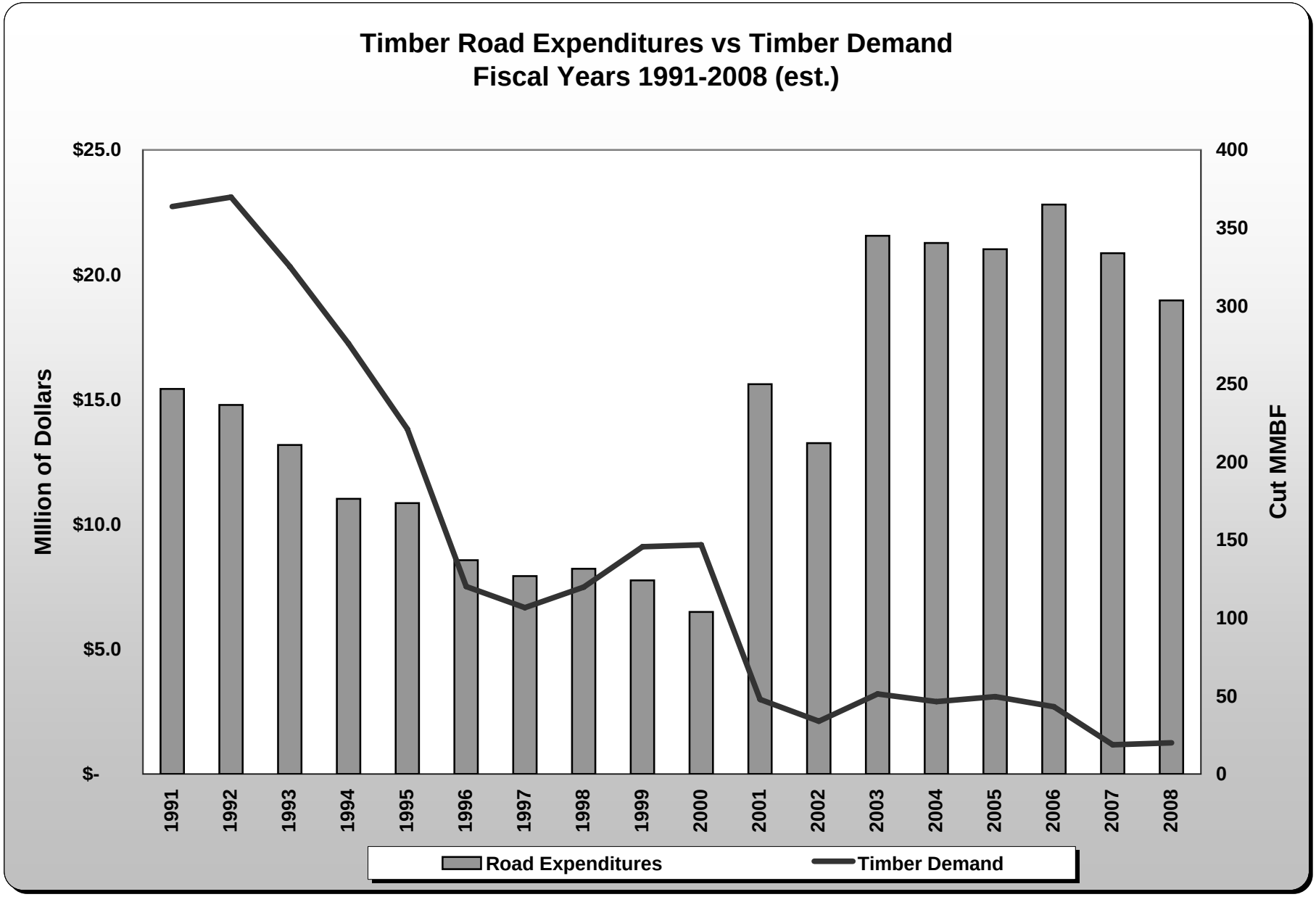
Loss
Jobs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$5.0
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250
200
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2008
Road Expenditures
Timber Demand

TAXPAYERS for COMMON SENSE

TIMBER REPORT

October 2019

Cutting Our Losses: 20 Years of Money-Losing Timber Sales in the Tongass

Clearcut timber harvest in the Tongass National Forest on Prince of Wales Island, AK. Photo used with permission.

The U.S. Forest Service (USFS) within the Department of Agriculture manages 193 million acres of public forests and grasslands collectively known as the National Forest System. The Tongass National Forest (Tongass) in southeast Alaska is the largest national forest at 16.8 million acres, roughly the size of West Virginia. Every year, the USFS prepares and conducts sales for the rights to harvest millions of board feet of timber from the Tongass. These sales have historically generated less revenue than the USFS spends to administer them, resulting in large net losses for U.S. taxpayers. New budget data reveal that the USFS has continued to lose millions of dollars on Tongass timber sales in recent years.

- **In total, the USFS has lost approximately $600 million over the last twenty years or $30 million per year on average.**
- **USFS could end up losing more than $180 million in the Tongass over the next four years.**

USFS Timber Sales—Background

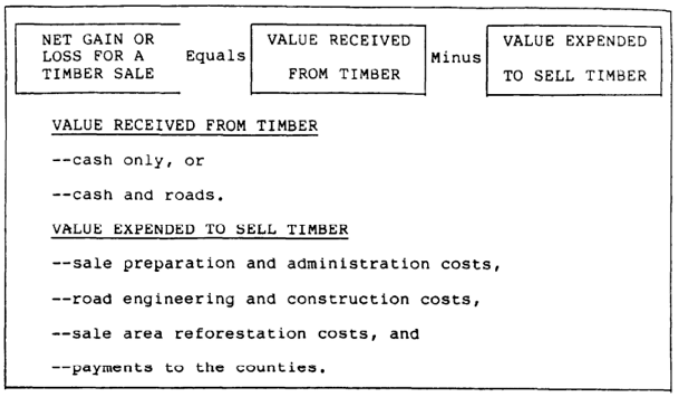
Commercial logging accounts for the vast majority of timber harvest in the Tongass National Forest. To provide for commercial logging consistent with the Tongass Land Management Plan, the USFS prepares and administers commercial timber sales through a complicated process known as the "**Gate System**." As part of this process, the USFS spends years selecting suitable timber stands, thinning them when necessary, analyzing the environmental effects of various harvest options, calculating the sale's financial efficiency, advertising the sale, and evaluating bids from private logging companies. For some sales, the USFS also pays to construct or reconstruct roads to facilitate harvest of the chosen timber stands.

After a successful sale, the winning logging company will harvest the timber and transport it to a sawmill, or when allowed, prepare it

for export. When the value of the cut timber is determined at the sawmill, the logging company pays the USFS the set amount per board foot based on the determined value agreed to during the timber sale. The USFS deposits these receipts and then manages the reforestation and recovery of the affected areas in the Tongass.

Sizing Up Tongass Timber Sales

Whether a timber sale generates a net gain or loss to taxpayers depends on the how much the USFS spent to prepare and administer it, and the amount of revenue collected when the timber is harvested. For decades, the USFS has conducted timber sales in the Tongass that consistently generate huge losses for taxpayers. Various independent analyses have attempted to quantify these losses, but no such evaluation has been conducted in recent years. Newly released budget data indicate that the USFS continues to lose millions of dollars every year on Tongass timber sales.



Source: Government Accountability Office **RCED-84-96**

Net Losses

Over the last 20 fiscal years (FY1999-2018), the USFS spent $632 million in connection with its timber sale program in the Tongass and collected $33.8 million in timber sale receipts, resulting in a net loss of **$598.2 million**, in 2018 dollars. That is, the USFS lost $29.9 million per year, on average from FY1999 to FY2018. Or put another way, Tongass timber sale revenues covered just 5.4 percent of timber sale costs. (See table "Tongass Timber Program: Receipts, Expenses, Losses (FY1999-2018)" for detail.)

Timber sale expenses and revenues fluctuate significantly from one year to the next. A comparison of the three-year moving averages of timber sale losses indicates that losses have decreased substantially over the 20-year period. The inflation-adjusted average loss for FY16-18 of $17.9 million is less than half the average for FY99-01, $38.2 million. Rather than some gain in efficiency, the decrease in losses reflects the lower volume of timber being sold in recent years.

The rate of losses per amount of timber sold has not decreased. During the 20-year period from FY 1999 to 2018, the USFS **reported selling** 977 million board feet of timber in the Tongass. Overall, the USFS lost approximately $612 for every thousand board feet (mbf) of timber it sold. Further, the three-year moving average for losses per mbf more than doubled within the last decade, indicating that the financial efficiency of Tongass timber sales has declined in recent years.

Under **current plans**, the USFS will offer more than 290 million board feet in several timber sales in the Tongass over the next four years. If spending to prepare those sales and the revenue generated from them match the long-run average, the USFS could end up losing more than $180 million.

Receipts Analysis

The USFS reports its "**All Service Receipts**" by national forest, region, and fiscal year to provide transparency into the distribution of receipts to states and localities directed by Congress. Total revenue generated by the USFS timber program includes receipts from commercial timber sales, salvage sales, and amounts deposited into certain trust funds.

Over 20 fiscal years (1999-2018), the USFS has collected a total of $33.8 million from timber sales in the Tongass, after adjusting for inflation. On average, the USFS collected $1.7 million per year in that period, though over the last ten years, the average has dropped to $1.2 million per year.

The timber sales receipts included in the above total are deposited and reported in three separate accounts: National Forest Fund, Knutson-Vandenberg Fund, and Salvage Sales Fund. In short, the Knutson-Vandenberg Fund receives a percentage of timber receipts and uses them to fund timber sale area improvement (reforestation) and some regional cooperative work. The Salvage Sales Fund receives the receipts from sales of

Tongass trees. Source: Joseph, via Flickr Creative Commons

"salvage" timber—timber that is dead, damaged, downed by other natural means, or otherwise in need of clearing—and uses its funds to prepare and administer future salvage sales.

Outlays Analysis

Over the 20 fiscal years (1999-2018), the USFS spent $632 million, adjusted for inflation, in association with timber sales in the Tongass. On average, the USFS spent $31.6 million per year, but annual expenses have declined steadily over the two decades. In that period, the inflation-adjusted, three-year moving average of Tongass timber expenses dropped by more than half from $45.1 million to $18.6 million.

Of the $632 million, $334 million was spent from the "Forest Products" account, the primary fund for preparing and administering timber sales. For road construction and maintenance, the USFS spent $221 million. Expenditures from the Knutson-Vandenberg Fund, Salvage Sales Fund, and Reforestation Trust Fund make up the remaining $38 million.

Methodology Note — The USFS does not report how much it spends to prepare and administer timber sales individually or collectively. As a result, estimates of USFS timber sale losses often vary due to different determinations of which expenses are appropriately categorized as timber sale outlays.

In this analysis, outlays associated with timber sales represent the total of six budget line items. These six budget accounts fund three types of USFS activity: timber sale preparation, reforestation, and road building. The latter is included because the vast majority of roads in the Tongass have been built and maintained to facilitate timber harvest.[1] Other expenses that are necessary for timber sales but primarily serve other Forest Service missions, such as forest inventory and monitoring activities, were not included.

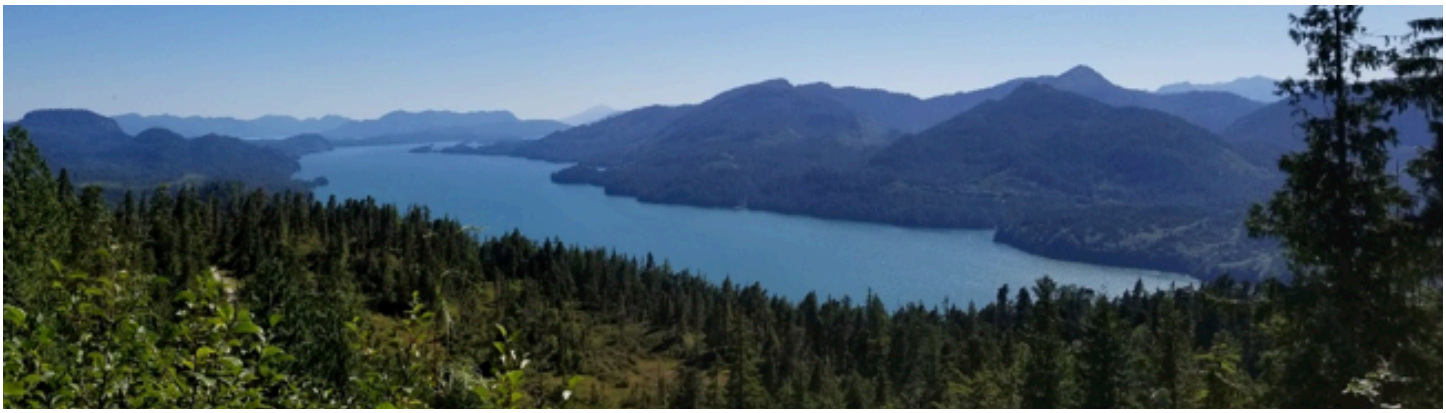
Information on USFS budget allocations and expenses in the Tongass is generally unavailable to the public. The USFS provided Tongass budget data to Taxpayers for Common Sense in response to several formal and informal information requests dating back to 2004.

Comparison and Discussion

The USFS' administration of timber sales throughout the National Forest System, and in the Tongass specifically, has been scrutinized for decades. The Government Accountability Office (GAO), an independent congressional watchdog, has published dozens of reports assessing various aspects of the USFS timber program including harvest levels, contract bidding, road construction, cost accounting systems, receipt distribution, reforestation, data deficiencies, and below-cost sales, among others.

In one of its first reports on the economics of USFS timber sales in 1984, the GAO found that 27 percent of sales in fiscal year (FY) 1981 and 42 percent of sales in FY 1982 were below-cost.[2] After increased Congressional scrutiny in the 1980s, GAO helped the USFS design a new accounting system to address severe deficiencies in the agency's collection and reporting of timber sale data—the Timber Sale Program Information Reporting System (TSPIRS).[3]

[1] U.S. Forest Service, *Tongass National Forest—Land and Resource Management Plan Amendment*. Final Environmental Impact Statement, Vol. II—Appendix C, Table C-1.
[2] U.S. General Accounting Office (now, Government Accountability Office) - GAO. RCED-84-96, "Congress Needs Better Information on Forest Service's Below-Cost Timber Sales." June 28, 1984. **https://www.gao.gov/products/RCED-84-96**
[3] U.S. GAO. AFMD-87-33, "TIMBER PROGRAM: A Cost Accounting System Design for Timber Sales in National Forests." April 21, 1987. **https://www.gao.gov/products/AFMD-87-33**



Carroll Inlet in the Tongass National Forest. Source: Wikimedia Commons

In 1988, the GAO reported that USFS timber sales had lost $22.1 million in FY1986,[4] roughly equivalent to $50.6 million in 2018 dollars. As its most recent estimate, the GAO reported in 2016 that Tongass timber sales had lost $11.4 million per year on average during the period FY2005-2014. The agency was careful to note, however, that its estimate excluded USFS roadbuilding costs.[5]

Like the GAO calculations in previous reports, this analysis represents a basic accounting of the Tongass timber program on a *cash* basis—reflecting what outlays are paid and receipts are collected in a given year. The profitability of a specific timber sale is more appropriately measured on an *accrual* basis—where the amounts spent to prepare and administer a timber sale over many years are matched against the receipts collected when the sold timber is eventually harvested. However, the USFS does not publicly release its financial data for each timber sale, making such analysis impossible.

Conducting a cash-flow analysis of the timber program instead can have significant limitations. Comparing the receipts collected from previous timber sales and spending for future sales in any one year can provide a skewed indication of timber sale profitability. Over a longer period, however, discrepancies between when expenses and receipts are tallied diminish, and a cash-basis accounting more accurately estimates the overall financial return from timber sales. By looking at timber receipts and program expenses over 20 years, the approach adopted in this report not only mirrors most previous attempts to quantify Tongass timber losses, but also provides a more accurate assessment of overall timber sale performance.

Lastly, given current efforts to exempt the Tongass National Forest from the 2001 National Roadless Area Conservation Rule ("Roadless Rule"),[6] roadbuilding costs will likely increase. The USFS constructs or reconditions roads to provide harvesters access to timber stands it sells. Covering roadbuilding costs improves the economics of a timber sale for logging companies, but also significantly increases the total costs of the USFS timber program. In fact, USFS spending on roads in the Tongass made up more than 40 percent of all timber sale expenses from FY1999 to FY2018.

The 2001 Roadless Rule prohibits new road construction and reconstruction in inventoried roadless areas with national forests, including 9.2 million acres in the Tongass. Exempting those acres from the rule in the future would allow the USFS to expand timber sales to new areas, which would require comparatively more road construction for timber access. This would only drive up USFS expenses and deepen taxpayer losses from Tongass timber sales.

[4] U.S. GAO. RCED-88-54, "TONGASS NATIONAL FOREST: Timber Provision of the Alaska Lands Act Needs Clarification." April 11, 1988. **https://www.gao.gov/products/RCED-88-54**

[5] U.S. GAO. GAO-16-456, "TONGASS NATIONAL FOREST: Forest Service's Actions Related to Its Planned Timber Program Transition." April 25, 2016. **https://www.gao.gov/products/GAO-16-456**
By excluding roadbuilding costs in its 2016 estimate, the GAO significantly understated the losses associated with Tongass timber sales.

[6] See TCS Comments to the USFS during the Roadless Rule Scoping Period. Available at: **https://www.taxpayer.net/energy-natural-resources/tcs-submits-comments-to-the-us-forest-service-on-its-roadless-rule-scoping/**

Tongass Timber Program: Receipts, Expenses, Losses (FY1999-2018)

($ in millions)

FISCAL YEAR	TIMBER VOLUME SOLD (MBF)	TIMBER RECEIPTS	TIMBER EXPENSES	NET RECEIPTS	TIMBER RECEIPTS: ($2018)	TIMBER EXPENSES ($2018)	NET RECEIPTS ($2018)
2018	9,211	$0.4	$18.1	**-$17.7**	$0.42	$19.07	**-$17.65**
2017	20,808	$1.0	$17.8	**-$16.7**	$1.04	$18.20	**-$17.16**
2016	13,535	$0.5	$18.5	**-$18.1**	$0.47	$19.40	**-$18.92**
2015	22,625	$0.3	$19.7	**-$19.5**	$0.29	$20.91	**-$20.62**
2014	105,523	$0.6	$22.4	**-$21.8**	$0.6	$23.8	**-$23.1**
2013	15,866	$0.6	$19.7	**-$19.1**	$0.6	$21.2	**-$20.6**
2012	52,483	$1.9	$21.5	**-$19.6**	$2.0	$23.5	**-$21.5**
2011	44,190	$3.3	$18.0	**-$14.8**	$3.7	$20.1	**-$16.5**
2010	45,632	$1.9	$22.3	**-$20.4**	$2.2	$25.7	**-$23.5**
2009	22,670	$0.6	$26.4	**-$25.7**	$0.7	$30.8	**-$30.1**
2008	5,351	$0.4	$23.5	**-$23.1**	$0.5	$27.4	**-$27.0**
2007	30,392	$0.3	$25.1	**-$24.8**	$0.3	$30.4	**-$30.1**
2006	85,007	$0.8	$27.9	**-$27.1**	$1.0	$34.8	**-$33.8**
2005	65,075	$0.4	$34.4	**-$34.0**	$0.5	$44.2	**-$43.7**
2004	87,072	**-$4.3**	$36.9	**-$41.2**	**-$5.7**	$49.1	**-$54.8**
2003	36,489	$2.0	$31.0	**-$29.0**	$2.7	$42.3	**-$39.6**
2002	24,372	$1.3	$33.4	**-$32.2**	$1.8	$46.7	**-$44.9**
2001	49,592	$1.8	$35.0	**-$33.2**	$2.6	$49.6	**-$47.1**
2000	170,329	$6.9	$23.8	**-$16.9**	$10.0	$34.7	**-$24.7**
1999	61,426	$5.3	$33.8	**-$28.5**	$8.0	$51.0	**-$42.9**
2009-2018 TOTAL	**362,544**	**$11.0**	**$204.4**	**-$193.4**	**$12.1**	**$221.8**	**-$209.7**
1999-2018 TOTAL	**977,649**	**$25.9**	**$509.4**	**-$483.5**	**$33.8**	**$632.0**	**-$598.2**

A Research Paper by

The Tongass National Forest and the Transition Framework: A New Path Forward?

NOVEMBER 2014

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November 2014

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Introduction

In 2010 the Forest Service announced a Transition Framework for the Tongass National Forest, proposing a "new path forward in the region that enhances economic opportunities to communities while conserving the Tongass National Forest."

This important announcement, from an agency historically focused on the production of old growth timber, recognized the decades-long decline of the timber industry in southeast Alaska and the subsequent rise of other economic sectors, such as tourism and fishing, which rely on intact and pristine Tongass National Forest resources.

The Transition Framework sought to support the well-being of the region's communities and economy by shifting to young growth harvests and restoration as well as investing more heavily in other program areas like recreation, wildlife, fish, and watershed protection.

This report examines whether such a transition has begun. It provides detailed budget and staffing information for the Tongass National Forest, examines how these resources were used programmatically, and reviews whether there has been a shift in budget and staffing in line with the proposed Transition Framework.

The report also explores whether Tongass National Forest resources now are being utilized to support significant and promising southeast Alaska economic sectors; and whether the Tongass National Forest timber program has moved beyond a historic emphasis on harvesting old growth timber and below-cost timber sales.

Executive Summary

In 2010 the Forest Service announced a new direction for the Tongass National Forest. Called the "Transition Framework," the Forest Service proposed a "new path forward in the region that enhances economic opportunities to communities while conserving the Tongass National Forest."

Four years since this commitment, it is fair to ask if a transition is in fact occurring, and whether it is improving economic opportunities for communities in southeast Alaska. To understand if change is taking place, this report examines the Tongass National Forest budget and staffing, as well as the economy of southeast Alaska and proposed timber sales.

Summary Findings:

- The Tongass National Forest has made no meaningful shift in its budget and staff allocations since announcing the Transition Framework in 2010.

- The Tongass National Forest continues to invest disproportionately in a timber industry that provides relatively few jobs while neglecting more economically important industries to the region such as tourism and fishing.

- The Tongass National Forest remains predominantly focused on old growth harvests at a significant cost to U.S. taxpayers.

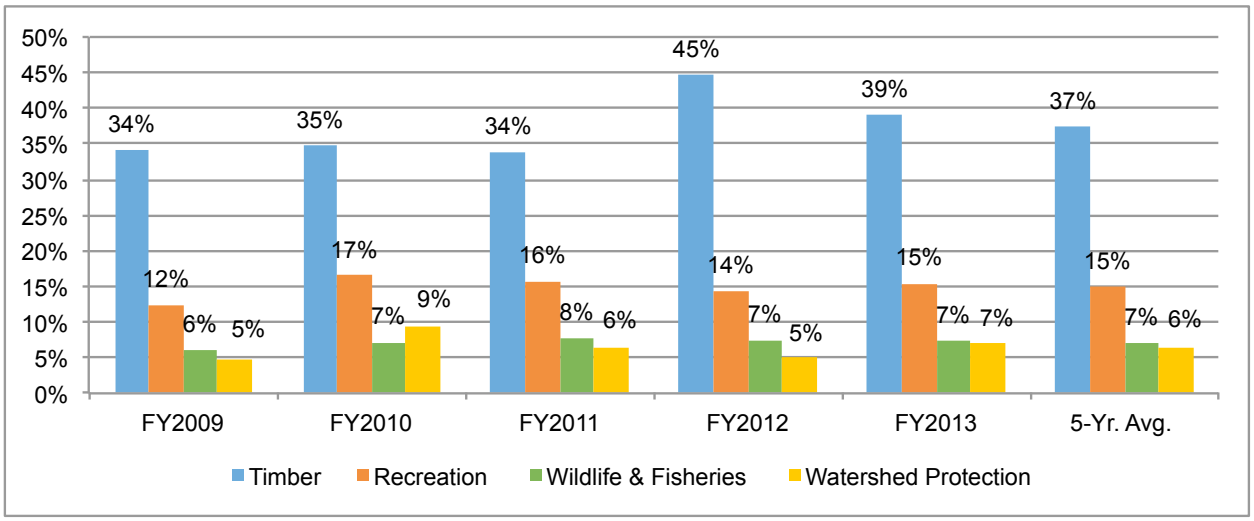
More Detailed Findings:

<u>Tongass National Forest Has Failed to Shift Resources from Timber Program</u>

The Tongass National Forest budget and staffing were examined in detail because they provide an indicator of agency priorities. Forest Service spending on timber continues to account for the largest portion of the Tongass National Forest budget—roughly 34 to 45 percent of the budget. Since the transition was announced, expenditures on timber production show no particular trend, though timber's share of the overall budget has increased. Despite overall staff cuts on the Tongass National Forest from FY2011 to FY2013, timber FTEs have largely held steady.

Recreation budget expenditures fell during the analysis period, though they were partially offset by increases in recreation receipts. In 2014 the Tongass National Forest announced its intention to enact future budget cuts in the recreation program—despite growing public demand for recreation activities on Forest Service lands. From FY2011 to FY2013, recreation staff declined more than any other major program on the Tongass National Forest, falling from 60 to 47 FTEs.

Tongass National Forest Budget by Program, Share of Total, FY2009 to FY2013 and 5-Yr. Avg.

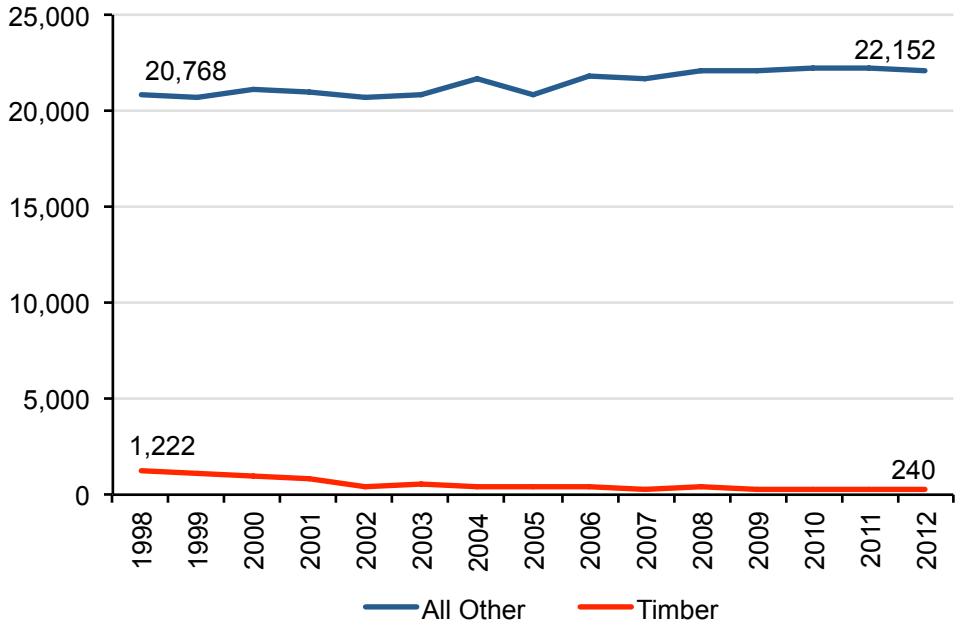


Source: U.S. Forest Service

Tourism and Fishing, Rather than Timber, Drive Southeast Alaska Economy

The southeast Alaska economy is no longer driven by the timber industry, which has steadily declined as a share of all private sector jobs. From 1998 to 2012, according to the U.S. Department of Commerce, regional timber jobs declined by more than 80 percent (-982 jobs), while all other private sector jobs grew by nearly seven percent (+1,384 jobs).

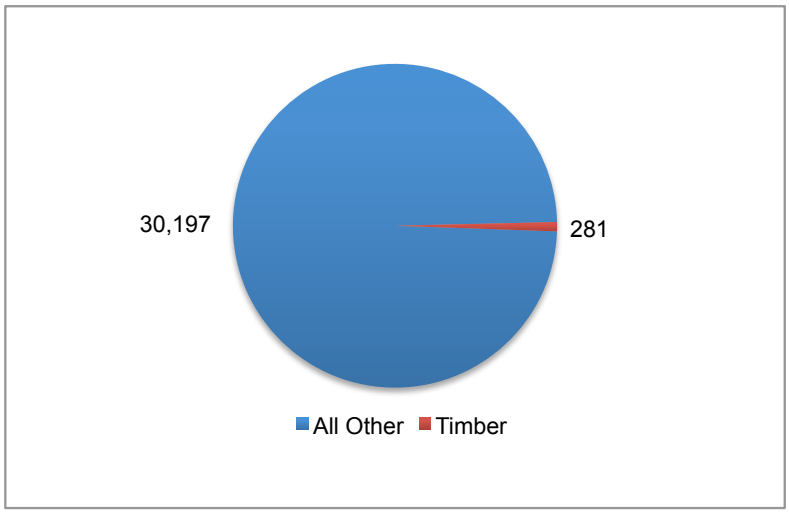
Private Sector Employment Trends, Timber vs. All Other, Southeast Alaska, 1998 to 2012



Source: County Business Patterns

In addition to a declining number of jobs, economic data from all sources indicate that timber industry employment in southeast Alaska today is small proportion of the regional economy. According to the U.S. Department of Commerce, regional timber industry jobs accounted for 1.1 percent of total private employment in 2012. An additional 41 self-employed individuals worked in the timber industry in 2012, or 0.5 percent of all self-employed people in the region—for a combined 0.9 percent of all private jobs and self-employed in southeast Alaska.

Private Sector Timber Jobs & Self-Employed vs. All Other Private Sector Jobs & Self-Employed, Southeast Alaska, 2012



Source: County Business Patterns, Nonemployer Statistics

By comparison, the two largest private sectors in the region's economy—the tourism and fishing industries—are growing. Southeast Conference reports that in 2013:

- The southeast Alaska visitor industry employed 6,707 people, is growing (+332 jobs, 5.2% change from 2012 to 2013), and accounted for 15 percent of total regional employment.

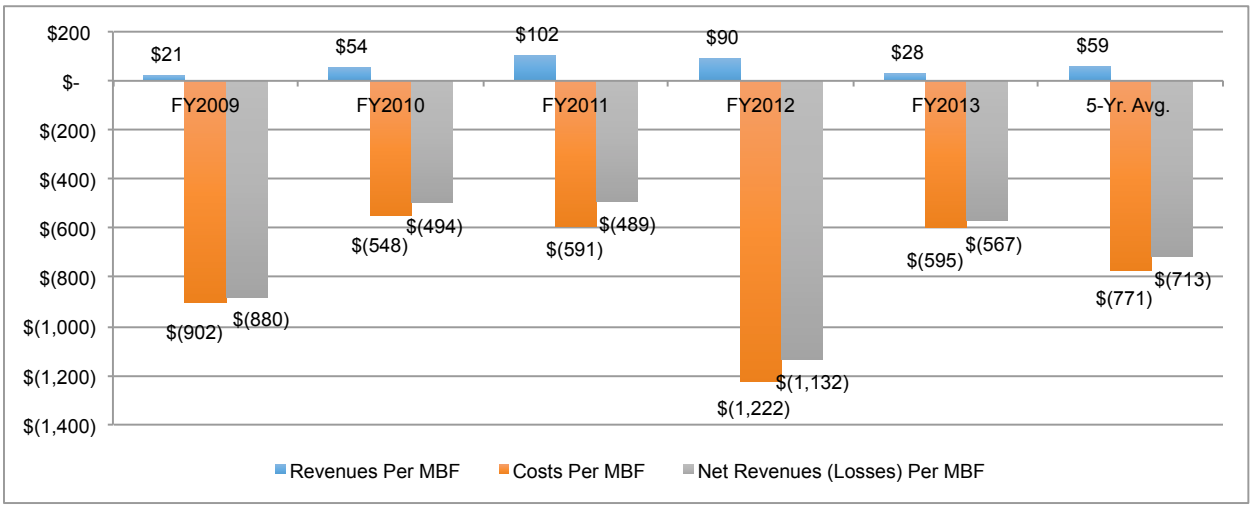
- The southeast Alaska seafood industry employed 4,252 people, is growing (+148 jobs, 3.6% change from 2012 to 2013), and accounted for nine percent of total regional employment.

The tourism and fishing industries both rely on land and water resources managed by the Tongass National Forest and directly benefit from enhancements to natural resource health, along with services and infrastructure provided by the Forest Service. Activities that degrade the pristine nature of the land, such as old growth harvesting, are likely to have adverse impacts on these important regional industries.

Narrow Focus on Old Growth Timber Sales with Subsidies Persists

Since the Transition Framework announcement, 87 percent of timber sales proposed by the Tongass National Forest have been old growth by volume. Timber sales have consistently cost much more to prepare, access, and administer than the federal government receives for the timber. The net loss to the U.S. taxpayer has ranged from $489 to $1,132 per thousand board feet—or more than $100 million—during these years.

Tongass National Forest Timber Sale Revenues and Costs, FY2009 to FY2013 and 5-Yr. Avg.



Source: Costs are from the budget table in this report; revenues and cut volume are from U.S. Forest Service Cut and Sold reports.

Earlier this year, the Forest Service awarded a 97-million board foot timber sale contract as part of the Big Thorne Project that was reportedly worth more than $6 million. But at the FY2013 average Tongass National Forest cost of $595 per MBF, the preparation and administration costs of the sale would be more than $57 million, with a net cost to the U.S. Treasury of $50 million—a nearly 10:1 expense-revenue loss ratio.

In summary, the allocation of scarce Tongass National Forest budget and staff resources to a minor economic sector represents a large opportunity cost for the regional economy: these resources could be repurposed, using the logic of the Transition Framework, to larger and more vibrant industries that support more jobs and communities in southeast Alaska. The casualties of this failure to seize a more promising economic trajectory are southeast Alaska's businesses and communities, as well as the U.S. taxpayer.

Methods

Forest Service Data

We requested budget and staffing data for the Tongass National Forest from the Forest Service's Region 10 Regional Office for the past five fiscal years—FY2009 through FY2013. In response, the Regional Office required the submission of two Freedom of Information Act requests for these and supplemental data.

We received FY2009 through FY2013 budget data. We also received FY2014 data, but these data were preliminary and incomplete, and thus are not used in this analysis. In addition, because the budget data did not include recreation-related mandatory spending accounts (as discussed below), we identified recreation fees retained and used by the Tongass National Forest in its annual *Recreation Program Fee Accomplishment Report* and included these funds in the Total Budget as well as under the Recreation Accounts in calculations. Be aware that the Total Budget exceeds the total of the accounts shown, since many programs (*e.g.*, land management planning, wildland fire management) are not shown in the summary table in this report.

In one fiscal year (FY2009) the Tongass National Forest budget was significantly larger than in subsequent years. This may have been due to short-term or one-time American Recovery and Reinvestment Act funding (see CRS Report 40537), but this was not verified. Requests to the Region 10 Regional Office for clarification and review on this and other topics were not responded to.

As noted, we also requested workforce data for the past five fiscal years—FY2009 through FY2013. We received data only for three fiscal years (FY2011 through FY2013). The data are measured in FTEs, full-time equivalents; this aggregates part-time and temporary employees to the equivalent of full-time employees, to reflect total workloads. The data include total FTEs for the Tongass National Forest and for each of the categories used for the budget allocation.

Budget Explanation

A significant portion of the Tongass National Forest annual budget is from mandatory spending accounts. As a result, it is important to understand the distinctions between annual appropriations and mandatory spending.

All federal spending comes from appropriations enacted by Congress. The majority is from annual appropriations, enacted in one of 10 annual appropriations acts. Forest Service annual funds are provided in the Interior, Environment, and Related Agencies Appropriations. The Forest Service funds are provided in four major accounts: Research; State & Private Forestry; National Forest System; and Construction; plus several minor accounts. Within each account, Congress provides details for the spending, both through budget line items and through written direction. For the Forest Service, such congressional guidance rarely provides funding direction for specific national forests. The agency's Research Branch administers research appropriations to research stations. State & Private Forestry funds are for assistance programs administered by the Forest Service Regional Offices, except in the Northeast Area.

National Forest System and Construction appropriations are provided in numerous budget line items to each national forest through the regional offices. In general, the budget line items correspond to the various agency programs, such as timber, recreation, range management, watershed and wildlife protection, etc. A comprehensive list and description of each budget line item is included in the agency's annual budget justifications (available through the Forest Service's website, http://www.fs.fed.us/aboutus/budget/).

In addition to the annual appropriations, Congress has enacted laws that provide funding for specific purposes, funded from specified sources. These are commonly called permanent appropriations or mandatory spending. The term "trust fund" is also used occasionally, but this often leads to misconceptions, since in federal parlance, "trust fund" indicates the disposition of interest on the balance in the account, and does not indicate whether the money is available with or without an annual appropriation.

The Forest Service has numerous mandatory spending accounts. They are shown in the agency's annual budget justifications to Congress (see above), although this is not required since the accounts do not need annual appropriations. (The history and purposes of Forest Service mandatory spending accounts are described in more detail in CRS Report RL30335.) The Forest Service often includes some, but not all, of its mandatory spending accounts in reported budget data.

Many of the Forest Service mandatory spending accounts have been funded from timber sale receipts; their magnitude and relative importance have declined with the widespread decrease in Forest Service timber sales since 1990, but many still provide substantial funds for agency operations. In recent years, Congress has created mandatory spending accounts funded from recreation fees, and their magnitude and importance have been increasing.

Program Categories

The categories we use to show the Tongass National Forest budget and staffing allocations generally include more than one account—one or more budget line items of annual appropriations and one or more mandatory spending accounts. For a description of acronyms that follow, see the Appendix at the end of this report.

Timber includes two budget line items—NFTM, Forest Products; and CMRD, Roads Capital Improvements & Maint—and three mandatory spending accounts—CWKV and CWK2, K-V Projects; RTRT, the Reforestation Trust Fund; and SSSS, Salvage Sales. Forest Products is the budget line item used to pay for timber sale preparation and administration. Road Construction and Maintenance is substantially for timber access. (See below) To the extent that some road construction and reconstruction is for other purposes (recreation, administration, etc.), this may overstate total timber expenditures on the Tongass National Forest. The Knutson-Vandenberg (K-V) Fund is a mandatory spending account funded from timber sale receipts for reforestation, timber stand improvements, and mitigation and enhancement of other resources in timber sale areas. The Reforestation Trust Fund is another mandatory spending account, funded from tariffs on imported wood products for reforestation and timber stand improvements. The Salvage Sale Fund is a third timber-related mandatory spending account. It is funded from the receipts of designated salvage sales for preparing and administering further salvage sales.

Some would doubtless dispute all these costs as entirely timber-related. For example, roads are used for other purposes, and thus some would attribute road costs to other resources. However, timber has been the primary reason for road building in the national forests; the primary purpose for road construction, reconstruction, and maintenance is no longer reported, but even in the years of relatively low timber sale levels since 1990, more than 90 percent of new roads and more than 80 percent of road reconstruction was for timber removal. (CRS Report 97-706)

Similarly, attributing reforestation costs to current timber sales could be disputed. The U.S. Internal Revenue Service (IRS) generally prohibits private landowners from such expensing of reforestation costs, and requires them to capitalize the costs for deduction from future income. However, the National Forest Management Act of 1976 (NFMA; 16 U.S.C. 1600, *et al*.) mandates reforestation within five years of timber harvesting in the national forests, making reforestation a requirement of harvesting. Furthermore, private landowners would expense reforestation costs if the IRS allowed it, because it would reduce taxable income without altering cash flow. Thus, it seems appropriate to include reforestation as a cost of timber harvesting.

Recreation includes four budget line items—NFRW, Recreation, Heritage, & Wilderness; FDRF, Deferred Recreation—Recreation; CMTL, Trails Capital Improvements & Maint; and Recreation Receipts. The first three of these accounts clearly relate to various aspects of recreation in the national forests. The fourth, Recreation Receipts, is not shown in the budget data received from the Regional Office, but is clearly both an income from and expenditure on recreation management activities. As noted above, these data are from the annual Tongass National Forest *Recreation Program Fee Accomplishment Report.*

Wildlife and Fish includes one budget line item—NFWF and NFWF Subsistence, Wildlife & Fisheries Habitat Mgt. NFWF Subsistence, which is combined with NFWF in the Tongass National Forest budget allocations, provides support for Native American subsistence uses of wildlife and fish.

Watershed Protection includes two budget line items—NFVW, Vegetation & Watershed Management; and CMLG, Legacy Roads &Trails. The first item includes activities to protect and improve watershed conditions, such as reforesting sites after wildfires and landslides. Legacy Roads and Trails is an account created by Congress to provide for reconstructing or obliterating roads and trails that were in poor condition due to lack of planning (*e.g.*, roads created by recreation users, without planning and engineering) or inadequate maintenance.

Examining the Legacy Roads &Trails retrospectively, it could be considered a timber account, since many of the roads were used for timber harvesting. However, examining the line item prospectively, it is a watershed protection account, since the intent is to halt or prevent watershed damages from roads (and bridges and culverts) in poor condition. To the extent that timber roads are the cause of poor road conditions, the inclusion of Legacy Roads funding as watershed protection understates the expenditures related to timber harvesting in the Tongass National Forest.

Other Accounts are also included in the Tongass National Forest budget allocations, but are not shown in the budget table in this report. Some of these accounts are for other resource purposes

(*e.g.*, NFMG, Minerals & Geology Management; and NFRG, Grazing Management) or for purposes that support all resources (*e.g.*, NFIM, Inventory & Monitoring; CMFC, Facilities Capital Improvements & Maint; and WFWF, Wildland Fire Management). Hence, the total annual Tongass National Forest budget allocation exceeds the sum of timber, recreation, wildlife and fish, and watershed protection.

The Tongass National Forest budget allocation data do not show all the Forest Service expenditures on the Tongass National Forest. The budget allocation tables in this report include many, but not all, of the mandatory spending accounts. The largest timber-related accounts—the K-V Fund, the Salvage Sale Fund, and the Reforestation Trust Fund—are shown, but other timber-related accounts—Cooperative Deposits, from purchasers for post-sale road restoration; and Brush Disposal, from timber purchasers to dispose of slash (tree tops and limbs, and unusable trees) from the sale—are not presented in the budget allocations. It is possible that the brush disposal account is not used on the Tongass National Forest, since its use is not required, but the Forest Service has always treated brush disposal funds differently from other accounts, even though the authorizing language is quite similar. On the other hand, cooperative road (and other cooperative) deposits of $264,711 are shown under receipts in the "Tongass Financials" table on page 11 of the *State of the Tongass National Forest FY2013* (USFS Report R10-MB-786), but they are not shown in the budget allocation tables. (The *State of the Tongass* report is not used for this budget analysis because it shows deposits to mandatory spending accounts as revenues, but does not show expenditures from any of these accounts as expenses.) Thus, it seems likely that the Tongass National Forest budget presented in this report understates timber expenditures.

In addition, three recreation mandatory spending accounts were not included in the budget allocation tables received from the Forest Service. The Federal Land Recreation Enhancement Act (FLREA) authorizes the Forest Service (and other federal agencies) to collect and retain certain recreation fees, and spend them on certain types of projects. (See CRS Report RL33730) Because of their significance—more than $3 million collected annually since FY2010—some estimate of the relevant expenditures was warranted. For this report, recreation receipts shown in the annual Tongass National Forest *Recreation Program Fee Accomplishment Reports* were included to estimate the expenditures from these mandatory spending accounts.

Fiscal Year

The federal government fiscal year is the accounting period that begins on October 1 and ends on September 30. The fiscal year is designated by the calendar year in which it ends; for example, FY2013 begins on October 1, 2012 and ends on September 30, 2013.

Regional Definition

In this report "southeast Alaska" refers to the following Boroughs and Census Areas: Haines Borough AK, Hoonah-Angoon Census Area AK, Juneau City and Borough AK, Ketchikan Gateway Borough AK, Petersburg Census Area AK, Prince of Wales-Hyder Census Area AK, Prince of Wales-Outer Ketchikan Census Area AK, Sitka City and Borough AK, Skagway Municipality AK, Skagway-Hoonah-Angoon Census Area AK, Wrangell City and Borough AK, Wrangell-Petersburg Census Area AK, and Yakutat City and Borough AK.

The Evolution of the Tongass National Forest "Transition Framework"

On May 26, 2010 Agriculture Secretary Tom Vilsack proposed to "chart a new path forward in the region that enhances economic opportunities to communities while conserving the Tongass National Forest." The Secretary announced a "Transition Framework" designed to create jobs and community stability through a new emphasis on "forest restoration, renewable energy, tourism and recreation, subsistence, fisheries, and mariculture." He also proposed "a new approach to forest management … [that] will move timber harvesting into roaded, young growth areas and away from old-growth timber in roadless areas." (USDA 2010)

Regional Forester Beth Pendleton added that the Transition Framework would be designed to diversify the economy of southeast Alaska and above all to "develop a region-wide job creation platform." She went on to identify additional goals: "promote small business creation, expansion, and retention; improve access to capital; create quality jobs and sustainable economic growth; promote job training and educational opportunities; and maximize a forest restoration economy and by-product use."

Later in 2010 the Juneau Economic Development Corporation (JEDC), a partner in the evolving Transition Framework and under contract with the Forest Service, launched the Southeast Alaska Cluster Initiative to engage key interests and outline a business cluster approach to regional economic development. JEDC completed an asset map for the region and identified cluster action initiatives that the Forest Service and others could support in the region. (JEDC)

In 2011, after an extensive consultation process in the region, the Forest Service released a report refining the direction of Transition Framework efforts. An interagency team recommended initiatives that cross agency boundaries, support agency priorities, and are realistically achievable. These initiatives were organized around the concept of industry clusters and were focused on ocean products, with an emphasis on watershed restoration and mariculture; visitor services supporting independent traveler opportunities, new land and water trails, and guided access for forest resources; forest products with an emphasis on second-growth harvests and more efficient use of wood waste; and renewable energy, including the development of a renewable energy plan and projects focused on woody biomass. (USDA 2011)

In 2013 the Forest Service released a "Leader's Intent" document on young growth management to clarify how the Tongass National Forest would transition its timber program to a "young-growth forest products industry" and integrate this with "restoration, collaboration, and forest stewardship to support ecological, community and economic health." The document, signed by Region 10 and Tongass National Forest leadership, recognized constraints in making a timber transition and offered no firm deadlines. Under the heading "Actions," it proposed to "Offer increasing annual volumes of young growth timber and gradually reduce old growth harvests…." (USDA 2013)

In 2013 the Forest Service also released an update on Tongass National Forest economic diversification strategies in southeast Alaska. The report cited new cluster initiatives around mining, and research and development; and also proposed an innovation summit; a biomass initiative; and a "multi-year integrated plan for active forest management activities, including old and young growth timber sales, ecological restoration and enhancement, and road work." (USDA 2013)

In 2014 the Forest Service released a "Leader's Intent" document on recreation, wilderness, and heritage programs that acknowledged that outdoor recreation continues to grow in the region but indicated that the Forest Service would be cutting back on its investments in recreation and trail infrastructure due to budget constraints starting in FY2015. (USDA 2014)

Budget and Staffing Analysis

This section reviews findings from the analysis of the Tongass National Forest's budget and staffing during the Transition Framework period and evaluates whether discernable changes were made in either budgets or staffing.

Budget Analysis

The table and figure below summarize findings from the budget analysis.

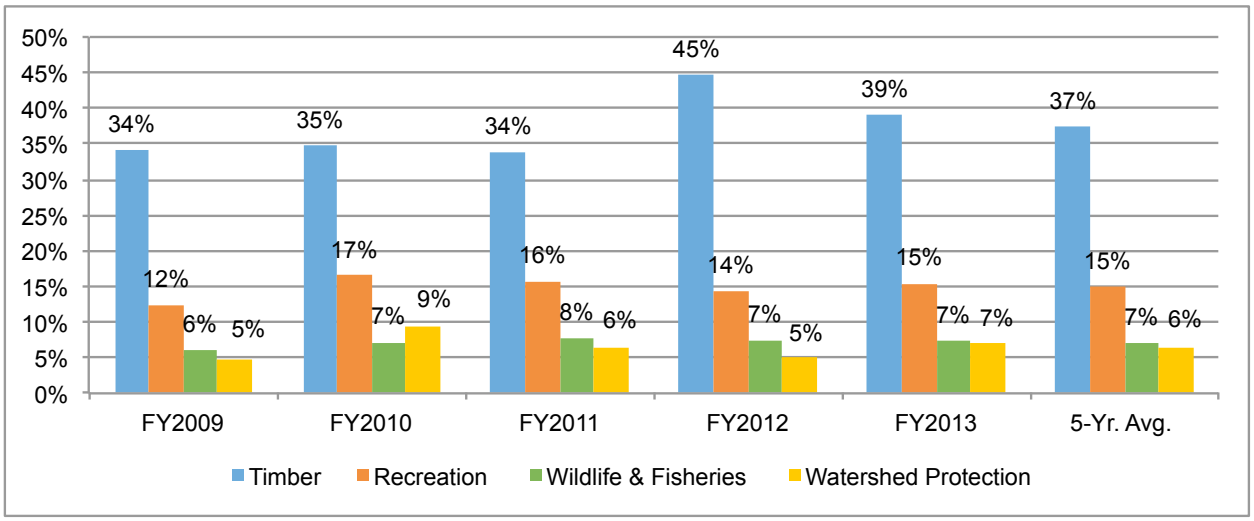
Tongass National Forest Budget by Program, FY2009 to FY2013 and 5-Yr. Avg.

Fiscal Year	FY2009	FY2010	FY2011	FY2012	FY2013	5-Yr. Avg.
Total Budget	**$74,773,208**	**$55,826,372**	**$ 56,841,568**	**$56,850,896**	**$55,302,207**	**$ 59,918,850**
Timber Accounts						
NF Forest Products [NFTM]	$14,179,865	$ 11,307,823	$ 11,609,957	$10,858,311	$10,621,183	$ 11,715,428
K-V projects [CWKV + CWK2]	$ 95,000	$ 98,000	$ 207,050	$ 164,730	$ 442,000	$ 201,356
Reforestation Trust Fund [RTRT]	$ 1,382,107	$ 1,434,000	$ 1,420,172	$ 1,421,253	$ 1,567,942	$ 1,445,095
Salvage Sales [SSSS]	$ 200,000	$ 200,000	$ 500,000	$ 800,000	$ 789,000	$ 497,800
Subtotal	**$15,856,972**	**$13,039,823**	**$ 13,737,179**	**$13,244,294**	**$13,420,125**	**$ 13,859,679**
Timber-related programs						
Roads [CMRD]	$ 9,732,200	$ 6,363,750	$ 5,549,666	$12,214,050	$ 8,208,324	$ 8,413,598
Subtotal	**$ 9,732,200**	**$ 6,363,750**	**$ 5,549,666**	**$12,214,050**	**$ 8,208,324**	**$ 8,413,598**
Timber Total	**$25,589,172**	**$19,403,573**	**$ 19,286,845**	**$25,458,344**	**$21,628,449**	**$ 22,273,277**
Timber Share	**34%**	**35%**	**34%**	**45%**	**39%**	**37%**
Recreation Accounts						
Recreation & Wilderness [NFRW]	$ 5,015,500	$ 4,249,015	$ 4,086,561	$ 3,875,730	$ 3,775,277	$ 4,200,417
Deferred Maint. Recreation [FDRF]		$ 731,201				$ 146,240
Trails [CMTL]	$ 1,987,785	$ 1,251,374	$ 1,650,300	$ 1,284,095	$ 1,271,005	$ 1,488,912
Recreation Receipts	$ 2,312,532	$ 3,005,430	$ 3,245,632	$ 3,036,745	$ 3,516,487	$ 3,023,365
Recreation Total	**$ 9,315,817**	**$ 9,237,020**	**$ 8,982,493**	**$ 8,196,570**	**$ 8,562,769**	**$ 8,858,934**
Recreation Share	**12%**	**17%**	**16%**	**14%**	**15%**	**15%**
Wildlife and Fish Accounts						
W & F [NFWF & NFWF Subsistence] Total	**$ 4,550,435**	**$ 4,012,222**	**$ 4,405,136**	**$ 4,247,316**	**$ 4,088,231**	**$ 4,260,668**
Wildlife & Fisheries Share	**6%**	**7%**	**8%**	**7%**	**7%**	**7%**
Watershed Protection Accounts						
Vegetation & Watershed [NFVW]	$ 2,701,736	$ 2,706,380	$ 2,963,618	$ 2,660,900	$ 2,931,650	$ 2,792,857
Legacy roads & trails [CMLG]	$ 896,000	$ 2,503,870	$ 683,773	$ 146,230	$ 926,180	$ 1,031,211
Watershed Protection Total	**$ 3,597,736**	**$ 5,210,250**	**$ 3,647,391**	**$ 2,807,130**	**$ 3,857,830**	**$ 3,824,067**
Watershed Protection Share	**5%**	**9%**	**6%**	**5%**	**7%**	**6%**

Source: U.S. Forest Service

Note: This table does not display Regional Office budget allocations that support timber, even though the Tongass National Forest has accounted for 90 percent or more of the timber harvested in Region 10, which includes only the Tongass and Chugach national forests.

Tongass National Forest Budget by Program, Share of Total, FY2009 to FY2013 and 5-Yr. Avg.



Source: U.S. Forest Service

The results show that timber expenditures account for the largest share of the Tongass National Forest budget in all years. The total budget was $75 million in FY2009 and $55 million to $57 million annually for FY2010 through FY2013. The total budget five-year average was $60 million. Timber expenditures ranged from $19 million to $26 million during the five years, accounting for 34 percent (FY2009 and FY2011) to 45 percent t (FY2012) of the total budget. Timber expenditures accounted for 37 percent of total on average during the five-year study period.

Recreation, wildlife and fish, and watershed protection combined accounted for less of the total budget than timber for the entire period FY2009 to FY2013. Recreation expenditures ranged from $8 million to $9 million, 12 percent to 17 percent of the total. Wildlife and fish expenditures averaged about $4 million annually, 6 percent to 8 percent of the total. Watershed protection expenditures ranged from $3 million to $5 million, 5 percent to 9 percent of the total.

These three non-timber categories aggregated to $15 million to $18 million annually. At their peak in FY2010, they accounted for 33 percent of the Tongass National Forest budget, only a little less than the 35 percent of the Tongass National Forest budget in that year's relatively low timber expenditures; the difference was less than $1 million. In FY2012, however, the difference was much greater, with the three non-timber categories accounting for only 27 percent of the Tongass National Forest budget compared to 45 percent for timber expenditures; the difference was more than $10 million in FY2012.

FY2009 may be an outlier as the total Tongass National Forest budget in that year, $75 million, was $18 million to $20 million (about 25%) higher than the subsequent years. It is unknown whether this was because of additional American Recovery and Reinvestment Act funding in FY2009 (see CRS Report 40537), or if this is part of a longer-term trend; additional data and further analysis would be needed to make such an assessment.

Looking at the five-year period does not show a significant change for most categories of expenditures. For timber expenditures, the two highest years were FY2009 and FY2012, with the lowest timber expenditures in FY2010 and FY2011; this shows no particular trend. Similarly, wildlife and fish, and watershed protection expenditures show no clearly identifiable rising or falling trend.

For recreation expenditures, it is worth distinguishing between changes in budget allocations and recreation receipts. Recreation budget expenditures fell by $2 million from FY2009 to FY2013. This downward trend was partially offset by increases in recreation receipts paid by forest users. The budget cutbacks are consistent with language from the agency's 2014 leader's intent document that indicates the Tongass National Forest will be cutting the recreation budget, despite increasing demand for Tongass National Forest recreation resources.

These budget findings show no evidence of a transition in Tongass National Forest priorities. The timber program remains the largest program, larger than the other program areas combined for all years. Recreation cutbacks in the budget have been partially offset by increases in retained receipts from users. As we will see below, these budget commitments are out of step with the economy of southeast Alaska and opportunities for the Tongass National Forest to contribute to expanded economic opportunities in the region.

Staffing Analysis

The table and figure below summarize findings from the staffing analysis.

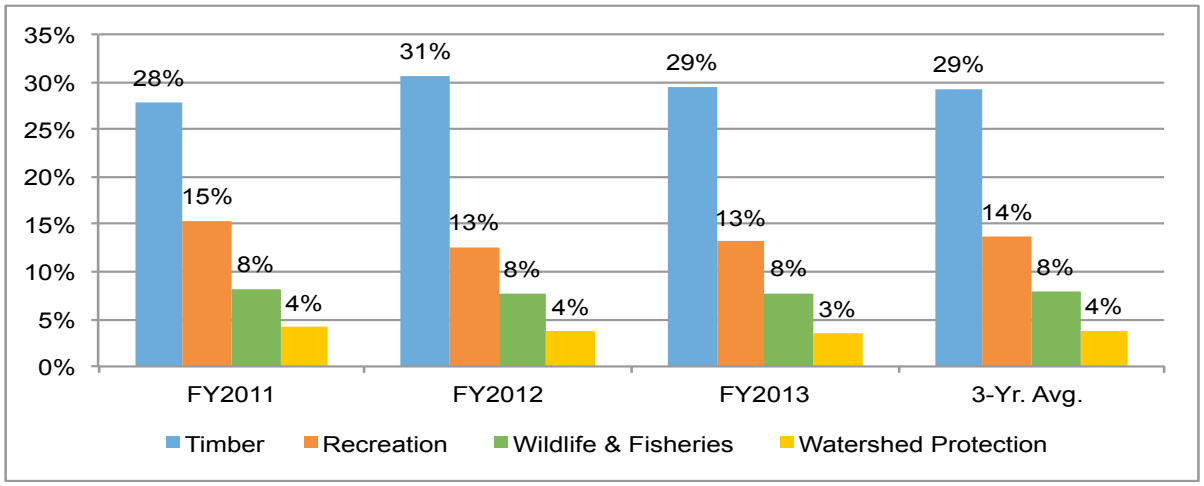
Tongass National Forest Staffing (FTEs) by Program, FY2011 to FY2013 and 3-Yr. Avg.

Fiscal Year	FY2011	FY2012	FY2013	3-Yr. Avg.
FTE Total	**392**	**368**	**356**	**372**
Timber Accounts				
NF Forest Products [NFTM]	85.6	82.4	78.3	82.1
K-V projects [CWKV]	0.5	0.8	0.8	0.7
Reforestation Trust Fund [RTRT]		2.7	2.6	1.8
Salvage Sales [SSSS]	2.5	6.3	5.4	4.8
Timber-related programs				
Roads [CMRD]	20.5	20.4	17.8	19.6
Timber Total	**109.1**	**112.6**	**104.9**	108.9
Timber Share	**28%**	**31%**	**29%**	**29%**
Recreation Accounts				
Recreation & Wilderness [NFRW]	44.1	34.8	34.8	37.9
Deferred Maint. Recreation [FDRF]	1.2	0.0	0.0	0.4
Trails [CMTL]	14.8	11.5	11.9	12.8
Recreation Total	**60.2**	**46.3**	**46.7**	51.1
Recreation Share	**15%**	**13%**	**13%**	**14%**
Wildlife and Fish Accounts				
W & F [NFWF] Total	**32.0**	**28.4**	**27.6**	29.3
Wildlife & Fisheries Share	**8%**	**8%**	**8%**	**8%**
Watershed Protection Accounts				
Vegetation & Watershed [NFVW]	15.7	13.1	12.0	13.6
Legacy roads & trails [CMLG]	0.5	0.4	0.4	0.4
Watershed Protection Total	**16.2**	**13.5**	**12.4**	14.0
Watershed Protection Share	**4%**	**4%**	**3%**	**4%**

Source: U.S. Forest Service

Note: This table does not display Regional Office staffing allocations that support timber, even though the Tongass National Forest has accounted for 90 percent or more of the timber harvested in Region 10, which includes only the Tongass and Chugach national forests.

Tongass National Forest Staffing by Program, Share of Total, FY2011 to FY2013 and 3-Yr. Avg.



Source: U.S. Forest Service

The results of the staff analysis are similar to those of the budget analysis. Timber is the most significant Tongass National Forest workforce commitment for all years, accounting for 105 to 113 FTEs annually for the three fiscal years—ranging from 28 percent to 31 percent of the total. This is a smaller share of the total Tongass National Forest staffing than is timber's share of the Tongass National Forest budget. The factors causing this difference probably include contracting for timber sale support (*e.g.*, some road work and some required environmental analyses) and that most of the mandatory spending accounts excluded from the budget allocation tables are not timber-related accounts. Timber accounted for 29 percent of all FTEs on average during the three-year study period.

Recreation staffing was smaller, at 60 FTEs in FY2011, 46 FTEs in FY2012, and 47 FTEs in FY2013. This ranges from 13 percent to 15 percent of the total Tongass National Forest staffing, roughly the same proportion as recreation's share of the Tongass National Forest budget when the recreation receipts are included. While the recreation staffing share of total remains consistent, the absolute decline in FTEs, from 60 in FY2011 to 47 in FY2013, shows that as the overall workforce on the Tongass National Forest shrank the recreation programs absorbed the largest losses.

Wildlife and fish staffing, at 28 to 32 FTEs, accounted for about 8 percent of the total Tongass National Forest staffing, also comparable to the wildlife and fish share of the total Tongass National Forest budget. Watershed protection staffing was much smaller, at 12 to 16 FTEs. This is only about 4 percent of the total Tongass National Forest staffing, smaller than the watershed protection share of the Tongass National Forest budget. Contracting for watershed protection work could explain the relatively smaller staff share.

These staff findings show no evidence of a transition in Tongass National Forest commitments. With only three fiscal years of FTE data, it is difficult to assess staff trends by workforce category. However, it does not appear there was a significant shift in FTE allocations across programs from FY2011 to FY 2013. The exception is the recreation program, which saw the largest declines. Timber remained the largest staff commitment, larger than all other programs combined during the three years.

Economic and Fiscal Analysis

This section reviews key southeast Alaska economic sectors for comparison with Tongass National Forest budget and staffing priorities, and assesses whether the Tongass National Forest has moved beyond an emphasis on old growth timber and below-cost timber sales.

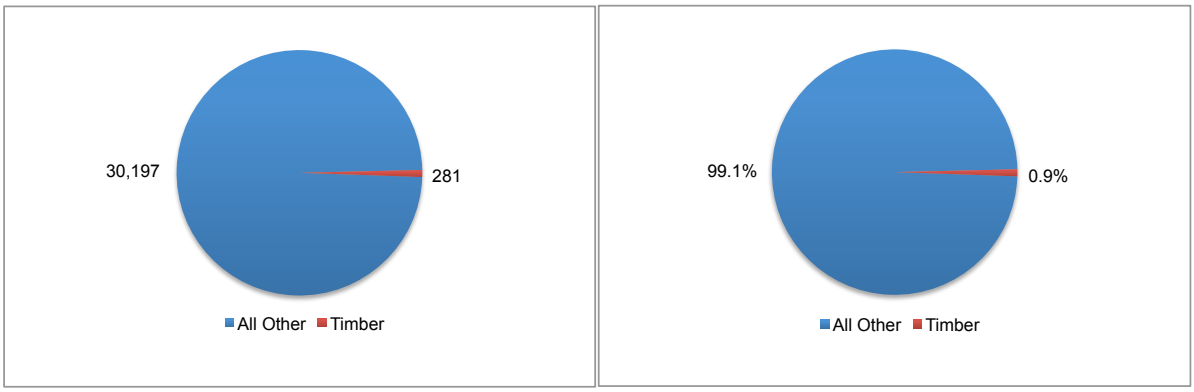
Economic Analysis

Evaluation of the Tongass National Forest budget and staffing shows that timber production is the largest resource management account, and is larger than the Tongass National Forest budget and staffing dedicated to recreation, wildlife and fish, and watershed protection combined. This allocation of funding and effort is at odds with the regional economy of southeast Alaska, where the timber industry is a small source of employment, and two of the largest sectors of the economy are the tourism and fishing industries.

The few studies of the economic impacts of Tongass National Forest management and activities are outdated and focus on timber production. For example, *Economic Growth and Change in Southeast Alaska* (USFS Report PNW-GTR-611) was published a decade ago in 2004. Many Forest Service studies and projections of the timber supply and timber industry in southeast Alaska appear to be based on sawmill capacity in 2003 and 2004. (See draft U.S. Forest Service studies, http://www.fs.fed.us/pnw/pubs/brackley/index.shtml.) These studies are thus based on the historic timber industry, not on current timber utilization by the existing industry.

However, the timber industry in southeast Alaska has clearly declined substantially in the past two decades. One industry source (Resource Development Council) stated that there were 457 people employed in forestry and sawmill jobs in all of Alaska in 2011, down 90 percent from the 4,600 jobs in 1990. A Forest Service source (*Economic Analysis of Southeast Alaska*) reported 265 timber-related jobs in Southeast Alaska in 2008. The Southeast Conference's most recent assessment (*Southeast Alaska by the Numbers 2014*) estimates the timber industry lost 3,500 jobs in the 1990s, and reports that the industry supported 270 jobs and 55 self-employed individuals in 2013, a two percent decline from the previous year and less than one percent of total regional employment in 2013. (Southeast Conference)

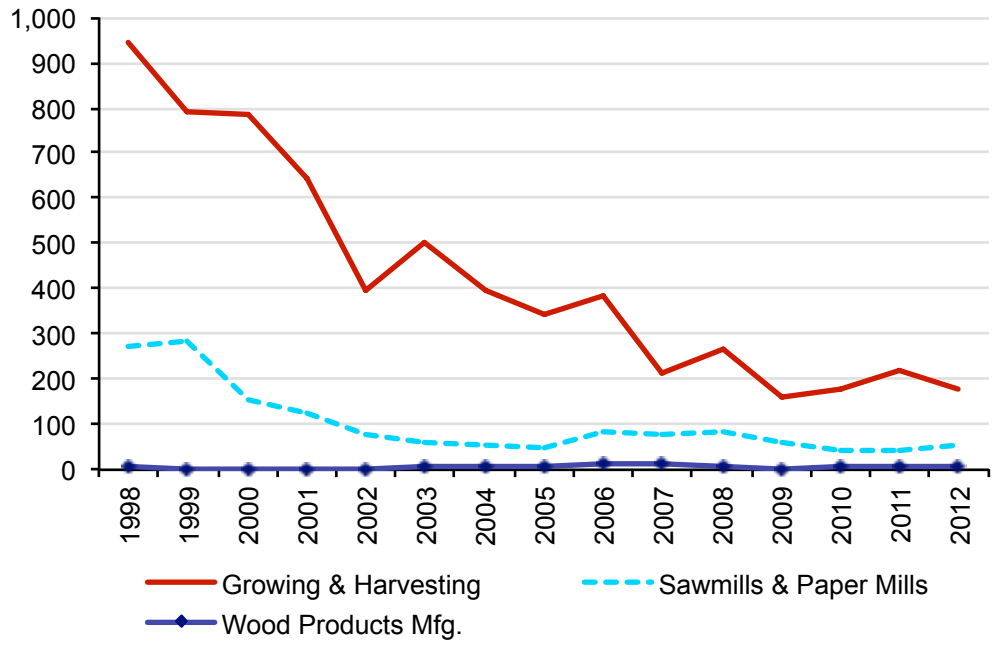
Private Sector Timber Jobs & Self-Employed vs. All Other Private Sector Jobs & Self-Employed, Southeast Alaska, 2012



Source: County Business Patterns, Nonemployer Statistics

Data from the U.S. Department of Commerce show similar trends and values. According to this source, southeast Alaska timber industry employment—in growing and harvesting, sawmills, and wood products manufacturing from timber cut on state, private, and federal lands combined—declined from 1,222 jobs in 1998 to 240 jobs in 2012, or 1.1 percent of total private employment that year. The largest declines were sustained in growing and harvesting jobs. Regional self-employed trends in timber-related activities are difficult to determine because of data limitations, but there were 41 self-employed individuals in the timber sector in 2012, or 0.5 percent of total self-employed people in the region that year. Private sector timber jobs and self-employed individuals together accounted for 0.9 percent of private jobs and self-employed in southeast Alaska in 2012. (County Business Patterns, Nonemployer Statistics)

Private Sector Employment Trends in Timber by Major Category, Southeast Alaska, 1998-2012



Source: County Business Patterns

These figures exaggerate the size of the timber sector that relies specifically on Tongass National Forest resources. A portion of the timber jobs in the region are not related to the Tongass National Forest, since the Tongass National Forest is not the only timber producer in southeast Alaska. In the Big Thorne Project Final Environmental Impact Statement, the Forest Service estimated that Tongass National Forest-related private employment was 109 in 2011. (Big Thorne Project Final EIS, 3-19) This is less than half of the total size of the timber industry in southeast Alaska as reported from other sources.

The cause of the decline in timber industry employment in southeast Alaska is disputed. Industry and federal and state government sources assert that declining timber sales from the Tongass National Forest are the cause. (See, *e.g.*, Alaska Timber Jobs Task Force, *Report to Governor Sean Parnell*.) Others (Colt, *et al*.) have noted that the decline was largely due to the closure of the two large pulp mills in southeast Alaska, both of which relied exclusively on Tongass National Forest timber, but whose closures was the result of declining Japanese pulp markets, not

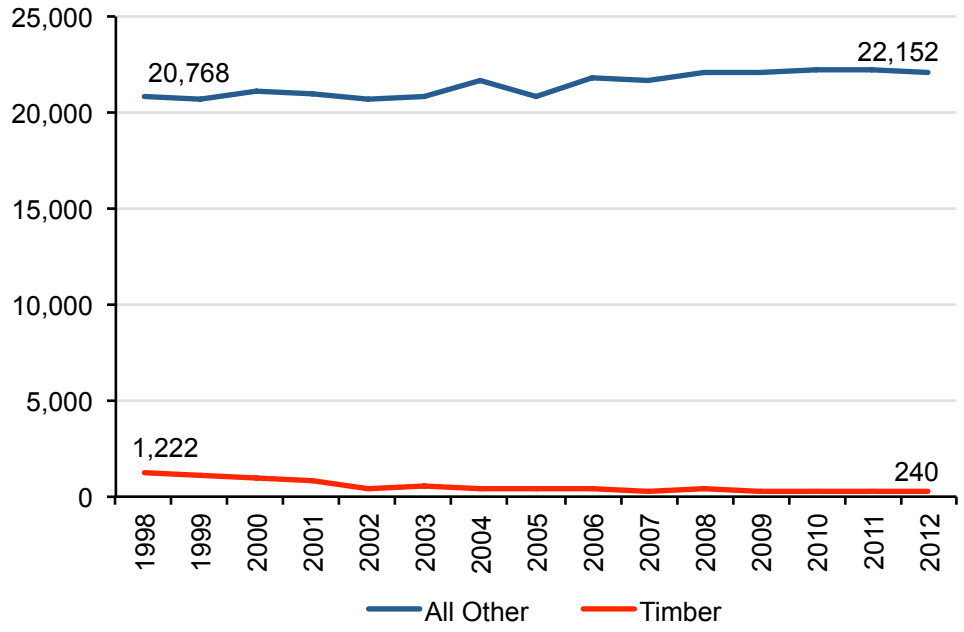
declining Tongass National Forest timber supplies. Environmental sources charge that estimated timber demand from the Tongass National Forest has been persistently overestimated, and that restrictions on log exports (to promote local wood processing jobs) have been eased to find markets for Tongass National Forest timber. (See, *e.g.*, *Tongass Timber Economics 101*.) Others (Colt, *et al*.) have noted that Alaska is a high-cost production area and is far from markets, making recovery and/or growth of the timber industry difficult.

The relative importance of the Tongass National Forest for timber supply is also unclear. One industry source (Resource Development Council) noted that the federal government administers about half of Alaska's forests, with the state government and Native corporations each administering about a quarter of the forests. A state source (AK Dept. of Commerce) stated that the federal government administers 65 percent of Alaska's forests, with 25 percent owned by the state and only 10 percent owned by Native corporations. Another industry source (Alaska Forestry Association) stated that the Tongass National Forest contains 93 percent of the timberland in southeast Alaska. In contrast, Sealaska, a Native corporation, maintains that it is the dominant timber producer in southeast Alaska, although Native corporations are not bound by the log export restrictions imposed on most logs from federal lands, and thus may provide little timber for domestic processing.

The conclusion from these data is that the timber industry in southeast Alaska has experienced a decades-long decline and today is a small part of the regional economy, accounting for no more than one percent of southeast Alaska employment while receiving the lion's share of Tongass National Forest budget and staffing resources.

The decline of the timber industry has been difficult for the region, but it has not kept the overall southeast Alaska economy from growing. According to the U.S. Department of Commerce, from 1998 to 2012 regional timber jobs declined by more than 80 percent (-982 jobs), while all other private sector jobs grew by nearly seven percent (+1,384 jobs). (County Business Patterns)

Private Sector Employment Trends, Timber vs. All Other, Southeast Alaska, 1998 to 2012



Source: County Business Patterns

In considering how the Tongass National Forest might contribute to the economic vitality of southeast Alaska communities, it is useful to examine two major regional industries—tourism and fishing—that are affected by Tongass National Forest management decisions and investments.

Tourism is a notoriously difficult sector to measure because it spans a number of industries and the U.S. Department of Commerce does not have a single industry code for tracking the travel and tourism economy. Despite this challenge, there are credible efforts to measure the visitor industry. Southeast Conference reports that in 2013 the southeast Alaska visitor industry employed 6,707 people, is growing (+332 jobs, 5.2% change from 2012 to 2013), and accounted for 15 percent of total regional employment. (Southeast Conference) Using data from the U.S. Department of Commerce, Headwaters Economics estimates that in 2012 travel and tourism-related industries combined—accommodation and food services; arts, entertainment, and recreation; passenger transportation; and retail trade—accounted for 4,711 jobs, or 21 percent of total private employment. (County Business Patterns)

The fishing, or seafood, industry also can be measured in a number of ways and has tracking challenges related to data nondisclosures and the large number of self-employed individuals. Despite these hurdles, Southeast Conference reports that in 2013 the southeast Alaska seafood industry employed 4,252 people, is growing (+148 jobs, 3.6% change from 2012 to 2013), and accounted for nine percent of total regional employment. (Southeast Conference) Using data from the U.S. Department of Commerce, Headwaters Economics estimates that in 2012 fishing-related sectors employed 1,780 people, along with another 2,408 self-employed individuals. This represents eight percent of total private employment and 31 percent of all self-employed people in the region. (County Business Patterns, Nonemployer Statistics)

There are also methods of calculating the broader regional economic significance (*i.e.*, including the multiplier effect of direct spending and employment) of the tourism and fishing industries in southeast Alaska. Several recent efforts, which confirm the economic importance of the tourism and fishing industries, are summarized below.

A 2014 McDowell Group study for the state of Alaska's Department of Commerce, Community, and Economic Development found that the visitor industry as a whole in southeast Alaska, including multiplier effects, totaled $1.1 billion in spending and resulted in 10,900 jobs and $407 million in labor income during the 12-month period from October 2012 to September 2013. The employment total represents 20 percent of total southeast Alaska employment in 2012. (Bureau of Economic Analysis) This report shows that the visitor industry is growing in the region. Since the 2011-2012 season, visitor spending increased by 10 percent, employment by 7 percent, and labor income by 10 percent. (McDowell Group 2014)

The McDowell Group also analyzed specific southeast Alaska visitor activities in an earlier 2012 study and found that top tourism activities were: "wildlife viewing (42 percent of visitors participated), hiking/nature walk (28 percent), day cruises (26 percent), flightseeing (15 percent), fishing (11 percent), bird watching (9 percent), zipline (7 percent), dogsledding (7 percent), kayaking/canoeing (7 percent), biking (4 percent), rafting (3 percent), ATV/4-wheeling (2 percent), camping (2 percent), Northern Lights viewing (1 percent), and hunting (<1 percent)." (McDowell 2012) Many of these visitor activities rely heavily on natural resources managed by the Tongass National Forest and the ability to access and enjoy the landscape in its natural state.

A 2010 TCW Economics report for Trout Unlimited found that southeast Alaska salmon fisheries and hatchery operations, including multiplier effects from commercial, recreational, and personal use/subsistence and the processing of commercially harvested salmon, accounted for $986 million in total economic output, 7,282 jobs, and $189 million in personal income in 2007. (TCW Economics) The employment total represents 14 percent of total regional employment in 2007. (Bureau of Economic Analysis)

A more recent 2013 McDowell Group study for the Alaska Seafood Marketing Institute, which was not limited to salmon and used different classifications than the TCW Economics report, found that the seafood industry produced $641 million worth of seafood (in wholesale terms) and, including multiplier effects, supported 9,650 average monthly jobs along with $468 million in labor income in 2011. (McDowell 2013) The average monthly job total represents 18 percent of total southeast Alaska employment in 2011. (Bureau of Economic Analysis) The salmon fishery, which relies on the Tongass National Forest for cold water and healthy spawning grounds, accounted for three quarters of the region's total commercial wholesale fishing value and drives the majority of the industry's economic impacts in southeast Alaska.

The conclusion from these data is that the tourism and fishing industries are two of the major economic sectors in southeast Alaska today, and are growing in scale and importance. Despite demonstrated growth in tourism and fining markets, these industries are not benefiting from increases, or even increases in share, of Tongass National Forest budget and staffing resources.

Fiscal Analysis

Tongass National Forest timber sales have consistently cost more to prepare, access, and administer than the federal government receives for the timber. The proposed transition from old growth to young growth timber, which in general has lower value, has brought renewed attention to losses on timber sales and the return these sales provide U.S. taxpayers. The argument that old growth must be harvested because it has higher value has not changed the fact that predominantly old growth timber sales on the Tongass National Forest continue to cost significantly more than they generate in revenue.

National concerns about Forest Service timber sales in which the sale costs exceeded the revenues (known as below-cost timber sales; see CRS Report 94-698 ENR) were first raised in 1980. That year, the Natural Resources Defense Council (NRDC) issued a lengthy report showing timber costs and revenues for each national forest in the country, and showing federal fiscal losses on timber sales from many national forests, including the Tongass National Forest. Several reports, mostly from various congressional agencies, were published in 1984, also showing fiscal losses on timber sales in many national forests, including the Tongass National Forest. (See CRS Report 84-799 ENR) The Forest Service and the timber industry have defended such practices, arguing that the agency was not required to make a profit for the U.S. Treasury and that timber sales were needed to stabilize communities. (See, *e.g.*, Beuter) Despite the concerns and counter-arguments, no action to reduce timber sale losses has been made by Congress or the several Administrations, but the concerns persist. (See CRS Report RL32485)

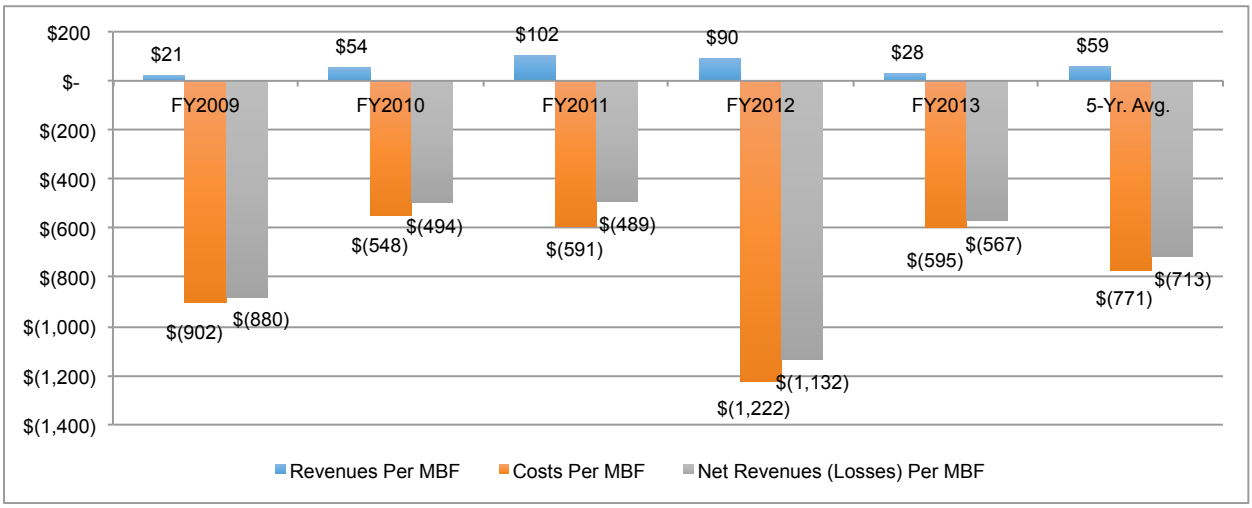
The Tongass National Forest clearly has lost money on recent timber sales, as the table below shows. (See also Mehrkens) Harvest revenues ranged from $600,000 to more than $3.3 million between FY2009 and FY2013—from $20 per thousand board feet (MBF) harvested to more than $100 per MBF. As noted above, timber-related costs have been significantly higher, ranging from $19 million to $26 million during the same period—from more than $500 per MBF harvested to more than $1,200 per MBF. This means that the Tongass National Forest lost nearly $25 million—$880 per MBF—in FY2009; more than $17 million—$494 per MBF—in FY2010; nearly $16 million—$489 per MBF—in FY2011; nearly $24 million—$1,132 per MBF—in FY2012; and nearly $21 million—$567 per MBF—in FY2013. The total net cost to the U.S. Treasury from Tongass National Forest timber sales during these five years was more than $100 million.

Tongass National Forest Timber Sale Revenues and Costs, FY2009 to FY2013 and 5-Yr. Avg.

Fiscal Year	FY2009	FY2010	FY2011	FY2012	FY2013	5-Yr. Avg.
Total Revenues	$ 605,166	$ 1,897,909	$ 3,330,495	$ 1,873,382	$ 1,015,373	$ 1,744,465
Total Costs	$ 25,589,172	$ 19,403,573	$ 19,286,845	$ 25,458,344	$ 21,628,449	$ 22,273,277
Net Revenues (Losses)	**$(24,984,006)**	**$(17,505,664)**	**$(15,956,350)**	**$(23,584,962)**	**$(20,613,076)**	**$(20,528,811)**
Volume Harvested (in MBF)	28,385	35,410	32,638	20,828	36,366	30,725
Revenues Per MBF	$ 21	$ 54	$ 102	$ 90	$ 28	$ 59
Costs Per MBF	$ 902	$ 548	$ 591	$ 1,222	$ 595	$ 771
Net Revenues (Losses) Per MBF	**$ (880)**	**$ (494)**	**$ (489)**	**$ (1,132)**	**$ (567)**	**$ (713)**

Source: Costs are from the budget table in this report; revenues and cut volume are from U.S. Forest Service Cut and Sold reports available online: http://headwaterseconomics.org/interactive/national-forests-timber-cut-sold.

Tongass National Forest Timber Sale Revenues and Costs, FY2009 to FY2013 and 5-Yr. Avg.



Source: Costs are from the budget table in this report; revenues and cut volume are from U.S. Forest Service Cut and Sold reports available online: http://headwaterseconomics.org/interactive/national-forests-timber-cut-sold.

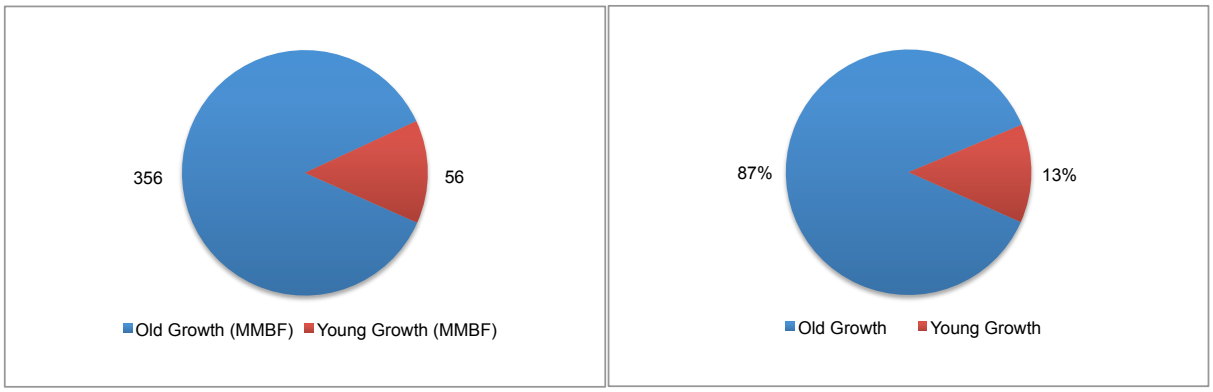
The Transition Framework outlines a transition from old growth to young growth harvests, but such a shift has yet to be shown in Tongass National Forest timber sales and is unlikely to improve the fiscal results of timber sales. A review of timber sales proposed (or in various planning stages) by the Tongass National Forest since the Transition Framework announcement shows an overwhelming bias toward old growth volume—approximately 87 percent of total proposed volume.

Recent Tongass National Forest Proposed Timber Sales, Old Growth vs. Young Growth

Project Name	District	Final Decision	Status	Date	Old Growth Volume (MMBF)	Young Growth Volume (MMBF)
Navy	Wrangell	N	FEIS	3/1/09	11.6	0
Central Kupreanof	Petersburg	Y	ROD/FEIS	2/4/11	26.3	0
Wrangell Roadside	Wrangell	Y	DN/EA	3/10/11	5	0
Tonka	Petersburg	Y	ROD/FEIS	3/28/12	38.5	0
Dargon Point	Thorne Bay	Y	DN/EA	2/19/13	0	2.5
Wrangell Island	Wrangell	N	Scoped	7/31/13	65	0
Kosciusko	Thorne Bay	N	Scoped	8/1/14	5	38
Mitkof	Petersburg	N	Draft Decision, EA, FONSI	8/7/14	28.5	0
Big Thorne	Thorne Bay	Y	FEIS/ROD/SIR	8/21/14	116.3	15
Saddle Lakes	Ketchikan	N	DEIS	8/29/14	60	0
Total Volume (MMBF)					**356**	**56**
Share of Total Volume					**87%**	**13%**

Source: Tongass National Forest planning documents; Tongass National Forest 5-Year Timber Sale Schedule (no longer publically available on the Tongass National Forest website); and Trajectory to Young Growth report.

Recent Tongass National Forest Proposed Timber Sales, Old Growth vs. Young Growth



Source: Tongass National Forest planning documents; Tongass National Forest 5-Year Timber Sale Schedule (no longer publically available on the Tongass National Forest website); and Trajectory to Young Growth report.

An instructive illustration of the continued money-losing reality is the Big Thorne Project, which has been approved by the Tongass National Forest but is being litigated by various environmental groups. This sale is the largest proposed timber sale in decades on the Tongass National Forest. It is predominantly an old growth timber sale and is rationalized in large part by the Forest Service's assertion that young growth trees on Prince of Wales Island are not commercially viable at present—that without a substantial old growth component the various proposed alternatives would incur significant financial loses, or find no bidders.

However, even with the dominant old growth component—which takes the Tongass National Forest in a direction counter to the Transition Framework and stated young growth leader's intent goal—the Tongass National Forest will likely find itself losing money for federal taxpayers. The recently awarded 97-million board foot sale contract was reportedly worth more than $6 million, but at the FY2013 average Tongass National Forest cost of $595 per MBF, the preparation and administration costs of the sale would be more than $57 million, with a net cost to the U.S. Treasury of $50 million—a nearly 10:1 expense-revenue loss ratio. (E&E News)

There may be legitimate questions about the readiness of second growth supply on the Tongass National Forest and the viability of young growth timber economics, but as these figures show the old growth program itself is not a self-supporting endeavor. The allocation of scarce Tongass National Forest budget and staff resources to a minor economic sector represents a large opportunity cost for the regional economy—these resources could be repurposed, using the logic of the Transition Framework, to larger and more vibrant industries that support more jobs and communities in southeast Alaska.

Conclusion

The Tongass National Forest Transition Framework, announced in 2010, came at an opportune time, promising a "new path forward in the region that enhances economic opportunities to communities while conserving the Tongass National Forest."

Southeast Alaska was poised to emerge from the Great Recession, and timber conflicts had seemingly given way to a discussion about how to shift to young growth harvesting and restoration that would in turn support other forest values and activities, and ultimately allow the Forest Service to better meet the needs southeast Alaskans.

Over time, the region's timber industry has shrunk to a fraction of its former size and continues to decline; while the large and growing tourism and fishing industries could benefit from new Tongass National Forest investments in infrastructure and supporting services. The goal of managing the Tongass National Forest in a way that contributes to the revitalization of the southeast Alaska economy seemed within grasp.

A close analysis, however, shows a path taken that is much different than the promises made. Today, four years after the start of the Transition Framework, the Forest Service continues to allocate the largest share of its budget and manpower to timber production, while simultaneously flat-lining or even reducing support for recreation, wildlife, fish, and watershed protection. At best, the agency's actions are inconsistent with the assurances made by the Transition Framework.

Given the economic context of southeastern Alaska, the Forest Service's actions are difficult to understand. While there may be legitimate questions about the readiness of second growth supply on the Tongass National Forest and the viability of young growth timber economics, the analysis in this paper clearly demonstrates that the old growth program itself is not a self-supporting endeavor. It is possible that, with the right support, some timber industry could be a vital part of the region's economic geography, but this should not come at the cost of more strategic and promising investments in southeast Alaska's overall economic health.

The allocation of scarce Tongass National Forest budget and staff resources to a minor economic sector represents a large opportunity cost for the regional economy—these resources could be repurposed, using the logic of the Transition Framework itself, to larger and more vibrant industries that support more jobs and communities in southeast Alaska.

In short, the Tongass National Forest has not lived up to the expected "transition," and the casualties of this failure to seize a more promising economic trajectory are the region's businesses and communities, as well as the U.S. taxpayer.

Appendix: U.S. Forest Service Budget Acronyms

National Forest Systems - NFNF	
Inventory & Monitoring	NFIM
Landowner Management	NFLM
Minerals & Geology Management	NFMG
Forest Planning	NFPN
Grazing Management	NFRG
Recreation, Heritage, & Wilderness	NFRW
Timber Sale Management	NFTM
Vegetation & Watershed Management	NFVW
Wildlife & Fisheries Habitat Mgt	NFWF
Capital Improvements & Maintenance - CMCM	
Facilities Capital Improvements & Maint	CMFC
Infra Improvements - Deferred Maint	CMII
Legacy Roads & Trails	CMLG
Roads Capital Improvements & Maint	CMRD
Trails Capital Improvements & Maint	CMTL
Deferred Maint Projects for Recreation Facilities	FDRF
Perms & Trust Funds (Not All-Inclusive)	
Cooperative Work - NONAGT Based	CWF2
Cooperative Work - Other	CWFS
K-V Sale Area Projects	CWKV
Regional K-V Sale Area Projects	CWK2
Reforestation Trust Funds	RTRT
Conveyance of Admin Sites	EXSC
Regional Recreation Enhancement	FDAS
Unit Recreation Enhancement	FDDS
Gifts & Bequests	GBGB
Maps - (MRMS, MVIS & MSEQ)	MAPS
Quarters Maintenance	QMQM
Secure Rural Schools (Title II)	SRS2
Stewardship Contracting	SSCC
Salvage Sale	SSSS
Timber Pipeline - Botanical Products	TPBP
Timber Pipeline - Recreation Backlog	TPCD
Timber Pipeline - Sale Prep	TPPS
Cost Recovery - Major Projects	URMJ
Cost Recovery - Minor Projects	URMN

References

Alaska Forestry Association, *Alaska Timber Industry History: Southeast Alaska*, available at www.akforest.org/Alaska%20Timber%20Industry%20History.pdf.

Alaska Timber Jobs Task Force, *Report to Governor Sean Parnell*, Administrative Order 258: Final Report, June 2012, available at http://forestry.alaska.gov/aktimber_jobs_taskforce.htm.

John H. Beuter, *Overview of Below-Cost Timber Sale Issue*, American Forest Resource Alliance, Technical Bulletin No. 90-02, November 30, 1990.

Thomas J. Barlow, Gloria E. Helfand, Trent W. Orr, and Thomas B. Stoel, Jr., *Giving Away the National Forests: An Analysis of U.S. Forest Service Timber Sales Below Cost*, Natural Resources Defense Council (NRDC), June 1980.

Steve Colt, Darcy Dugan, and Ginny Fay, Institute of Social and Economic Research, Univ. of Alaska, *The Regional Economy of Southeast Alaska: Final Report*, for the Alaska Conservation Foundation, March 1, 2007.

CRS Report 84-799 ENR. Ross W. Gorte, *Summary of Recent Reports on Forest Service Timber Sale Costs and Revenues*, November 8, 1984.

CRS Report 94-698 ENR. Ross W. Gorte, *What Are Below-Cost Timber Sales?*, September 2, 1994.

CRS Report 97-706 ENR. Ross W. Gorte, *Forest Roads: Construction and Financing*, July 16, 1997.

CRS Report RL 32485. Ross W. Gorte, *Below-Cost Timber Sales: An Overview*, July 21, 2004.

CRS Report 40537. Clinton T. Brass, Carol Hardy Vincent, Pamela J. Jackson, Jennifer E. Lake, Karen Spar, and Robert Keith, *American Recovery and Reinvestment Act of 2009 (P.L. 111-5): Summary and Legislative History*, April 20, 2009.

CRS Report RL30335. Ross W. Gorte, Carol Hardy Vincent, and M. Lynne Corn, *Federal Land Management Agencies' Permanently Appropriated Accounts*, Oct. 5, 2010.

CRS Report RL33730. Carol Hardy Vincent, *Recreation Fees Under the Federal Land Recreation Enhancement Act*, October 21, 2010.

E&E News, *Agency Awards Controversial Old-Growth Logging Contract in Tongass*, October 1, 2014.

Headwaters Economics, Economic Profile System, available at http://headwaterseconomics.org/tools/eps-hdt.

Juneau Economic Development Council (JEDC), Southeast Alaska Cluster Initiative, available at http://www.jedc.org/seclusterinitiative.

McDowell Group, 2012, *Economic Impacts of Visitors to Southeast Alaska, 2010-11*, available at http://www.alaskawild.org/wp-content/uploads/mcdowell_report_final.pdf.

McDowell Group, 2013, *Economic Value of the Alaska Seafood Industry*, available at http://pressroom.alaskaseafood.org/wp-content/uploads/2013/08/AK-Seafood-Impact-Report.pdf.

McDowell Group, 2014, *Economic Impacts of Alaska's Visitor Industry, 2012-13 Update*, available at http://commerce.alaska.gov/dnn/Portals/6/pub/TourismResearch/AVSP/Visitor%20Industry%20Impacts%202013%201_30.pdf.

Joseph R. Mehrkens, *Tongass Timber Economics 101*, Greater Southeast Alaska Conservation Community, available at http://www.gsac.net/issues/tongass-timber-economics-101.

Resource Development Council, *Alaska's Forest Industry*, available at http://www.akrdc.org/issues/forestry/overview.html.

Sealaska, *Timber*, available at http://www.sealaska.com/page/timber.

Southeast Conference, *Southeast Alaska by the Numbers, 2014*, available at http://www.seconference.org/sites/default/files/Southeast%20Alaska%20by%20the%20numbers%202014%20FINAL.pdf.

State of Alaska Department of Commerce, Community & Economic Development, *Forest Products*, available at http://commerce.alaska.gov/dnn/ded/DEV/ForestProducts/SourcesofTimberSupply.aspx.

TCW Economics, *Economic Contributions and Impacts of Salmonid Resources in Southeast Alaska*, 2010, available at http://www.americansalmonforest.org/uploads/3/9/0/1/39018435/econreportfull.pdf.

U.S. Department of Agriculture, Forest Service, *Timber Products Outputs and Timber Harvests in Alaska: Projections for 2005-2025 (Draft)*, available at http://www.fs.fed.us/pnw/pubs/brackley/index.shtml.

U.S. Department of Agriculture, Forest Service (Rhonda Mazza, tech. ed.), *Economic Growth and Change in Southeast Alaska*, Report PNW-GTR-611, July 2004, available at www.fe.fed.us/pnw/pubs/pnw_gtr611.pdf.

U.S. Department of Agriculture, Forest Service, *Economic Analysis of Southeast Alaska: Envisioning a Sustainable Economy with Thriving Communities*, R10-MB-725, May 2010.

U.S. Department of Agriculture, Forest Service, *USDA Pursues Jobs, Community Stability While Developing New Approach to Forest Management in Southeast Alaska*, Release No. 0288.10, May 26, 2010, available at http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2010/05/0288.xml.

U.S. Department of Agriculture, Forest Service, *USDA Investment Strategy in Support of Rural Communities in Southeast Alaska 2011-2013*, R10-MB-734, November 2011, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5352925.pdf.

U.S. Department of Agriculture, Forest Service, *Trajectory to Young Growth on the Tongass National Forest*, January 2013, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5445758.pdf.

U.S. Department of Agriculture, Forest Service, *Leaders Intent: Forest Stewardship and Young Growth Management on the Tongass National Forest*, January 2013, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5408229.pdf.

U.S. Department of Agriculture, Forest Service, *USDA Economic Diversification in Southeast Alaska, Briefing Paper*, December 2013, available at http://www.fs.usda.gov/detail/r10/home/?cid=FSBDEV2_038855.

U.S. Department of Agriculture, Forest Service, *Recreation Program Fee Accomplishment Report*, 2013, available at: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3801961.docx.

U.S. Department of Agriculture, Forest Service, *Leaders Intent: Recreation, Wilderness and heritage Program Management in the Alaska Region,* February 6, 2014, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3792642.pdf.

U.S. Department of Agriculture, Forest Service, *State of the Tongass National Forest FY2013*, R10-MB-786, April 2014, available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3799223.pdf.

U.S. Department of Agriculture, Forest Service, *Fiscal Year 2015 Budget Justification*, available at http://www.fs.fed.us/aboutus/budget/.

U.S. Department of Agriculture, Forest Service, Tongass National Forest, *5-Year Timber Sale Plan*, no longer available online; see http://www.fs.usda.gov/projects/tongass/landmanagement/projects.

U.S. Department of Commerce, Census Bureau, Nonemployer Statistics, 2014.

U.S. Department of Commerce, Census Bureau, County Business Patterns, 2014.

U.S. Department of Commerce, Bureau of Economic Analysis, 2014.

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May 21, 2017

VIA USDA OIG HOTLINE AND U.S. MAIL

Phyllis K. Fong, Inspector General
United States Department of Agriculture
Office of Inspector General
PO Box 23399
Washington, D.C. 20026-3399

RE: KOSCIUSKO FOREST TIMBER SALE – 17-GN-11100100-004

Dear Ms. Fong,

Public Employees for Environmental Responsibility ("PEER") submits this request to the United States Department of Agriculture ("USDA"), Office of Inspector General ("OIG"), to employ its statutory authority to investigate illegal actions, fraud, and abuse occurring in the timber program of the Tongass National Forest. Specifically, we request an investigation of the Good Neighbor Agreement ("GNA") entered into between the United States Forest Service ("USFS"), the Alaska Department of Forestry ("DOF"), and their subcontractor Alcan Timber ("Alcan") for the Kosciusko Forest Timber Sale, Supplemental Project Agreement 17-GN-11100100-004 (hereinafter "SPA", *see* Att. A).

This timber sale is not permitted under the claimed legal authority, because it does not prescribe the restoration projects or services required under the GNA authority granted through the Fiscal Year ("FY") 2014 Appropriations Act and the Agricultural Act of 2014 ("2014 Farm Bill"). It also violates federal regulations and the USFS's own procedural manual regarding the conduct of timber sales.

As shown below, the misuse of the GNA authority combined with these other violations results in allowing Alcan to buy federal timber at well below fair market value. It also appears to allow DOF to pocket much of the proceeds from the sale, and not use those proceeds for restoration activities in the project area as the GNA requires, depriving the U.S. taxpayer of most of the value of federal timber.

The Kosciusko GNA does not meet the requirements of the authorizing statute because it does not involve any authorized restoration services, but instead is a straight timber sale illegally invoking Good Neighbor authority.

Under the Good Neighbor authority,[1] Congress authorized cooperative agreements between federal, state, and local governments to allow for intergovernmental cooperation on forest restoration projects on federal lands when similar restoration projects are being carried out on adjacent state lands. As such, the GNA authority is intended to facilitate joint federal-state projects to improve forest health and fish and wildlife habitat. However, here GNA authority has been misused to support a project that does not serve these purposes and is not only *not* restorative, but in fact is environmentally damaging.

Additionally, while the GNA authority is designed to not cost the federal government money, this contract disposes of valuable federal timber at far below its market value and creates a windfall to the private timber purchaser. It also appears that the State of Alaska will not be required to return most of the proceeds of the sale to the U.S. Treasury, as required by regulation and U.S. Forest Service policy.

The GNA authorizing legislation does not provide funds to implement projects under the Good Neighbor authority. However, it does allow USFS payment to the state for its projected costs of administering the restoration project and, if there is a timber sale connected with the restoration work, the state partner is permitted to retain funds from that sale to pay the costs of administering authorized restoration services, including payment for time and materials associated with the work.[2]

By law, such income *may only be used for restoration activities identified in the GNA* – all other funds generated from the sale of timber must be returned to the U.S. Treasury. Yet nothing within this contract provides for any restoration projects that could justify the DOF retaining funds from the timber sale. However, there is also nothing in the contract providing for such funds to be returned to the Treasury, and the SPA is written so loosely that DOF can increase its administration costs at any time. As discussed further below, we are concerned that the bulk of the proceeds from the timber sale may be illegally retained by the DOF at the expense of U.S. taxpayers, and ask that this matter be investigated.

It also appears that this project has been carried out illegally under the GNA authority as a way to circumvent traditional USFS timber sale protocols in order to allow for a higher grading of the timber prescription, allowing the contractor to harvest more profitable tree species than the harvest prescription allows.[3] This sort of over-harvest and improper high-grading due to abandonment of the USFS's designation by prescription[4] has been seen recently in the Heceta stewardship project and the Tonka and Big Thorne timber sales, where it attracted attention from

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[1] *Codified in*, 16 U.S.C. § 2113a.

[2] *See* USFS, *Good Neighbor Timber Sales Interim Implementation Instructions, Enclosure with Forest Management Director's Letter to Regional Foresters*, July 6, 2015 (hereinafter "Implementation Instructions"), Att. B, § 2.3 – Determination of Appraised Value.

[3] *See* 16 U.S.C. § 2113a(b)(2)(A); 16 U.S.C. § 472a(g).

[4] "Prescription by designation" is a USFS process whereby the USFS lays out a project area for a timber harvest and sets the prescribed cut based upon agency designation of specific trees and species within a harvest unit.

local media and the USFS Washington Office.[5] It appears that USFS Tongass National Forest ("Tongass NF" or "Forest") has elected to categorize this Kosciusko project as a GNA in part to avoid increased scrutiny surrounding the agency's prescription by designation abuses with stewardship and conventional timber sale contracts. By turning over the sale administration to the State, as is permitted under GNA authority, accountability is being avoided by the USFS.

Additionally, this sale allows Alcan to lay out and select the trees to be cut in the two age prescription units; this means that the contractor – not USFS – selects what trees they wish to harvest regardless of the USFS prescription and NEPA documents. These two age cuts will be up to 2-acre patch clear cuts within the broader harvest unit that was already laid out by USFS within the project planning process, allowing for high-grading of the selected timber, contrary to the USFS prescription.

Furthermore, Alcan has entered additional contracts with both University of Alaska and Sealaska[6] on Kosciusko Island, both of which have land adjacent to USFS land. While DOF's Edna Bay Parlay sale has not yet been put out to bid, it can be anticipated that Alcan will be the purchaser of this sale, since Alcan is mobilized on this remote island already. It appears that this GNA is an attempt to give Alcan harvest rights across the entirety of Kosciusko Island, allowing Alcan to profit from reduced timber prices and ease of access, while not serving the authorized restoration purposes of GNA.

Moreover, this project is antithetical to the USDA's official strategic goals, as it is environmentally damaging and fails to support local communities. The project contains a large acreage of environmentally damaging clearcuts that are not justified by any restorative purpose, and 100% of the timber from this sale is slated for export, rather than processing in local mills and processing plants that could benefit the local economy.

Compounding the basic fact that this sale is being conducted under a claimed authority that does not in fact apply, as described below, there are numerous other problems with the administration of this sale. This is particularly concerning given that there is a long history of mismanagement in the Tongass National Forest,[7] most recently demonstrated by the USFS Washington Office's review of the Tongass NF's poor management of timber appraisal and sale administration.[8] Following allegations of misconduct by the Tongass NF, the Washington Office

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[5] *See* Katie Moritz, *Environmental groups sue over Big Thorne sale*, JuneauEmpire.com August 26, 2014, http://juneauempire.com/local/2014-08-26/environmental-groups-sue-over-big-thorne-sale; USDA Forest Service, *Washington Office Activity Review of Timber Sale Administration, Sale Preparation, Stewardship Contracting, NEPA, and Timber Theft Prevention – Region 10*, June 12-20, 2016 (hereafter "WO Review"), Att. C.

[6] Sealaska Corporation is the largest of thirteen Alaska Native Regional Corporations created under the Alaska Native Claims Settlement Act of 1971, 43 U.S.C. §1601 *et seq*, in settlement of aboriginal land claims. It is the largest private landowner in southeast Alaska and its principal economic enterprises have been the harvesting of timber and marketing of wood products to Pacific Rim countries and the Pacific Northwest.

[7] *See generally*, KATHIE DURBIN, TONGASS: PULP POLITICS AND THE FIGHT FOR THE ALASKA RAIN FOREST, (1999); Jeff DeBonis, *Stealing the Tongass, Playing by Alaska Rules in the U.S. Forest Service*, PEER (Nov. 1996), https://www.peer.org/assets/docs/whitepapers/1996_stealing_tongass.pdf; Jeff DeBonis, *Unindicted Co-Conspirator: Timber Theft and the U.S. Forest Service*, PEER (Mar. 26, 1996), https://www.peer.org/assets/docs/whitepapers/1996_unindicted_co-conspirator.pdf.

[8] *See* WO Review, Att. C; Joe Viechnicki, KTOO, *Tongass timber sale short on timber*, July 11, 2017, https://www.ktoo.org/2017/07/11/tongass-timber-sale-short-timber/ ; Scott Streater, E&E News, *Green group asks*

commenced a programmatic review of the forest, concluding in 2016 that the forest had been committing a series of ongoing errors in its timber sale administration; including improper project certification, failure to follow gate certification requirements, and improper delegation of authority – issues that all re-appear in this Kosciusko GNA.

The Tongass NF claims it has resolved its issues with the practices admonished by the Washington Office,[9] but results from multiple Freedom of Information Act requests submitted to the Tongass NF by PEER have demonstrated that seemingly nothing has been done to address the issues raised by the Washington Office's review – issues that were raised internally years prior to this review as well.[10] On the contrary, as evidenced by the details of this sale and the internal review of the timber sale administration program by Tongass NF after receiving programmatic recommendations from the Washington Office, it appears that the Forest's management is still maladministering timber sales in many of the same ways indicated by the Washington Office – at the expense of the U.S. taxpayer.[11]

I. The Kosciusko Project Violates the Good Neighbor Authority

In the 2014 Farm Bill, Congress permanently authorized the Secretary of Agriculture to enter into cooperative GNAs with state agencies to perform authorized restoration services on National Forest System ("NFS") lands.[12] "Restoration services" are defined in the statute as limited to "activities to treat insect and disease-infected trees," "activities to reduce hazardous fuels," and "any other activities to restore or improve forest, rangeland, and watershed health, including fish and wildlife habitat."[13] GNAs must "carry out authorized restoration services under this section."[14] The statutory requirements for carrying out these projects are reflected in the USFS Implementation Instructions for Good Neighbor timber sales.

The primary objective of these agreements is to coordinate state and federal cooperation *during restoration projects*.[15] They are meant to allow USFS to partner with state agencies in order for states and local governments to perform the enumerated services on NFS lands through subcontracts that utilize state contracting procedures and provide compensation for state labor costs. The overarching objective of this authority is to better facilitate cooperation on restoration projects, not to establish cooperative timber sale agreements or to allow state forestry agencies to log on NFS lands.[16]

IG to probe Tongass timber sales, Apr. 3, 2017, *available at* https://www.peer.org/assets/clips/FY15_4th_quarter_clips/E&ENEWS_FOREST_SERVICE_Green_group_asks_IG_to_probe_Tongass_timber_sales.pdf.

[9] *See* Forest Service Statement to Press, Apr. 4, 2017, Att. D.

[10] *See* District Ranger Request for TM Program Review, Jan. 30, 2014, Att. E.

[11] See 2017 Tongass NF Internal Review – Sale Administration, at 7, Att. F.

[12] *Codified in*, 16 U.S.C. § 2113a.

[13] 16 U.S.C. § 2113a(a)(3)(A)(i), (ii) and (iii).

[14] 16 U.S.C. § 2113a(a)(4) and (b)(1)(A).

[15] These projects consist of removal of hazardous fuels, insect and disease, and forest, rangeland and watershed restoration projects. Implementation Instructions, § 0.2 – Objectives; *See* 16 U.S.C. § 2113a(a)(4).

[16] *Id.*

Despite the clear requirements of the statute, the SPA between DOF and USFS, as well as the contract between DOF and its contractor, Alcan, do not contain any description of any restoration projects to be performed – directly violating the statute that is claimed to authorize the agreement. On the contrary, the SPA Scope of Work states that the project "consists of preparing, offering, awarding, and contract administration of the Kosciusko GNA-Timber Sale."[17] The "Project Areas and Treatment Activities" discussion within the SPA only describes nine tasks relating to layout, providing maps with unit boundaries, determining total sales volumes, appraising timber value, preparing contracts, advertising and conducting the bidding process, and administering the timber sale contract.[18] None of these are restorative as defined in the statute.[19] Moreover, the requirement that the project be near areas where similar or complementary activities are occurring on non-Forest Service land is not met, since there are no such activities.[20] Clearly, the intention here is *not* to coordinate state and federal restoration projects, as intended by the GNA, but to allow the State to conduct a timber sale on federal land.

The Kosciusko Environmental Assessment ("EA"), as required for this project under the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq*. ("NEPA"), describes in detail the proposed projects to be completed and possible alternative actions.[21] While the EA discusses *possible* restorative actions in a basically non-restorative timber sale, no such actions are *actually included* in the final contract.[22] For example, the EA discusses how "[k]arst systems *may* be improved, such as by removing blockages and remedying diverted water flow[; i]nvasive plant infestations *may* be treated manually or mechanically, or monitored[; i]nstream restoration activities *may* occur on up to one mile of stream segments."[23] However, no such activities are outlined within the final contract with Alcan,[24] whose sub-contractors, Southeast Alaska Resources, themselves have expressed hesitancy in proceeding due to a lack of restorative action in the final contract.[25]

Upon review of the documentation surrounding the Kosciusko SPA, it appears that this agreement is specifically meant to enable DOF and its subcontractor to log and sell (for overseas export) approximately 75,000 cubic feet ("CCF") of timber from nearly 1,500 acres of USFS land on Kosciusko Island in the Alexander Archipelago of southeastern Alaska. It is also quite apparent that there is no restoration planned of any kind on either federal or state lands, nor is there any restoration project outlined in the SPA or the signed contract between the purchaser, Alcan Timber of Ketchikan, and the State of Alaska. Furthermore, it appears that the Tongass NF did not even consider possible restoration projects until *after* this timber sale project had been approved, the SPA had been signed by the Forest Supervisor, the Alcan contract had been signed

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[17] *See* SPA, Att. A, Appendix A at 13.
[18] *See Id*. at Appendix C.
[19] 16 U.S.C. § 2113a(a)(3)(A)(i), (ii) and (iii).
[20] *See* Implementation Instructions, § 1.12 –Selection of Project Areas
[21] *See* USDA, *Kosciusko Vegetation Management and Watershed Improvement Project, Final Environmental Assessment, Draft Decision Notice, and Finding of No Significant Impact,* December 2015, (hereafter "EA"), available at http://a123.g.akamai.net/7/123/11558/abc123/forestservic.download.akamai.com/11558/www/nepa/99488_FSPLT3_2595790.pdf
[22] *See generally* Kosciusko GNA YG Timber Sale Contract, SSE-1362 K, Att. G.
[23] *See* EA at 3 (emphasis added).
[24] *See* generally SPA, Att. A.
[25] *See* E-mail from Clarence Clark, Jan. 2, 2018, Att. H.

by the Alaska Department of Natural Resources Commissioner, and a Freedom of Information Act request was filed seeking records surrounding this project.[26] It appears that the Tongass NF is now attempting to use a miniscule post-hoc restoration project, specifically designed only to mitigate environmental damage *caused by this project's own clear-cut logging* as an after-the-fact justification for this entire commercial timber sale.[27]

Moreover, according to the USFS Implementation Instructions, in a GNA sale, it is appropriate to consider the costs of authorized restoration services performed by the State to recognize that the sale is: "(a) conducted under [GNA authority], (b) *primarily for watershed improvement as cited in the legislation*, and (c) *used to pay for the State's performance of authorized restoration activities*."[28] The USFS Implementation Instructions further note that "*there would not be a timber sale unless the watershed restoration work could be accomplished*, as required under the Good Neighbor legislation."[29]

With regard to appraisals for timber sales, GNAs differ from other timber sales in that restoration work is generally not included in the appraised value of regular timber sale contracts administered under the National Forest Management Act of 1976, Public Law 94-588, and are usually stewardship work items under Stewardship authority contracts.[30] In GNA sales, restoration costs are included in the appraised value of the timber so that the State may be reimbursed for its restoration costs. However, here of course, such restoration costs were not considered because there were no restoration efforts planned. This is further evidence that USFS and DOF intend to administer this contract as a standard timber sale under the banner of GNA authority.

Such misuse of the GNA authority blatantly violates federal law, as it greatly exceeds the GNA authority granted to the USFS by Congress. This contract also contravenes the primary policy objective of the entire GNA contracting scheme, which is to facilitate restoration projects.

II. The Kosciusko Sale Violates Federal Regulations and USFS Implementation Instructions Regarding Timber Sales

Apart from the fact that Good Neighbor authority does not authorize straight timber sales at all, this sale violates numerous regulations and requirements regarding timber sales. This is prominently evidenced by the Tongass NF's unexplained decrease in appraised value for the timber for this project by nearly $2 million, likely evidencing a failure to follow prescribed appraisal protocols and failure to correct problems highlighted within the 2016 Washington Office Review of the Tongass's timber sale administration program.

a. Violation of regulations regarding appraised value and program income

[26] *See* E-mail from Tyler Gunn, Kos GNA Restoration Possibilities, Dec. 7, 2017, Att. I.
[27] *Id.*
[28] *See* Implementation Instructions, § 2.3 – Determination of Appraised Value, Att. B; *see also* 16 U.S.C. §2113a(a)(4) (emphasis added).
[29] *See* Implementation Instructions, § 2.3 – Determination of Appraised Value.
[30] *Id.*

According to the USFS, under the Good Neighbor Authority, determination of appraised values follow normal Forest Service appraisal methods or methods established by the State when acceptable to the responsible line officer.[31] This would require USFS and DOF to work together to establish an appraised value that will be the lowest rate that the State may use to advertise the NFS timber for sale. That rate will be either the established regional minimum stumpage rate (as defined in 36 C.F.R. § 223.61 and the Forest Service Handbook ["FSH"] 2431.31b) or the market rate ("fair market value") as required under 36 C.F.R. § 223.60, whichever is higher.

Given the vast unexplained discrepancy in appraised value between the Forest Service's initial 2015 appraisal and DOF's later 2017 appraisal used for the GNA contract, it appears that the USFS has inappropriately lowered the assessed value of its timber and failed to adhere to the necessary appraisal protocols.

The USFS initially appraised the timber sold within the Kosciusko project at $2,894,960.00 in a 2015 appraisal;[32] yet when this sale was initiated, the same timber was then re-appraised at $926,750 for the purposes of the DOF contract – showing an unexplained drop in valuation of nearly $2 million – all without being submitted for review to the pre-sale timber administrator tasked with managing timber appraisal of the sale.[33] Following that unexplained drop in valuation, DOF accepted a $2.6 million bid for the project, which was nearly $300,000 below the initial appraisal value, providing Alcan the timber at significantly below market rates. Through Alcan's future payment of $2.6 million to DOF for access to this timber, and DOF's subsequent payment to USFS for the revised appraisal price of $926,750, DOF could receive a windfall of $1,673,250 in what is called "Program Income" in GNA sales.[34]

In GNA sales, when a State sells USFS timber, the state is expected to set the bid price to cover the appraised value of the timber *plus* the state's cost for the restoration work to be conducted under the GNA. The "bid premium" above the appraised value is called "Program Income."[35] The USFS and the State may agree to use any amount of this income above the Minimum Rate (the Program Income) for restoration work on the instant project, including the State's indirect costs, and its costs in administering the sale.[36] The amount that the state pays the Forest Service for the timber does not include such Program Income.[37] However, Program Income is Federal money and must be expended on restoration activities specified in the SPA, or be returned to the U.S. Treasury.[38] The Forest Service's Implementation Instructions require that how the state handles amounts above the Minimum Rate value be fully addressed in the GNA SPA.[39]

The problem here is that because of the highly deflated appraisal amount for this sale, the purchaser paid $1.6 million more than the revised appraised value, *and this large amount*

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[31] *Id*.
[32] *See* Kosciusko RV Appraisal, 2400-17 Summary, Att. J.
[33] *See* Timber Sale Bid Opening, Completion of Gate 5, Att. K; E-mail from Charles Strueli, Dec. 12, 2017, Att L.
[34] *See* Kosciusko GNA YG Timber Sale Contract, SSE-1362 K, At. G
[35] *See* Implementation Instructions, § 3.5 – Program Income.
[36] *Id*.
[37] *See* Implementation Instructions, § 2.3 – Determination of Appraised Value
[38] *See* Implementation Instructions, § 3.5 – Program Income
[39] *See* Implementation Instructions, § 2.3 – Determination of Appraised Value

becomes "Program Income," which must be used for restoration projects or returned to the Treasury. However, here there are no restoration projects, and thus legally *all* of this money must be returned to the Treasury. Yet, despite the Forest Service requirement that the GNA Master Agreement or SPA must detail how Program Income is treated, there is nothing in these contracts that details how that money is to be disbursed, and we have seen no evidence that DOF is or will be returning this money to the Treasury as required by law. Thus, there is a serious concern that DOF may pocket this $1.6 million through a variety of means, including potential modification of its administration costs. If this is the case, the Forest Service will receive only a third of the original value of the timber that was sold, and the U.S. Treasury will receive nothing, resulting in a tremendous loss for the USFS and the U.S. taxpayer.

This is not an isolated incident. The maladministration on the recent Big Thorne and Tonka sales has resulted in nearly $4 million in lost income for the USFS, due primarily to timber theft and the high grading of the timber prescription.[40] While PEER's request for an audit of these two sales was denied in 2017, this denial was based upon a brief statement that the office currently lacked the resources to complete such an audit – not that this complaint was without merit.[41] A troubling trend of improper appraisal practices in various forms continues despite chastisement by the Washington Office for such behavior in the past.[42] Given the Tongass NF's past and ongoing conduct, it is apparent that if such behavior is not investigated and fully audited, the Tongass NF will continue to abuse its appraisal and contracting authority.

b. Insufficient authority

GNA contracts made to implement projects that include the sale of NFS timber must be approved by a line officer with delegated authority to dispose of the planned volume of timber.[43] It is evident from the Kosciusko SPA, signed by Earl Stewart – Tongass Forest Supervisor – that the project authorizes the harvest of 73,219.81 CCF of timber.[44] However, the authority granted to Earl Stewart as Forest Supervisor is limited to authorization of timber harvests up to 50,000 CCF.[45] Such a sale in exceedance of the line officer's disposal authority would require approval from the Regional Forester, and thus violates Forest Service policy, specifically its delegated authority requirements.

Furthermore, it appears that Earl Stewart himself did not even sign the SPA on this project; rather a Mr. Francis Sherman, a deputy forest supervisor on a 120-day detail, signed in his stead under Earl Stewart's name. This demonstrates a blatant disregard for the recommendations of the Washington Office to discontinue the practice of having staff sign "for"

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[40] Scott Streater, *Green group asks IG to probe Tongass timber sales*, E&E News PM (Apr. 3, 2017), *available at* https://www.peer.org/assets/clips/FY15_4th_quarter_clips/E&ENEWS_FOREST_SERVICE_Green_group_asks_IG_to_probe_Tongass_timber_sales.pdf.

[41] *See* USDA IG Denial Letter, May 3, 2017, Att. M.

[42] *See* WO Review at 17-18, Att. C.

[43] *See* Implementation Instructions, § 0.3 – Policy.

[44] *See* Timber Sale Bid Opening, Completion of Gate 5, Att. K.

[45] *See* Forest Service Manual ("FSM") Chapter 1230 – Delegations of Authority and Responsibility; Forest Service Manual Chapter 2450 – Timber Sale Contract Administration; see also FSM 2404.28 - Specific delegations of timber sale disposal authority.

a Line Officer,[46] and a disregard of USFS timber sale administration compliance requirements by the Tongass NF's management. Such behavior is particularly troubling given that the press office of the Tongass Forest has been informing the media that necessary changes are being made in accordance with the Washington Office Review.[47] This pattern of improper signatures, faulty paperwork, and sparse records appears to be how Forest officials avoid accountability by having the potential malfeasance of forest professionals instead appear as disorganization and ineptitude.

c. Violation of Forest Service requirements for gate certifications

Timber sale gate certifications, essentially quality assurances for each step of the sale, are required for GNA timber sales.[48] The Responsible Official for the project approves work completed in each gate by signing the Gates 1-4 Certification Reports (Plan, Design, Prepare, and Advertise) generated by the Natural Resource and Timber Information Manager, and this authority cannot be re-delegated.[49] Of note, the Tongass NF also failed to follow the Forest Service Manual requirements for completing and certifying completion of each gate sequentially in the Big Thorne timber sale.[50] Under the Kosciusko GNA, it appears that the Tongass NF has once again performed the gate certifications out of order; allowing Gate 2 Design be completed nine months before even initial Gate 1 Planning – only to sign off on Gate 2 at the same time as Gate 1.[51]

The Tongass NF has asserted that they have corrected procedural errors and will comply with the recommendations of the Washington Office Review; yet to this date, have failed to produce adequate documentation of how these issues were corrected and, based on the facts of this sale, appear to have done nothing to address these recurring issues. This lack of appropriate documentation demonstrates that management practices criticized by the Washington Office are still ongoing and uncorrected – in flagrant disregard of the recommendations for program compliance from senior management. Furthermore, the late dating of gate signatures after such activities have been completed raises questions as to the validity of other gate certification and contract datings related to this sale, and more broadly across the Forest's timber management practices.

III. The Kosciusko Project is Antithetical to the USDA Strategic Goals

In addition to failing to meet the statutory requirements of the GNA authority and USFS regulations and guidelines discussed above, the Kosciusko project is inconsistent with the clear policies and goals of the broader U.S. Department of Agriculture and USFS. As announced by Agriculture Secretary Sonny Perdue, USDA Strategic Goal 6 is to: "[f]oster productive and

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[46] *See* WO Review at 8, Att. C. The Review states that Line Officer approval that cannot be re-delegated must be signed by the Line Officer or their designated Acting, and recommends that the practice of signing documents "for" the Line Officer be discontinued. *See also* FSM 2404 – Timber Management – Authority; FSM Chapter 1230.
[47] *See* Forest Service Statement to Press, April 4, 2017, Att. D.
[48] *See* Implementation Instructions, § 2.6 – Timber Sales Gates 1-6.
[49] *Id.*
[50] *See* WO Review, p. 9, Issue 4, Finding 1 ("For the Big Thorne project, Gates 1-6 were not implemented sequentially"), Att. C.
[51] *See* Timber Sale Bid Opening, Completion of Gate 5, Att. K.

sustainable use of our National Forest System Lands."[52] The first objective to achieve this strategic goal is to "contribute to the economic health of rural communities through use and access opportunities."[53] The Kosciusko agreement falls well short of this objective.

- *The harvested timber is for export*. While the GNA allows for the sale of timber harvested incidental to a restoration project, such harvests from the Kosciusko project do not meet this objective. First and foremost, economic arguments supporting expanded harvest of USFS timber rely upon the ability of such harvests to support jobs at local lumber mills and processing plants, thus supporting the broader community surrounding where these resources are extracted.

  However, it is clear that the harvest of the Kosciusko sale does not contribute to the local community because the timber is exclusively being exported to East Asia. The DOF has applied for and received approval from the Alaska Regional Forester of the USFS to allow export of *all* of the trees cut in this project[54], an exceedingly large volume compared to recent sales in the Tongass NF.[55] The local community will neither use, process, nor access the harvested and exported timber. No local mills will be involved in processing the harvested timber.

  Because the trees are being exported, the harvest will have a minimal positive economic impact on the local community, while negatively impacting Alaska's robust $4.17 billion tourism industry through destruction of the Tongass' iconic forested vistas.[56] It clearly violates the objective of the USDA to contribute to the economic health of rural communities.

- *The clear-cut of second growth negatively affects access to recreational and subsistence activities for local communities*. The clear-cutting of 396 acres of forested USFS land on Kosciusko Island jeopardizes habitat for native wildlife populations, as nearly all old growth forests on the island and the nearby Prince of Wales Island have been extensively logged. People within the Edna Bay, Prince of Wales Island and Ketchikan communities and elsewhere use this forest for a variety of recreational activities and subsistence hunting purposes, which they could no longer do after large swaths of it are clear-cut.

  This project is also particularly troubling given the requirement under the Multiple-Use Sustained-Yield Act of 1960, 16 U.S.C. §§ 528 *et seq*., for the USFS to manage "all the various renewable surface resources of the national forests so that they are utilized in the

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[52] USDA, *USDA Strategic Goal #6*, https://www.usda.gov/our-agency/about-usda/strategic-goals (last visited on May 10, 2018).
[53] *Id.*
[54] *See* Letter from Rebecca Nourse, June 21, 2017, Att. N;
[55] In 2013, the Heceta 2nd Growth Timber Sale was 137 acres and the 2014 Dargon Point Timber Sale was 57.7 acres, compared to Kosciusko GNA's 1,461 acres of harvest area. *See* Heceta 2nd Growth Timber Sale, https://aws.state.ak.us/OnlinePublicNotices/Notices/View.aspx?id=168949; *see also* Dargon Point Timber Sale, http://www.sitkawild.org/dargon_point_timber_sale_local_wood_local_benefits.
[56] *See* Alaska Division of Economic Development, *Economic Impact of Alaska's Visitor Industry (2014-15 Update)*, https://www.commerce.alaska.gov/web/ded/DEV/TourismDevelopment/TourismResearch.aspx.

combination that will best meet *the needs of the American people*,"[57] and in a manner that maintains "in perpetuity [] a high-level annual or periodic output of the various renewable resources … *without impairment of the productivity of the land*."[58] This sale demonstrates a failure to balance competing interests on the island and a lack of restoration activities to ensure sustained yield, instead heavily favoring timber harvest for short-term profit.

The second objective to achieve USDA Strategic Goal 6 is to "ensure lands and watersheds are sustainable, healthy and productive."[59] The Kosciusko agreement falls well short of this objective.

- *The agreement does not ensure healthy, sustainable, and productive lands and watersheds*. Despite the EA's passing references to possible restorative features, the contract agreements between USFS, DOF, and Alcan all exclusively describe the manner and means by which timber will be harvested and sold across 1,461 acres of fragmented parcels. This project masquerades as restoration work, but instead it is a standard USFS timber sale that does not in any way "ensure lands and watersheds are sustainable, healthy and productive." In fact, the SPA signed by USFS does not even contain any reforestation requirements, stating, "that reforestation requirements will be met through natural regeneration."[60] This lack of any actual restoration in this timber sale violates the objectives of the USDA's Strategic Goals.

- *Clearcutting does not have a net-positive effect on watershed and land sustainability*. The effects of a clear-cut harvest on both soil and waterway health are detrimental,[61] and inclusion of this practice on nearly 400 acres of public rainforest land clearly violates the primary objective of the GNA authority as well as the USDA Strategic Goal. The SPA and contract agreements make no mention of any efforts, other than minimal mitigation associated only with harvest activities, aimed towards maintaining sustainable land and watersheds in the area. Aside from the removal of healthy trees from the forest, clearcutting has an impact on mycelial and ectomycorrhizal fungal networks vital to a sustainable and productive forest.[62] However, there was no mention of such possible impacts in the project's NEPA documents. Furthermore, clearcutting methods like those employed in this SPA remove vast amounts of nutrients from forests, thereby diminishing nutrient availability and reducing soil depth.[63] This clearcut, with its lack of reforestation or restoration efforts, clearly violates of the Multiple-Use Sustained-Yield Act's

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[57] 16 U.S.C. § 531(a).
[58] *Id*. § 531(b) (emphasis added).
[59] USDA, *USDA Strategic Goal #6*, https://www.usda.gov/our-agency/about-usda/strategic-goals (last visited on Feb. 26, 2018).
[60] *See* Kosciusko GNA YG Timber Sale Contract, SSE-1362 K, at 6, Att. G.
[61] Hornbeck, J W & Kropelin, W, *Nutrient removal and leaching from a whole-tree harvest of northern hardwoods*, 11 J. Environ. Qual. 309–316 (1982); R. A. Dahlgren & C. T. Driscoll, *The effects of whole-tree clear-cutting on soil processes at the Hubbard Brook Experimental Forest, New Hampshire, USA*, 158 Plant Soil 239 (Jan. 1994) *available at* https://doi.org/10.1007/BF00009499.
[62] *See* Randy Molina, *The Role of Mycorrhizal Symbioses in the Health of the Giant Redwoods and Other Forest Ecosystems*, USDA Forest Service Gen. Tech. Rep.PSW-151, 78 (1994), *available at* https://www.fs.fed.us/psw/publications/documents/psw_gtr151/psw_gtr151_12_molina.pdf.
[63] *See supra* n. 61.

requirement that harvest must be "without impairment of the productivity of the land,"[64] and does not support the USDA's own policy objectives for National Forest management.

CONCLUSION

PEER respectfully submits this request for investigation of the Kosciusko GNA timber sale, which, as shown above, clearly violates federal law, USDA regulations and USFS policies. Such mismanagement of the Tongass National Forest is not news, as knowledge of its illegal timber theft problems and faulty timber sale administration has been widely reported for over 20 years.[65] The Tongass NF has been chastised for its irresponsible timber management in the past. As such, the Inspector General should investigate and stop this fraud and abuse being committed by the USFS with the public property of NFS lands.

PEER requests the IG investigate this fraud, abuse, and violation of federal law and regulation. We request that the IG report that this sale is illegal and should be invalidated. Specifically, we request that the IG:

- Conduct a performance review for (a) compliance with the Congressional requirements for Good Neighbor Agreements and (b) compliance with USFS protocols and rules;
- Develop recommendations to prevent the recurrence of any problems that are found;
- Undertake a performance review of whether GNA goals are being met agency-wide and whether such sales are furthering Secretary Perdue's strategic goals;
- Perform a full and complete financial audit of the Kosciusko Island sale to ensure the U.S. Treasury is provided the financial compensation it is due; and
- Recommend that any abuses that are found be corrected.

Respectfully submitted,

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[64] 15 U.S.C. § 531(b).

[65] *See* Joe Viechnicki, *Tongass timber sale short on timber*, KTOO (July 11, 2017), https://www.ktoo.org/2017/07/11/tongass-timber-sale-short-timber/; Scott Streater, *Green group asks IG to probe Tongass timber sales*, E&E News (Apr. 3, 2017), https://www.peer.org/assets/clips/FY15_4th_quarter_clips/E&ENEWS_FOREST_SERVICE_Green_group_asks_IG_to_probe_Tongass_timber_sales.pdf; Jeff DeBonis, *Stealing the Tongass, Playing by Alaska Rules in the U.S. Forest Service*, PEER (Nov. 1996), https://www.peer.org/assets/docs/whitepapers/1996_stealing_tongass.pdf; Jeff DeBonis, *Unindicted Co-Conspirator: Timber Theft and the U.S. Forest Service*, PEER (Mar. 26, 1996), https://www.peer.org/assets/docs/whitepapers/1996_unindicted_co-conspirator.pdf.

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List of Attachments:

A. Kosciusko Forest Timber Sale, Supplemental Project Agreement 17-GN-11100100-004.

B. USFS, *Good Neighbor Timber Sales Interim Implementation Instructions, Enclosure with Forest Management Director's Letter to Regional Foresters*, July 6, 2015.

C. USDA Forest Service, *Washington Office Activity Review of Timber Sale Administration, Sale Preparation, Stewardship Contracting, NEPA, and Timber Theft Prevention – Region 10*, June 12-20, 2016.

D. Forest Service Statement to Press, Apr. 4, 2017.

E. District Ranger Request for TM Program Review, Jan. 30, 2014.

F. 2017 Tongass NF Internal Review.

G. Kosciusko GNA YG Timber Sale Contract, SSE-1362 K.

H. E-mail from Clarence Clark, Jan. 2, 2018.

I. E-mail from Tyler Gunn, Kos GNA Restoration Possibilities, Dec. 7, 2017.

J. Kosciusko RV Appraisal 2400-17 Summary.

K. Timber Sale Bid Opening, Completion of Gate 5.

L. E-mail from Charles Strueli, Dec. 12, 2017.

M. USDA IG Denial Letter, May 3, 2017.

N. Letter from Rebecca Nourse, June 21, 2017.

Contact Record

Date: June 13th, 2018

Time: 9:00 a.m.

Method of Contact: Conference Call

Person(s):

- Troy Heithecker (Deputy Forest Supervisor)
- Barth Hamburg (Forest Landscape Architect)
- Dani Snyder (Central Tongass Landscape Architect)
- Ben Case (Forester/Silviculturalist, Central Tongass Project)
- Carey Case (Central Tongass IDT Leader)
- Pat Heuer (Forest NEPA Coordinator)
- Dave Zimmerman (Petersburg District Ranger)

Remarks:

Group reviewed the Central Tongass Draft Notice of Intent and Proposed Action.

Group discussed challenges identified in the project area, and specifically background of Scenic Integrity Objectives (SIOs) on timber economics related to past Tongass timber sale contracts. SIOs at times restrict harvest areas to less-economic, uneven-aged management prescriptions and higher cost helicopter logging systems, sometimes to the extent that projects could not be offered due to a deficit appraisal. To address this, Forest staff suggested consideration of a Project Specific Forest Plan Amendment for the Central Tongass project that would consider lowering SIOs in the project area.

Action Needed:

- Ben and Dani will work together to identify areas within each timber analysis area (TAA) in the Central Tongass project area where lowering SIOs would have the greatest potential to improve timber economics.
- June 20 - Meet with Forest Supervisor, and Forest and Regional Planning Staff to present information generated by Dani and Ben for review and discussion.

Forest Service Alaska Region P.O. Box 21628
Juneau, AK 99802-1628

File Code: 2450 **Date:** AUG 2 2 2016
Route To: 2420

Subject: Correction of Material Error in Big Thorne Stewardship Contract Haul Cost Appraisal

To: Ted Sandhofer, Contracting Officer

Viking Lumber Company, the purchaser of the Big Thorne Stewardship Contract has indicated that the haul costs they are experiencing appear to be significantly higher than those estimated in the final appraisal. They also notes that there seems to be a significant difference in haul cost allowances between the original appraisal in 2013 and the final offer appraisal in 2014. They have requested that the CO review the appraisal to determine if there are any errors in the calculations for haul costs.

Forest Management personnel in the Regional Office assisted you with that review and determined that there was a material error of omission of a significant component of the haul cost. Haul cost calculations in the appraisal consists of two separate components: 1) the round-trip-minutes (RTM's) that it takes for a log truck to leave the landing, travel to the mill or sort yard site and return to the landing and 2) "delay time", defined as time waiting to load, unload, set binders, open gates, put on tire chains etc. Delay time is added to RTM's to equal the total average sale RTM's for haul cost calculation purposes. The review indicates that delay time, in the standard amount of .5 hour was omitted from the final total round-trip-minutes (RTM's) used. The result is an incorrect average haul cost allowance and a correspondingly larger advertised rate.

You are directed to correct this material error in the appraisal, with the assistance of Regional Office Forest Management Valuation personnel, and apply a rate correction to the contract. The correction basis must be the original appraisal premise and base year values with the only change in the appraisal premise being the addition of .5 hour of delay time to the RTM's currently entered into the appraisal program.

Please contact Dave Harris at (907) 586-7875 or dpharris@fs.fed.us for additional information.

Beth G. Pendleton

BETH G. PENDLETON
Regional Forester

cc: Earl Stewart, Charles Streuli, Matt Anderson, Inga Petaisto

Forest Service

Alaska Region

P.O. Box 21628
Juneau, AK 99802-1628

File Code: 2450
Route To: 2420

Date: September 7, 2016

Subject: Rescinded Direction. Correction of Material Error in Big Thorne Stewardship Contract Haul Cost Appraisal

To: Ted Sandhofer, Contracting Officer

On August 22, 2016, I directed you to correct an alleged material error in haul cost calculations on the Big Thorne Stewardship Contract. That direction is hereby rescinded. Please contact Dave Harris at (907) 586-7875 or dpharris@fs.fed.us for additional information.

BETH G. PENDLETON
Regional Forester

cc: Earl Stewart, Charles Streuli, Matt Anderson, Inga Petaisto, Christine Dawe

Alaska Department of Fish and Game
Division of Wildlife Conservation
(907) 465-4190—PO Box 115526
Juneau, AK 99811-5526

CHAPTER 5: DEER MANAGEMENT REPORT

From: 1 July 2012
To: 30 June 2014

LOCATION

GAME MANAGEMENT UNIT: 3 (3,000 mi^2)

GEOGRAPHIC DESCRIPTION: Islands of the Petersburg, Kake, and Wrangell area, including Mitkof, Wrangell, Zarembo, Etolin, Kupreanof, Kuiu and adjacent smaller islands in central Southeast Alaska

BACKGROUND

Sitka black-tailed deer inhabit most Unit 3 islands. Deer populations on these islands have historically fluctuated with high and low extremes; clearcut logging has and will continue to reduce winter carrying capacity in some areas. Population declines result from severe winter weather and may be exacerbated by reduced habitat capability as a result of logging, predation by wolves and bears, and illegal hunting.

During the late 1960s and early 1970s, deer in Unit 3 experienced a series of severe winters that resulted in a significant population decline and led to restrictive regulations and bag limits in 1973. Unit 3 was closed to deer hunting from 1975 through 1979. The area south of Sumner Strait had a limit of 1 antlered deer from 1980 to 1987. The Alaska Board of Game (board) increased this limit to 2 antlered deer in 1988. In 1991 a registration permit hunt with a 15–31 October season and a 1 antlered deer bag limit was opened on parts of Mitkof, Kupreanof, Woewodski, and Butterworth islands, where the deer season had been closed since 1975. The registration permit was replaced with a harvest ticket requirement in 1995.

Beginning with the 1993 hunt, the only part of Unit 3 closed to deer hunting was the area within the Petersburg and Kupreanof city limits. The board abolished that prohibition in fall 2000. At the fall 2002 meeting, the Board of Game extended the season length and increased the bag limit for deer on the Lindenberg Peninsula, aligning the deer regulations on all of Kupreanof Island with the majority of Unit 3. In another action, the board established the Petersburg Management Area, an archery-only hunt area within the Petersburg city limits, and extended the archery-only deer season in this area by an additional 2 weeks. At its fall 2004 meeting, the Board of Game adopted a region-wide regulation requiring that deer hunters use harvest tickets in sequential order and carry any unused tickets with them while hunting.

Most of Unit 3 is federal land managed by the U.S. Forest Service (USFS). This area has experienced a significant amount of logging activity over the years. Initial access to most hunting

areas is by water. However, in many areas, once hunters arrive, extensive networks of logging roads are used for additional access to hunting areas. The communities of Petersburg, Wrangell and Kake are located in the unit and some hunters use local road systems to access hunting areas.

Seasons and bag limits for deer on Mitkof Island and Unit 3 in general are more restrictive compared to other island-dominated management units in the region. Between RY94 and RY11, the estimated Unit 3 deer harvest ranged from a low of 333 to a high of 1,119, and the number of hunters varied from 556 to 1,220. In RY05, the estimated unit wide harvest began decreasing, a trend that continued until reaching a low of 333 deer in RY08. During the past 3 seasons, the harvest has decreased somewhat, and the mean harvest during this report period of 506 deer is still about 125 deer below the previous 10 year mean (RY02–RY11) (Table 1).

MANAGEMENT DIRECTION

MANAGEMENT GOALS

As established by the board during its fall 2000 meeting in response to the intensive management of game law [AS 16.05.255 (i)(4)], the management goal is to manage the Unit 3 deer population to achieve and maintain a population of 15,000 deer while maintaining an annual harvest of 900 deer.

MANAGEMENT OBJECTIVES

- Maintain winter range (<1,500 foot elevation) that is capable of supporting 32 deer/mi^2 (average 1.0 pellet group/20 m^2 plot).
- Monitor long-term trends in deer abundance using pellet-group surveys.
- Monitor deer harvest using mandatory harvest ticket reports.

METHODS

From 1980 to 2010 (with the exception of 1981), we estimated Unit 3 harvest data using a regional questionnaire, mailed to a random sample of 33% of deer harvest ticket holders (ADF&G 2012a). Survey results for hunter effort, success, and kill location were then expanded to estimate results for all harvest ticket holders. Beginning fall 2011, the mail out questionnaire was replaced by mandatory hunt report cards issued in conjunction with deer harvest tickets. A preliminary analysis indicated these methods produce comparable results. We monitored long-term deer abundance using spring pellet-group transects in selected areas. All data listed in this report is tallied within regulatory years (RY; e.g., RY11 = 1 July 2011–30 June 2012).

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

Population Size

Snow cover in the Petersburg area was well above average during the winters of 2006–2007, 2007–2008, and 2008–2009, including record breaking snowfall in 2006–2007 (NOAA 2010). Severe winter weather, reductions in deer winter range due to logging, and predation by wolves

and black bears are believed to be the primary factors contributing to the observed decline in the Unit 3 deer population and hunter harvest. Because winter severity can influence the results of pellet-group surveys, inferences about population trends based on year-to-year variations in observed pellet-group densities must be made with caution. Nonetheless, we believe the recent declines in pellet-group densities and the decline in the estimated unit-wide harvest reflect actual declines in the unit's deer population.

Of 3 areas where pellet-group surveys were conducted in spring 2011 and 2012, 1 increased, 1 decreased, and 1 remained unchanged. Slight variations in pellet-group densities can be expected even when populations are stable because annual weather variations can affect how long pellet groups persist through a winter, and influence deer use of transects surveyed. Due to growing concern about the decline in the deer population and harvest in the vicinity of Petersburg, during the report period the department focused pellet group surveys on portions of Mitkof Island and the Lindenberg Peninsula of Kupreanof Island.

In spring 2013, pellet-group counts were conducted in 4 VCUs on 2 islands in Unit 3. Castle River pellet-group counts were 0.15 pellet-groups/plot in spring 2013, which was nearly identical to 0.12 in spring 2008. East Duncan pellet-group counts declined slightly from 0.60 pellet-groups/plot in spring 2012, to 0.56 in spring 2013. Portage Bay pellet-group counts declined from 0.63 pellet-groups/plot in spring 2012, to 0.24 in spring 2013. Woewodski (South Mitkof Island) pellet-group counts continued a decreasing trend that began in 2007, down from 0.74 pellet-groups/plot in spring 2012 to 0.64 in spring of 2013. This represents the second lowest count since pellet-group counts were initiated in that area in 1984 (Table 2).

In spring of 2014, pellet-group counts were conducted in 2 VCUs on 2 islands in Unit 3. East Duncan pellet-group counts declined slightly from 0.56 pellet-groups/plot in spring 2013, to 0.47 in spring 2014. Woewodski (South Mitkof Island) pellet-group counts increased slightly from 0.64 pellet-groups/plot in spring 2013, 0.76 in spring of 2014 (Table 2).

MORTALITY

Harvest

Season and Bag Limit	Resident and Nonresident Hunters	
Unit 3, Mitkof Island, the Petersburg Management Area	15 October–15 December	2 bucks
Unit 3, remainder of Mitkof Island, Woewodski and Butterworth islands	15 October–31 October	1 buck
Remainder of Unit 3	1 August–30 November	2 bucks
Beginning in RY2013.		
Unit 3, that portion of Kupreanof Island on the Lindenberg Peninsula east of Portage Bay-Duncan Canal portage	Resident season 15 October–31 October (Nonresidents: No open season)	1 buck

Board of Game Actions and Emergency Orders. At the January 2013 BOG meeting, the board adopted a department proposal to reduce the resident deer hunting season by 10 weeks (October 15–October 31), reduce the bag limit from 2 bucks to 1 buck, and close the nonresident deer hunting season on that portion of Kupreanof Island on Lindenberg Peninsula east of the Portage Bay-Duncan Canal portage. This action returned the resident deer season and bag limit on Lindenberg Peninsula to those previously in place from 1993–2002, and realigned the deer season and bag limit on the Lindenberg Peninsula with those of Mitkof, Woewodski, and Butterworth islands.

In fall 2010 it was brought to the Board of Game's attention that the Unit 3 deer harvest was well below the Intensive Management (IM) objective of 900 deer per year and that although we have no way to estimate the unit-wide deer population, it also appeared to be below the IM objective of 15,000 deer. In response to the board's fall 2010 request, in early 2011 the department began investigating potential IM actions that might be undertaken to reverse the decline in the Unit 3 deer population and hunter harvest. In early 2012 the department prepared a "Feasibility Assessment for Increasing Sustainable Harvest of Sitka-Black-Tailed Deer in a Portion of Game Management Unit 3" (ADF&G 2012b) and submitted it for board consideration in November 2012. The IM feasibility analysis was received favorably by the board, which requested the department to proceed with development of an operational plan for IM action in Unit 3 and to submit a regulatory proposal for IM action for board consideration at its March 2013 meeting.

In February 2013 the department prepared an "Operational Plan for the Intensive Management of Sitka Black-tailed Deer in a Portion of Game Management Unit 3" (ADF&G 2013). The following month, the IM operational plan was submitted for board consideration, along with a regulatory proposal (179A) requesting authorization for the department to hire 1 or 2 experienced trappers to intensively trap wolves within a 1,680 km^2 treatment area within Unit 3. The IM Operational Plan was well received by the board, which adopted Proposal 179A authorizing the department to take actions to reduce the wolf population in the intensive management area.

During this report period the department did not implement wolf control efforts and instead focused on developing techniques to more accurately measure changes in deer and wolf abundance resulting from wolf control measures and to assess habitat condition. Coincidentally and without direct support from the department, Petersburg-based wolf trappers have targeted wolves in the IM area, taking a total of 38 wolves during this report period. We believe that harvest has significantly reduced the number of wolves in the IM area and may be largely achieving the department's wolf reduction goal.

We issued no emergency orders regarding deer hunting in Unit 3 during the report period.

Hunter Harvest. In RY12 the unit-wide harvest increased to 536 deer, up slightly from 514 deer in RY11 (Table 1). In RY13, the unit-wide harvest decreased to 476. Deer harvest was reported in 18 Wildlife Analysis Areas (WAAs) during the report period, with the greatest percentage of the unit-wide harvest coming from WAA 1905 (Zarembo Island), WAA 1903 (Wrangell Island), and WAA 1901 (northern Etolin Island) providing 38%, 18% and 15%, respectively, of the unit-wide harvest.

Hunter Residency and Success. Few nonresidents hunt deer in Unit 3, and most hunters are local residents (Table 3). Nonresidents were just 5% of all Unit 3 deer hunters in RY12 and RY13. Deer populations are greater and seasons and bag limits more liberal in other nearby units, attracting most nonlocal hunters to those areas. During the report period, the estimated number of hunters increased somewhat and was slightly higher than the preceding 10-year average (RY02 - RY11) of 781. The total number of hunters increased from 693 in RY11 to 818 in RY12. In RY13, the total number of hunters declined slightly to 808. The hunter success rate decreased from 51% in RY10 and 52% in RY11 to 45% and 42% in RY12 and RY13, respectively.

Harvest Chronology. Table 4 shows the historical Unit 3 deer harvest percentage by month. Since 2002, the highest percentage of the unit-wide deer harvest has typically occurred during November, followed in descending order by October, August, and September. Such was the case during the current report period. The Unit 3 deer season is closed during the months of December and January, so the reported level of harvest during those months represents either illegal harvest, misreporting on the part of hunters, or is possibly an artifact of the expansion factor used to derive monthly harvest estimates.

Transport Methods. In RY12, most hunters reported using boats, highway vehicles, and 3- or 4-wheelers in descending order, to access their hunting areas. In RY13 hunters reported using highway vehicles, boats, and 3- or 4-wheelers in descending order, to access their hunting areas (Table 5).

Other Mortality

In addition to mortality resulting from legal hunting, other sources of deer mortality include predation by wolves and bears, poaching, deer-vehicle collisions, injury and accidents, and starvation or other natural causes. We have no estimates of nonhunting mortality during the report period.

CONCLUSIONS AND RECOMMENDATIONS

The IM harvest objective of 900 deer per year in Unit 3 was established by the board in fall 2000 based on the average annual harvest during the period RY94–RY98 plus 10 percent. That objective was last achieved in RY04 when an estimated 921 deer were taken and has only been achieved during 2 of the last 12 years. Field observations indicate that throughout Unit 3 deer currently exist at levels well below carrying capacity.

We believe declines in pellet-group densities and estimated unit-wide harvest since RY04 reflect an actual decline in the GMU 3 deer population. Several deep-snow winters including the record-setting snowfall of winter 2006–07 were likely causes of the decline, but reasons for the slow recovery are less clear. We suspect the primary factor limiting growth of the deer population was predation by wolves and bears. We also believe hunter harvest exerted less influence because there was a one or two buck bag limit and unit-wide harvest has been relatively modest. Less clear are the effects of unfavorable long-term changes in habitat conditions resulting from decades of clearcut logging, and potential competition from recently established and expanding moose populations. Research on forage availability, abundance and food habits of predators, and effects of a sympatric moose population on deer is needed to evaluate future management direction.

In addition to ongoing clearcut logging, which removes productive old growth forest that provides important winter habitat for deer, since the 1990s there have been two other changes to the unit's capacity to support deer. The amount of forage (forbs and shrubs) available to deer year round continues to decline as young clearcuts mature into closed canopy second-growth forest, and the distribution and abundance of moose has increased throughout the Unit 3 islands. The first unit-wide moose hunting season in Unit 3 opened in 1993 with a harvest of 13 bulls. Even with antler restrictions, by RY13 the harvest had grown to 55 bulls. The current IM harvest objective for deer should be re-evaluated to determine if it remains realistic under existing habitat conditions and in light of the relatively recent increases in moose distribution and abundance in the unit.

REFERENCES CITED

ADF&G (Alaska Department of Fish and Game). 2012a. Region I deer harvest reports: Deer harvest database of hunter survey results, 1997–2010, Wildlife Information Network (WinfoNet). Division of Wildlife Conservation, Anchorage. [URL not publicly available as some information is confidential].

ADF&G (Alaska Department of Fish and Game). 2012b. Feasibility assessment for increasing sustainable harvest of Sitka black-tailed deer in a portion of game management unit 3, October 2012. Report to Alaska Board of Game. Alaska Department of Fish and Game. Division of Wildlife Conservation. Juneau.

ADF&G (Alaska Department of Fish and Game). 2013. Operational plan for intensive management of Sitka black-tailed deer in a portion of game management unit 3, February 2013. Report to Alaska Board of Game. Alaska Department of Fish and Game. Division of Wildlife Conservation. Juneau.

NOAA (National Oceanic and Atmospheric Administration). 2010. National Weather Service, AK. Alaska Climate Database. http://pajk.arh.noaa.gov/cliMap/climap.php (Accessed January 2010)

PREPARED BY:

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Please cite any information taken from this section, and reference as:

Lowell, R.E. 2015. Unit 3 deer. Chapter 5, pages 5–1 through 5–16 [*In*] P. Harper and L. A. McCarthy, editors. Deer management report of survey and inventory activities 1 July 2012–30 June 2014. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2015-3, Juneau.

While this unit report was actually published in 2016, it is part of the set of 2015 unit species management reports, so we suggest citing the report as a 2015 report to maintain its relationship to the other 2015 unit reports.

Product names used in this publication are included for completeness but do not constitute product endorsement.

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Table 1. Unit 3 (estimated) deer harvest, regulatory years[a] 2002–2013.

Regulatory year	Estimated legal harvest[b]							
	M	(%)	F	(%)	Unk.	Total	Estimated illegal harvest	Total
2002[c]	624	(100)	0	(0)	0	624	0	624
2003[c]	888	(100)	0	(0)	0	888	13	901
2004[c]	921	(100)	0	(0)	0	921	0	921
2005[c]	710	(100)	0	(0)	0	710	8	718
2006[c]	594	(100)	0	(0)	0	594	16	610
2007[c]	457	(100)	0	(0)	0	457	0	457
2008[c]	328	(100)	0	(0)	0	328	5	333[d]
2009[c]	543	(100)	0	(0)	0	543	4	547
2010[c]	669	(100)	0	(0)	0	669	4	673
2011[e]	504	(100)	0	(0)	0	504	10	514
2012[e]	536	(100)	0	(0)	0	536	0	536
2013[e]	474	(100)	0	(0)	0	474	2	476

[a] Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.
[b] Estimates for RY02–RY10 are based on data from a mail questionnaire sent to hunters.
[c] Data from deer hunter questionnaire.
[d] Deer harvest reports for the 2008 hunting season were not returned from residents of Kake.
[e] Data from mandatory harvest ticket report requirement.

Table 2. Unit 3 deer population trends as indicated by pellet-group surveys, regulatory years[a] 1981–2013.

Area	Regulatory year	Mean pellet-groups/plot	Number of plots	95% CI
Security Bay	1984	0.02	360	0.01–0.04
(VCU 400)	1989	0.25	304	0.16–0.34
	1995	0.22	268	0.15–0.29
	2000	0.09	201	0.05–0.14
Pillar Bay	1988	0.16	337	0.10–0.22
(VCU 403)	2000	0.18	264	0.13–0.23
Malmesbury	1990	0.11	206	0.05–0.18
(VCU 408)	2000	0.06	254	0.03–0.09
Conclusion	1987	2.66	207	2.32–3.01
(VCU 417)	1989	0.95	200	0.72–1.18
	1991	0.71	200	0.53–0.88
	1996	1.45	191	1.19–1.70
Big John Bay	1994	0.38	300	0.29–0.48
(VCU 427)				
431–Point Barrie	1988	0.23	357	0.17–0.29
(VCU)	1993	0.77	375	0.64–0.90
Big Level	1981	1.54	399	1.45–1.63
(VCU 434a)	1983	1.56	336	
	1986	1.66	382	1.41–1.90
	1989	1.07	227	
	1991	2.16	456	1.90–2.41
Little Level	1981	2.48	114	2.02–2.94
(VCU 434b)	1983	2.34	136	
	1986	1.39	122	1.07–1.70
	1989	1.52	137	
	1991	3.59	132	3.07–4.11
Castle River	1984	0.19	312	0.12–0.26
(VCU 435)	1987	0.51	305	0.37–0.65
	1989	0.40	312	0.25–0.56
	1994	0.32	310	0.20–0.40
	1997	0.36	281	0.28–0.44
	2007	0.12	275	0.07–0.17
	2013	0.15	268	0.10–0.21

Table continues next page

Table 2. continued.

Area	Regulatory year	Mean pellet-groups/plot	Number of plots	95% CI
East Duncan Canal (VCU 437)	1990	1.12	227	0.92–1.32
	1992	0.78	213	0.63–0.94
	1998	1.04	153	0.77–1.30
	2001	1.89	254	1.59–2.19
	2007	1.37	262	1.10–1.65
	2011	0.64	289	0.51–0.77
	2012	0.60	282	0.43–1.72
	2013	0.56	263	0.40–0.71
	2014	0.47	354	0.33–0.61
Portage Bay (VCU 442)	1993	0.43	282	0.30–0.56
	1995	0.43	277	0.63–0.94
	1998	0.39	285	0.29–0.49
	2012	0.63	230	0.50–1.72
	2013	0.24	233	0.16–0.32
Woewodski (S. Mitkof) (VCU 448)	1984	.088	295	0.69–1.08
	1985	1.00	209	0.82–1.19
	1987	1.65	195	1.85–2.61
	1988	1.33	433	1.16–1.51
	1989	1.35	417	1.24–1.73
	1990	1.46	355	1.28–1.64
	1991	1.80	316	1.52–2.07
	1992	0.79	248	0.62–0.97
	1993	1.06	230	0.85–1.27
	1994	1.14	152	0.82–1.46
	1995	1.38	157	1.08–1.67
	1996	2.25	243	1.95–2.55
	1997	1.56	282	1.27–1.84
	1998	1.10	282	0.91–1.29
	1999	1.36	196	1.11–1.60
	2000	1.27	226	1.05–1.50
	2002	1.43	220	1.17–1.68
	2003	0.50	216	0.36–0.64
	2004	1.06	250	0.87–1.25
	2005	0.82	279	0.65–0.98
	2007	1.63	180	1.26–2.00
	2008	1.06	235	0.83–1.28
	2009	0.98	162	0.74–1.22
	2010	0.81	234	0.63–0.98

Table continues next page

Table 2. continued.

Area	Regulatory year	Mean pellet-groups/plot	Number of plots	95% CI
Woewodski (S. Mitkof)	2011	0.74	289	0.58–0.89
(VCU 448)	2012	0.74	229	0.56–2.15
	2013	0.64	220	0.50–0.77
	2014	0.76	225	0.58–0.93
Woewodski Island	1991	1.86	461	1.66–2.05
(VCU 448a)	1994	1.30	510	1.15–1.46
Frederick (N. Mitkof)	1981	0.08	945	0.06–0.11
(VCU 449)	1990	0.55	180	0.36–0.74
	1992	0.54	227	0.42–0.65
Blind Slough	1992	1.04	114	0.77–1.30
(Central Mitkof)	1993	1.28	265	1.04–1.51
(VCU 452)	1997	1.61	245	1.34–1.88
Dry	1981	0.92	91	0.56–1.28
(VCU 454)	1993	1.44	210	1.17–1.72
	1997	1.26	188	0.88–1.39
Vank Island Group	1981			
(VCU 455)				
a) Sokolof		1.73	900	1.61–1.85
b) Rynda		0.25	281	0.18–0.32
c) Greys		0.25	284	0.18–0.32
Baht	2001	2.75	109	2.10–3.41
(VCU 456)	2003	1.80	108	1.45–2.15
	2004	2.12	101	1.73–2.51
	2006	1.51	108	1.14–1.88
	2008	1.19	125	0.86–1.52
St. John	2001	1.67	220	1.38–1.93
(VCU 457)	2003	1.17	229	0.96–1.38
	2004	1.75	213	1.44–2.03
	2006	1.98	211	1.65–2.31
	2008	0.99	225	0.81–1.17

Table continues next page

Table 2. continued.

Area	Regulatory year	Mean pellet-groups/plot	Number of plots	95% CI
Snow Passage (VCU 458)	1994	0.57	345	0.45–0.70
	1997	0.98	315	0.80–1.16
	2001	1.50	280	1.28–1.72
	2003	1.02	306	0.84–1.20
	2004	1.08	262	0.89–1.27
	2006	1.52	289	1.26–1.78
Meter (VCU 459)	2001	0.87	180	0.64–1.10
	2003	0.89	180	0.68–1.10
	2004	1.41	155	1.07–1.75
	2008	2.29	80	1.33–3.24
Woronkofski (VCU 461) (All Transects)	1985	1.63	646	1.45–1.81
(Trans. 10, 11, 12)	1985	2.01	218	1.62–2.39
	1987	2.23	201	1.85–2.61
	1989	2.52	223	2.18–2.85
	1991	1.59	203	1.32–1.85
	1993	0.22	225	0.13–0.31
	1994	0.26	224	0.18–0.34
	1999	0.11	216	0.06–0.17
	2003	0.08	227	0.03–0.13
Mosman (VCU 467)	1993	0.07	304	0.03–0.11
Onslow (VCU 473)	1984	0.37	321	0.28–0.46
	1985	0.59	334	0.48–0.70
	1986	0.72	347	0.59–0.84
	1987	0.42	336	0.31–0.55
	1988	0.44	329	0.32–0.55
	1991	0.66	322	0.51–0.80
	1993	0.68	341	0.55–0.82
	1994	0.88	340	0.74–1.02
	1997	0.73	346	0.59–0.86
	2002	0.97	332	0.81–1.13
	2006	0.60	363	0.48–0.71
	2008	1.33	339	1.13–1.53
	2010	0.96	366	0.81–1.10

Table continues next page

Table 2. continued.

Area	Regulatory year	Mean pellet-groups/plot	Number of plots	95% CI
Fool's (VCU 480)	1994	0.54	193	0.38–0.70
	2000	0.61	201	0.45–0.77
Canoe (VCU 474)	2000	0.11	228	0.06–0.17
Coronation (VCU 564)	1983	1.20	696	1.04–1.36
	1985	2.34	228	N/A
	1988	1.41	408	1.17–1.66
	1989	1.63	293	1.28–1.98
	1997	0.44	289	0.34–0.55

[a] Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.

Table 3. Unit 3 deer hunter residency and success, regulatory years[a] 2002–2013.

	Successful						Unsuccessful						
Regulatory year	Local[b] resident	Nonlocal resident	Nonresident	Unk	Total	(%)	Local[b] resident	Nonlocal resident	Nonresident	Unk	Total	(%)	Total[c] hunters
2002[d]	363	51	14		428	(48)	413	22	28		463	(52)	891
2003[d]	480	66	21		567	(58)	345	38	20		403	(42)	970
2004[d]	500	51	9		560	(53)	410	67	21		498	(47)	1,058
2005[d]	404	64	5		473	(52)	356	71	15		442	(48)	915
2006[d]	298	40	32		370	(49)	320	57	9		386	(51)	756
2007[d]	264	14	5		283	(41)	315	66	18		399	(59)	682
2008[d]	184	25	5		214	(38)	284	31	27		342	(62)	556[e]
2009[d]	197	16	6		219	(38)	325	20	6		351	(62)	570
2010[d]	286	70	13	0	369	(51)	283	45	7	16	351	(49)	720
2011[f]	306	38	11	2	357	(52)	283	25	16	12	336	(48)	693
2012[f]	320	31	12	4	367	(45)	361	54	30	6	451	(55)	818
2013[f]	279	53	7	3	342	(42)	349	81	34	2	466	(58)	808

[a] Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.
[b] Residents of Units 1B, 3, Meyers Chuck, Point Baker, and Port Protection.
[c] Data from registration permit report, hunter survey, and harvest ticket report included.
[d] Data from deer hunter questionnaire.
[e] Deer harvest survey reports for the 2008 hunting season were not returned from residents of Kake.
[f] Data from mandatory harvest ticket hunt reports.

Table 4. Unit 3 deer percentage of harvest by month, regulatory years[a] 2002–2013.

Regulatory year	Harvest periods										Total[b] no. deer
	August	September	October	November	December	January	February	March	April	Unk.	
2002[c]	15	16	25	36	0	0	0	0	0	8	624
2003[c]	19	9	27	30	0	0	0	0	0	15	901
2004[c]	15	10	36	30	1	0	0	0	0	8	921
2005[c]	15	6	30	38	0	0	1	1	0	9	717
2006[c]	21	11	25	35	1	0	0	0	0	7	610
2007[c]	17	5	19	52	1	0	1	0	0	5	458
2008[c]	0	0	31	58	2	0	0	0	0	9	201[d]
2009[c]	13	6	15	58	0	0	0	0	0	7	548
2010[c]	15	9	27	41	2	0	0	0	0	5	674
2011[e]	17	9	19	50	2	1	0	0	0	2	515
2012[e]	16	6	17	57	2	0	0	0	0	1	537
2013[e]	12	7	25	52	3	0	0	0	0	1	476

[a] Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.
[b] May not equal harvest table due to rounding or incomplete reporting.
[c] Data from deer hunter questionnaire.
[d] Deer harvest reports for the 2008 hunting season were not returned from residents of Kake.
[e] Data from mandatory harvest ticket report requirement.

Table 5. Unit 3 deer hunter percentage of effort by transport method, regulatory years[a] 2002–2013.[b]

Regulatory year	Airplane	Boat	3- or 4-wheeler	Foot	Highway vehicle	ORV	Other	Unknown	Number of trips
2002[c]	3	38	8	2	49		0		NA
2003[c]	0	49	6	2	40		3		NA
2004[c]	1	47	5	2	43		2		1,580
2005[c]	1	39	5	2	52		0	1	1,263
2006[c]	4	51	0	1	37		1	6	756
2007[c]	1	55	5	1	35		0	3	683
2008[c]	3	53	0	2	43		0	0	546[d]
2009[c]	2	47	0	1	47		0	2	569
2010[c]	0	36	1	5	49	7	0	2	822
2011[e]	1	45	9	5	26	3	0	11	744
2012[e]	2	42	12	5	33	2	1	3	882
2013[e]	2	38	8	3	42	3	1	2	892

[a] Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.
[b] The hunter mail survey reports transport as total number of hunting trips by method.
[c] Data from deer hunter questionnaire.
[d] Deer harvest reports for the 2008 hunting season were not returned from residents of Kake.
[e] Data from mandatory harvest ticket report requirement.

Public Employees for Environmental Responsibility
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April 3. 2017

Inspector General Phyllis Fong
USDA, Office of Inspector General
Room 117-W Jamie Whitten Bldg.
1400 Independence Avenue SW
Washington, DC 20250

Dear Inspector General Fong:

I am writing you today on behalf of Public Employees for Environmental Responsibility (PEER) to request your office's review of recent timber sales from Alaska's Tongass National Forest. As indicated in the attached U.S. Forest Service (USFS) documents, these sales have been conducted in a manner that does not safeguard the taxpayer interests or forest health, with surprisingly lax oversight and in violation of the agency's own policies.

Some of the major problems highlighted in these documents include:

1. Major Monetary Losses to the Taxpayer.
The attached June 20, 2016 "Washington Office Activity Review" examined two large Tongass timber sales and found that in one recent sale USFS maladministration led to "a reduction in sale value exceeding $1,700,000."

The attached post-harvest Monitoring Report concerning another large-scale sale concluded that though its lax oversight the agency lost "close to 2 million", an amount "more than double the original stumpage."

Agency employees believe that even this these figures are significant underestimates of the true losses to the taxpayer. However, USFS has resisted internal entreaties to conduct a detailed financial audit of these sales. Indeed, the Washington Office Activity Review itself called for "an independent review [to] inform solutions and prevent similar issues in future timber and stewardship contracts." That call has been unanswered.

PEER is asking your office to conduct a forensic audit to determine the true extent of losses to the taxpayer from the lapses cited in these internal reviews.

In addition, under the Secure Rural Schools and National Forest Receipts programs, a portion of

all Tongass timber sale proceeds go to local communities and schools. Depressed sale values therefore cost both the U.S. taxpayers and Alaskan schoolkids. PEER is also asking you to determine if there any mechanism for recovering funds rightfully owed to both the USFS and the Alaskan communities and schools.

2. Poor Purchaser Oversight.

The attached USFS reports also document how unnamed U.S. Forest Service officials allowed timber operators to benefit by cherry-picking more valuable trees and leaving intended salvage trees—which were far less valuable—standing. Thus, despite these being stewardship sales to improve forest health, these officials looked the other way while companies ignored the sale prescriptions by "favoring removal in the larger diameter, more valuable species groups, such as western red cedar and spruce" while significantly undercutting far less valuable hemlock, in the words of the Washington Office Review.

Further, this review found that the Forest facilitated "purchaser selection of trees without prior marking" and the forest's only follow-on monitoring was completely "reliant on the purchaser's own data."

Even more incredibly, The Forest could not even produce a written contract or other "pertinent documentation" for a high-volume sale.

To that end, PEER is also requesting your office to conduct a performance review of these recent sales in order to 1) identify the responsible USFS who permitted or committed these actions to the detriment of the public resource; 2) recommend disciplinary or other actions that would be appropriate for these individuals; and 3) recommend actions or protocols that the Tongass National Forest should adopt to prevent recurrence of these missteps.

3. Safeguards Bypassed.

The Washington Office Review also found that required law enforcement timber theft prevention inspections appear to have been bypassed.

To that end, we are asking your office to 1) review the protocols that should be required to prevent timber theft or fraud; 2) recommend policies or actions that USFS should take to ensure compliance with safeguards; and 3) determine whether there is any actionable evidence of collusion by USFS in aiding commercial timber fraud.

4. Stewardship Goals Compromised.

Apart from the adverse financial effects, the manner in which these sales were administered appear to have compromised their purported environmental benefits, as well. These recent sales were stewardship sales in which the harvests are supposed to be designed to reach prescribed tree species cut criteria. However, the Washington Office Review concluded that these sales lacked any "defined process for independently confirming whether the criteria are being met. This obfuscates the acceptability of the end result."

Another issue the Review identified was temporary timber roads improperly left open "for several years following commercial activity."

To address these issues, we would request that your performance review also assess whether USFS met its forest health goals for these sales—or whether the agency lacked the means for verifying if those goals were met. Further, we would hope that you recommend approaches the agency should employ to ensure that future stewardship sales in fact serve their stewardship purposes.

In summary, PEER is urging your office to perform both a forensic financial audit of recent Tongass National Forest to determine the extent of the losses and to conduct a performance review to assess deviations from best practices and to identify USFS employees responsible for these lapses. Further, we would suggest that you develop recommended steps to ensure that these missteps are not repeated.

Thank you for your attention to this request. We are happy to provide your office with any additional information it may require.

Sincerely,

Jeff Ruch
Executive Director

Attachments

Alaska Department of Fish and Game
Division of Wildlife Conservation
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CHAPTER 2: DEER MANAGEMENT REPORT

From: 1 July 2012
To: 30 June 2014

LOCATION

GAME MANAGEMENT UNIT: 1B (3,000 mi^2)

GEOGRAPHIC DESCRIPTION: Southeast Alaska mainland from Cape Fanshaw to Lemesurier Point

BACKGROUND

Except for isolated pockets, Sitka black-tailed deer inhabit the Unit 1B mainland in low densities. Deer numbers have fluctuated over time with high and low population extremes. Severe winter weather has caused most population declines, and illegal hunting and predation by wolves and bears have extended the length of the declines. Clearcut logging has and will continue to further reduce deer carrying capacity in some areas.

A substantial population decline occurred as a result of a series of severe winters in the late 1960s and early 1970s. The population declines led to restrictive regulations and bag limits in 1973. Unit 1B remained open, with a 1 antlered-deer limit from 1973 to 1980 and a 2 antlered-deer limit from 1981 to the present. However, another deep-snow winter during 2006–2007 further reduced already low populations.

Most of Unit 1B is federal land managed by the U.S. Forest Service (USFS). There are no large communities in Unit 1B, although private in-holdings and small settlements exist at Point Agassiz, Farm Island, and Meyer's Chuck. The subunit is accessible only by boat or airplane although some local logging roads exist for onsite access. Although the communities of Petersburg and Wrangell are located only a short distance west of Unit 1B, much of the hunting effort by individuals in these communities is focused on the Unit 3 islands to the west of the mainland. The deer season in most of neighboring Unit 3 closes a month earlier than Unit 1B, after which time some Petersburg residents shift their deer hunting efforts to the mainland where the season remains open until December 31. From 2002 through 2011, the estimated Unit 1B deer harvest ranged from a low of 34 to a high of 121, and the estimated number of hunters varied from 66 to 157 (Tables 1 and 2).

MANAGEMENT DIRECTION

MANAGEMENT GOALS

The management goal for Unit 1B deer is to maintain healthy, productive populations, sufficiently abundant and resilient to harsh winters to ensure good hunting opportunities and success. The population objective for deer in Unit 1B is from 6,400 to 10,200 deer.

MANAGEMENT OBJECTIVES

- Maintain winter range (<1,500 foot elevation) that is capable of supporting 32 deer/mi^2 (average 1.0 pellet group/20 m^2 plot).
- Monitor long-term trends in deer abundance using pellet-group surveys.
- Monitor deer harvest using harvest ticket reports.

METHODS

Prior to RY11, we estimated Unit 1B harvest data from a regional questionnaire, mailed to a random sample of 33% of deer harvest ticket holders. However, during this reporting period deer harvest data were collected from mandatory hunt report cards issued in conjunction with deer harvest tickets. Relative winter deer densities are periodically measured with spring pellet-group transects in selected areas (ADF&G 2012). All data listed in this report is tallied within regulatory years (RY) (i.e., RY11=1 July 2011–30 June 2012).

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

Population Size

Unit 1B pellet-group surveys are currently inadequate to determine deer population trends (Table 3). In spring 2002, the most recent year that pellet-group counts were conducted in the unit, one value comparison unit (VCU) at Horn Cliffs had a pellet-group density of .67 pellet-groups/plot, which was nearly identical to the .60 recorded the previous time the area was surveyed in 1998. In recent years emphasis has been placed on conducting deer pellet counts and monitoring the deer population in neighboring Unit 3 where hunting pressure is much higher and where Department and hunter observations indicate deer populations have remained stagnant at low levels since 2007. As a consequence, we did not conduct pellet-group surveys in Unit 1B during the current report period.

MORTALITY

Harvest

Season and Bag Limit	Resident and Nonresident Hunters	
Unit 1B	1 August–31 December	2 bucks

Board of Game Actions and Emergency Orders. The Board of Game (BOG) took no actions and we issued no emergency orders regarding deer hunting in Unit 1B during the report period.

Hunter Harvest. The estimated Unit 1B harvest (including illegal harvest) increased slightly from 87 deer in RY12 to 92 deer in RY13. Both years of this report period remained above the preceding 10-year average (RY02─RY11) of 71 deer per year. During the report period deer harvest was reported in 5 Wildlife Analysis Areas (WAAs), including WAA 1603 (Thomas Bay), WAA 1605 (Muddy River/Patterson Glacier), WAA 1706 (Horn Cliffs/LeConte Bay), WAA 1707 (North Arm of the Stikine River Drainage), and WAA 1817 (Vixen Inlet, Union Bay). The greatest percentages of the unit-wide harvest were taken in WAA 1603 (54%), WAA 1605 (35%), and WAA 1706 (17%).

Hunter Residency and Success. Based on estimates derived from harvest ticket hunt report cards, 13 nonresidents hunted deer in Unit 1B during RY12 and 9 were successful (Table 2). In RY13, an estimated 29 nonresidents hunted deer in the unit and 8 were successful. Deer populations are higher and seasons and bag limits more liberal in Unit 2 and Unit 4. Therefore, those areas attract more nonlocal hunters. Nonetheless, some nonlocal residents, and guided nonresidents in particular, hunt deer incidentally while mountain goat hunting in Unit 1B.

During the report period, the number of hunters increased from 138 in RY12, to 159 in RY13, both well above the preceding 10 year average (RY02─RY11) of 106 hunters per year. The hunter success rate of 48% in RY12 and 38% in RY13, were slightly above and below, respectively, the preceding 10-year average (RY02─RY11) of 46%.

Harvest Chronology. Generally, most harvest in the unit takes place during November, October, and August, in descending order, and such was case during RY12. However, during RY13 most of the harvest occurred in November, but more deer were harvested during August than during October (Table 4).

Transport Methods. Most Unit 1B deer hunters generally reported traveling to their hunting areas by boat (Table 5). In RY12 83% of hunters reported using boats to access their hunt area, 9% used 3- or 4-wheelers, and 3% accessed their hunting area on foot. In RY13 84% of hunters reported using boats to access their hunting area, 6% accessed their hunting area on foot, and 4% used 3- or 4-wheelers. Logging roads provide some all-terrain vehicle (ATV) and highway vehicle access in a few isolated portions of the unit.

Other Mortality

In addition to mortality resulting from legal hunting, other sources of deer mortality include severe winter weather, predation by wolves and bears, poaching, injury and accidents, and starvation or natural causes.

CONCLUSIONS AND RECOMMENDATIONS

Unit 1B deer populations exist in isolated pockets and have patchy distribution. The unit has relatively low deer density overall (due to typically high snow accumulation) and is largely inaccessible. Unit-wide, deer densities vary from moderate in some isolated areas to extremely low in others. Overall, deer populations seem stable with localized variations.

Winter weather, predation, and removal of winter habitat through clearcut logging have the greatest effects on deer population dynamics. Clearcut logging and second-growth stands entering stem exclusion have and will continue to reduce deer carrying capacity in the unit. With recent declines in the deer population and harvest in the northern Unit 3, many residents of Petersburg have begun to shift hunting effort to the adjacent Unit 1B mainland. At this time there are no indications that hunting seasons or bag limits should be further restricted.

REFERENCES CITED

ADF&G (Alaska Department of Fish and Game). 2012. Region I deer harvest reports: Deer harvest database of hunter survey results, 1997–2010, Wildlife Information Network (WinfoNet). Division of Wildlife Conservation, Anchorage. [URL not publicly available as some information is confidential].

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Please cite any information taken from this section, and reference as follows:

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While this unit report was actually published in 2016, it is part of the set of 2015 unit species management reports, so we suggest citing the report as a 2015 report to maintain its relationship to the other 2015 unit reports.

Table 1. Unit 1B deer harvest, regulatory years 2002–2013.

Regulatory	Estimated legal harvest						Estimated illegal harvest					
year	M	(%)	F	(%)	Unk	Total	M	(%)	F	(%)	Unk	Total
2002[a]	34	(100)				34						34
2003[a]	82	(100)				82						82
2004[a]	38	(100)				38						38
2005[a]	58	(100)				58						58
2006[a]	114	(100)				114						114
2007[a]	43	(100)				43						43
2008[a]	34	(100)				34						34
2009[a]	105	(100)				105			16	(100)		121
2010[a]	103	(100)				103						103
2011[b]	83	(100)				83						83
2012[b]	87	(100)				87						87
2013[b]	89	(100)				89			3	(100)		92

[a] Data from mail out survey.
[b] Data from mandatory harvest ticket reports.

Table 2. Unit 1B deer hunter residency and success, regulatory years 2002–2013.

	Successful					Unsuccessful					
Regulatory year	Local[a] resident	Nonlocal resident	Nonresident	Total	(%)	Local[a] resident	Nonlocal resident	Nonresident	Total	(%)	Total hunters
2002	30	0	0	30	(33)	52	0	9	61	(67)	91
2003	45	0	0	45	(42)	46	15	0	61	(58)	106
2004	34	0	0	34	(49)	26	10	0	36	(51)	70
2005	47	0	5	52	(43)	48	7	14	69	(57)	121
2006	62	10	5	77	(65)	23	5	13	41	(35)	118
2007	24	3	0	27	(41)	24	6	9	39	(59)	66
2008	19	0	0	19	(25)	57	0	0	57	(75)	76
2009	61	6	6	73	(51)	53	6	6	71	(49)	144
2010	54	7	13	74	(50)	61	0	14	75	(50)	157[b]
2011	57	0	7	64	(56)	36	7	8	51	(44)	115
2012	56	1	9	66	(48)	58	9	4	71	(52)	138[c]
2013	52	0	8	60	(38)	66	9	21	96	(62)	159[d]

[a] Residents of Units 1B, 3, Meyers Chuck, Point Baker, and Port Protection.

[b] Categories do not equal number of hunters because the residency status for 8 hunters was unknown.

[c] Categories do not equal number of hunters because residency status of 1 hunter was unknown.

[d] Categories do not equal number of hunters because residency status of 3 hunters was unknown.

Table 3. Unit 1B deer population trends as indicated by pellet-group surveys, regulatory years 1991 through 2002.

Area	Regulatory year	Mean pellet-groups/plot	Number of plots	95% CI
Frosty Bay (VCU 524)	1991	.70	266	0.55–0.86
Muddy River (VCU 489)	1996	1.53	348	1.26–1.80
Horn Cliffs (VCU 490)	1998	.60	250	0.47–0.74
Madan (VCU 504)	2000	.23	244	0.14–0.31
Harding (VCU 511)	2000	.02	207	0.00–0.05
Horn Cliffs (VCU 490)	2002	.67	290	0.53–0.81

Table 4. Unit 1B deer harvest chronology by month and percent, regulatory years 2002–2013.

Regulatory year	Harvest periods								Number of deer[a]
	Aug	Sep	Oct	Nov	Dec	Jan	Mar	Unk	
2002	12	12	24	52	0	0	0	0	33
2003	20	15	27	38	0	0	0	0	82
2004	33	0	33	34	0	0	0	0	39
2005	43	16	19	22	0	0	0	0	58
2006	14	13	20	42	11	0	0	0	114
2007	56	9	0	28	0	0	0	7	43
2008	0	0	34	66	0	0	0	0	29
2009	17	3	3	64	7	0	0	7	121
2010	5	14	28	38	12	3	0	1	104
2011	19	7	20	45	6	0	0	2	83
2012	14	8	25	52	2	0	0	0	93
2013	23	3	14	43	16	1	0	0	88

[a] May not equal harvest table due to rounding or incomplete reporting.

Table 5. Unit 1B deer hunter effort, percent by transport method, regulatory year's 2002–2013[a].

Regulatory year	Airplane	Percent of effort							Number of trips
		Boat	3- or 4-wheeler	Foot	ORV	Highway vehicle	Horse / Dog Team	Not specified	
2002		91				4		4	NA
2003		84	8	9					NA
2004		95	5						74
2005		97				3			129
2006	3	93						3	118
2007	8	77	6	9					66
2008		100							34
2009		93				3		3	121
2010		83	1	3	1	10		2	160
2011	1	84	3	6		4	1	2	114
2012	1	83	9	3		2		2	138
2013	1	84	4	6		1		4	159

[a] The hunter survey reports transport as total number of hunting trips by method.

Preliminary List of Activities for Proposal and Review in 2020

Preliminary list of activities within the Central Tongass project area being considered for proposal and review in 2020[1] (after the Central Tongass Record of Decision is signed).*

Location	Timeframe	Project Description
Etolin Island, Anita Bay	2021	**Anita Bay LTF** Reconstruct the existing bulkhead to replace a rotting log substructure and expand the lower level to increase the width working within the existing footprint.
Mitkof Island	2020	**Raven's Roost Cabin** Build public recreation cabin in new location; decommission old cabin.
Mitkof Island	2020	**Dispersed Recreation Sites** Improve parking areas and log transfer facilities on Mitkof Island at locations that are known public use areas on NFS lands (for example, Snake Ridge, Woodpecker undeveloped campsite and LFT, South Blind Slough LTF, end of Dry Straits road). No infrastructure would be provided at these sites (e.g., fire rings, picnic tables, trash cans).
Mitkof Island	2020	**Old-growth Timber Harvest** Old-growth timber harvest, new NFS road building, reconstruction and temporary road construction.
Mitkof Island	2020-2021	**South Blind Slough LTF Reconstruction and Improvements** Remove and replace rotting log bulkhead, improve ramp and add rock lift to existing footprint to better implement BMPs. Expand upland sorting capacity an estimated 2 acres working with the existing easement.
Mitkof Island	2020-2021	**Woodpecker LTF Improvements** Expand upland sorting and operability capacity by an estimated 2.5 acres within the existing easement.
Thomas Bay	2020	**Young-growth Timber Harvest** Young-growth timber harvest, and temporary road construction.
Zarembo Island	2020-2021	**Bridge and AOP culvert reconstruction** Reconstruct 80 foot bridge on NFS road 6590 at MP 1.177 (St John's Creek) to retain stream course and address scour issues; reconstruct a bridge on Outback Creek to address scour issues and stream constriction; replace existing culverts with AOP structures on NFS road 6590 at MP 42.44 and NFS road 6590 at MP 5.36 to provide aquatic fish passage (survey and designs complete); install AOP structure on NFS road 6585 at MP 10.174 (surveyed complete and needs design).

* These activities have NOT been NEPA-cleared. The Central Tongass IDT will use the Implementation Framework and Implementation Checklist outlined in the Central Tongass, Appendix A - Implementation Plan and Activity Guides to introduce projects and review proposed activity locations.

WASHINGTON OFFICE ACTIVITY REVIEW OF TIMBER SALE ADMINISTRATION, SALE PREPARATION, STEWARDSHIP CONTRACTING, NEPA AND TIMBER THEFT PREVENTION REGION 10

June 12-20, 2016

REPORT
USDA FOREST SERVICE
WASHINGTON, D.C.

REVIEW TEAM

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WASHINGTON OFFICE ACTIVITY REVIEW
TIMBER SALE ADMINISTRATION, SALE PREPARATION, STEWARDSHIP CONTRACTING, NEPA AND THEFT PREVENTION
REGION 10 - Alaska
2016

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FOREST MANAGEMENT ACTIVITY REVIEW
REGION 10- ALASKA
June 12 – 20, 2016

I. INTRODUCTION

Type of Review

A Forest Management Activity Review focusing on timber sale and stewardship contracting activities in Region 10, including preparation, administration, and timber theft prevention was conducted from June 12–20, 2016. The review team examined and evaluated regional guidelines, program direction, accounting procedures, and accomplishments at the regional office and forest level. The Forest Service internal review system guidelines (FSM 1410) were used to conduct this review.

Need for Review

Preparation and administration of timber sale and stewardship contracts are key areas of resource management and critical for the attainment of resource objectives. National Environmental Policy Act (NEPA) disclosure, decision implementation, and theft of timber from National Forest System land continues to attract national attention. The last similar review in Region 10 was completed in 2001. A limited review of the transaction evidence appraisal (TEA) system was conducted in 2003. A functional assistance trip was conducted in 2013 to discuss the residual value appraisal system being used. The intent of this review is to follow up on these past findings and recommendations to determine where progress has been made and identify any areas that continue to need attention.

Review Objectives and Major Areas of Emphasis

1. Evaluate compliance with national policies and directions pertaining to preparation and administration of timber sale and stewardship contracts, delegations of authority for timber disposal, NEPA decision implementation, and timber theft prevention procedures

2. Follow up on Action Items from 2001 Activity Review and 2013 Functional Assistance Trip conducted by the Washington Office (WO) including use of timber information manager (TIM), timber sale accounting, and the appraisal system

3. Evaluate implementation of authorities from the 2014 Farm Bill including stewardship, Good Neighbor Authority, and designation by prescription

4. Evaluate implementation of silviculture prescriptions for consistency with land management objectives and NEPA decisions

5. Review implementation of NEPA decisions and monitoring during timber sale and stewardship contract preparation and administration

6. Evaluate the adequacy and effectiveness of the organizational structure and the coordination of the forest management program at all levels

7. Evaluate the training and skill level of forest management program employees

8. Evaluate regional and forest training and certification programs related to sale preparation and sale administration

9. Evaluate the management controls for log accountability and payments

10. Evaluate the management controls for sale appraisal, contract preparation, permit issuance, and reporting

11. Evaluate implementation of national policy and standards regarding transportation planning, road maintenance, and construction methods

Review Approach

The review was conducted on the Tongass National Forest and included the review of the Big Thorne timber sale and to a lesser extent the Tonka Integrated Resource Timber Contract (IRTC) stewardship contracts. This review covers office records, discussion with field personnel, and observation of procedures applied on the ground. Dave Harris, Director for Forest Management in Region 10, served as the review team liaison responsible for coordinating the Region's interdisciplinary participation in the review, arranging for review of materials and travel within the Region. An in-person closeout report was provided with findings and observations before the team left on Monday, June 20, 2016, which was followed by a final written report after the review.

II. COMMENDATIONS

1. Dave Harris provided excellent logistical support for all aspects of this review. The travel and lodging for more than ten individuals by plane, boat, and truck covering four overnight locations and numerous short stops, was extremely challenging and the team recognizes, especially after the fact, how much effort he and his team must have expended to make the trip as flawless as it was.

2. Safety was seamlessly incorporated into the review itinerary. Inspections and briefings were conducted sometimes openly, sometimes subtly, personal protective equipment and mandatory pre-flight safety training was provided as appropriate. Dave and his team did an excellent job of mitigating the hazards that are inherently part of doing business in Alaska.

3. Dave Harris and his team provided very comprehensive pre-review electronic documentation, which was very useful in preparing for this review.

4. Tongass National Forest (NF) and District personnel who participated in the review are commended for providing the team with candid insights and information. Their willingness to speak openly about the issues, challenges, and successes, of which there are many, speaks to the great potential for improving the work environment and team atmosphere across the Tongass NF. There is no doubt that the management team and staff

of the Tongass NF consists of dedicated professionals who are striving against monumental headwinds to achieve the results the public expects.

5. In light of the political pressure and tight deadlines, the Forest should be commended for their ability to complete the project within the timeframe.

III. FOLLOW UP TO ACTION ITEMS FROM 2001 ACTIVITY REVIEW

Adaptive Management: The Timber Program Review in 2001 found that partial harvest prescriptions failed to adequately identify future vegetation management objectives or options. Should the Forest continue partial cutting and uneven-aged management, the review report recommended developing silviculture prescriptions needed to implement the new strategy including an appropriate update to the forest plan. The 2016 review found that the Forest is following these recommendations.

The Program Review found that non-painted trees in diameter limit prescriptions may not be meeting all resource objectives and recommended that the Region define under what conditions diameter limit prescriptions are to be used. The Region's 2001 Action Plan addressed implementation of this recommendation. The 2016 review found that the Region has transitioned to partial harvest prescriptions based upon a basal area (BA) removal approach.

Log Accountability: The 2016 review found that the Region is following the recommendations in the review report and in their action plan.

Financial Accountability: The 2001 review found that following a long delay in filling the position dealing with automated timber sale accounting (ATSA) and other business management activities, problems were identified that needed attention. The recommendations were for the Region to identify problems and conduct workshops to train personnel on resolving the problems and to continue functional assistance trips intended to ensure that quality work is being accomplished in a timely fashion. The Region's action plan addressed the recommendations.

The 2016 review found that there continues to be problems with filling vacancies. The combination of skillsets of those individuals currently in ATSA and other business management activities, the impact of the unfilled regional position, and the normal logistical challenges in the Region is impeding their ability to conduct workshops and functional assistance trips.

B. FOLLOW UP ON RECOMMENDATIONS OF TIMBER SALE APPRAISAL FUNCTIONAL ASSISTANCE TRIP (FAT) (2013)

Overview: The issues identified in this FAT have been or are being addressed. Many of the issues are addressed in the June 2016 direction letter from the Regional Forester to the Tongass NF Supervisor.

IV. ISSUES AND FINDINGS

Note: An issue is a general description of a subject area containing findings. A finding is an observation of an activity that does not meet policy and needs corrective action to bring it into compliance with national or regional policy. Issues are not listed in order of importance or priority.

ISSUE 1: Financial Issues

FINDING 1: Salvage Sale Fund (SSF) collection plans have been approved for use on the Tonka and Big Thorne Stewardship sales. Distribution of funds to SSF reduces the funds available to support stewardship projects.

DISCUSSION: Deriving receipts from the sale of products designated for removal through stewardship contracting projects is a secondary objective to achieving land management goals. In accordance with 16 U.S.C. 2104 (d)(2)(3) and 2014 Farm Bill, Sec 8205(2)(3) cash receipts realized from stewardship sales are to be used to fund other stewardship projects and are not considered to be monies received from the National Forest System or the public lands under any provision of law.

In accordance with Forest Service Handbook (FSH) 2409.19, 67(1)(c) cash revenue from stewardship projects can only be distributed to the SSF to reimburse the SSF expenditures incurred in preparing the project.

RECOMMENDED ACTION: Cancel Salvage Sale Plans associated with any stewardship contracts and remove from ATSA if the stewardship projects were not prepared with salvage sale funds.

FINDING 2: Advance Deposit requirements for payment prior to cutting under E.2.1.2 Advance Deposits of the Big Thorne IRTC, are not being met. Advance deposits are only being required for the minimum amount of 30 days, however cutting and hauling operations exceed projected volume and value, resulting in an account balance that consistently falls below the mandatory 10-day cut suspension balance requirement.

DISCUSSION: Contract statement projections do not accurately reflect advance deposit needs, and the review team identified several instances where operations were not adequately covered. No documented evidence of suspension of operations or revised operating plans was found. Lack of adequate coverage of minimum advance deposits is putting the Forest Service and the contracting officer (CO) at risk of financial loss, resulting in personal liability for the CO if payment is not received from the contractor for timber removed.

RECOMMENDED ACTION: Bring projected cut and removal volume and value in line with operating plans and actual production. Require sufficient cash or payment guarantee to cover actual production. Provide additional training on advance deposits and calculating projections. Ensure projections are accurately reported on the monthly statement and billings and collection of advance deposits is timely.

FINDING 3: A complete official contract record was not available. Records are located at multiple locations and while sale preparation documentation was provided from a second location, these files did not include official, signed, hardcopy documents to support the awarded contract.

DISCUSSION: The official contract records are not in compliance with FSH 2409.15 Sale Administration Handbook, Chapter 14 and FSH 6209.11 Records Management Handbook, Chapter 40. The Tongass NF contract records appear to be dispersed between several locations; however, the Forest was unable to provide official approved documents when requested from local offices. One complete official record is not being maintained with the CO. It is critical that the CO maintains a complete record and accurate documentation of all records to administer the contract. Forest Management directives on contract records identify the required documents that should be printed and maintained in hardcopy. For example, the contract record located at the Petersburg Supervisor's Office with the CO did not include pertinent environmental analysis disclosure and decision documents. Financial internal controls also provide for specific documentation requirements found at FSM 6503 POLICY (31 U.S.C. 3512(c), General Accounty Office (GAO)-14-704G Federal Internal Control Standards (pages 47 and 48). Finally, agency records management requires a hardcopy contract record with a 30-year retention.

RECOMMENDED ACTION: Ensure that all pertinent documents are submitted to the CO for printing and filing in a single official contract record.

FINDING 4: No documentation was included in the CO's official files from the Engineering Representative(s) or Construction Inspector.

DISCUSSION: Electronic copies were made available but were still in an editable form (MSWord Document). The last recorded visit to the Big Thorne stewardship sale was in March of 2016.

RECOMMENDED ACTION: Consolidate all engineering inspection reports and any other correspondence into the official file with the CO. Review documentation and project/sale visit requirements in FSH 2409.15, Chapter 10 and regional supplement R-10 2409.15-2006-2. The supplement requires Engineering Representatives to use form R10-2400-25a, Timber Sale Inspection Report. If electronic copies of documentation are submitted, place a hard copy in the official file.

FINDING 5: Corporate certifications on various legal instruments, including the stewardship or timber sale contract, are not properly executed.

DISCUSSION: When the legal entity is a corporation, the corporate signature must be certified by a different member of the corporation. Signers cannot self-certify the validity or authenticity of their corporate representation. Also, no witnesses should sign a contract with a corporation as they do not provide any legal certification for the corporate signer. Contracts are not executed properly. Corporation certification is "self-certified."

RECOMMENDED ACTION: Ensure that all legal instruments, e.g. contracts, bonds, etc., are executed by a corporation officer, and are properly certified.

FINDING 6: Project plans, certifications, or other documents that must be signed by a Line Officer under FSM 2404 are being signed by staff identified as signing "for" the Line Officer.

DISCUSSION: Line Officer approval that cannot be re-delegated, such as Gate Certifications or Salvage Sale Plans, must be signed by the Line Officer or their designated Acting. Signatory authority is delegated as Acting Forest Supervisor or Acting District Ranger. The title on the official document should identify the signer as the designated acting and not signing for the Line Officer, as the authority cannot be re-delegated outside the line organization.

RECOMMENDED ACTION: Discontinue the practice of signing documents "for" the Line Officer and ensure the title is documented as "Acting," Review letters of delegation for Acting's to insure that authority for signing official documents is specifically delegated.

ISSUE 2. Need For Accountability and Compliance with the Regional Timber Theft Prevention Plan.

FINDING 1: No Law Enforcement and Investigations (LE&I) inspection reports were found in the Big Thorne Project file.

DISCUSSION: Region 10 Timber Theft Detection and Prevention Plan requires Law Enforcement Officers (LEO) to document site visits on standard timber sale inspection report R10-2400-25a. Completed inspection reports will be retained in timber sale folders and LE&I files. The LEO indicated that timber sale site visits had been conducted and documented only by using FS Form 5300-1 Incident Report and was only maintained by LE&I and not provided to timber sale administrator (SA).

RECOMMENDED ACTION: Follow Region 10 Timber Theft Detection and Prevention Plan for documenting timber sale inspections.

FINDING 2: Load receipt use requirements are not being followed.

DISCUSSION: Load check conducted during site visit found the load receipt attached with only two randomly placed staples instead of the standard of 5 staples as shown on the receipt. Correct attachment of load receipts is required as a method to prevent the reuse of load receipts. The SA communicated the infraction to the purchaser representative and the CO. No record of load receipt field checks was found in the contract records.

RECOMMENDED ACTION: Each truck check should include a thorough inspection of the load receipt and attachment method with results documented on the timber sale inspection report and to LE&I. There may be a need to improve the specific direction and training for completing and documenting these truck checks.

ISSUE 3: Engineering portions and administration of the Big Thorne Stewardship Contract did not meet standards.

FINDING 1: Nationally required Forest Service supplemental specification (FSSS) used to make the standard specifications applicable to timber or stewardship contracts were not included in the specified road packages. Supplemental specifications 230 Brushing and 30311(01) Blading, do

not follow or meet the standards of handbook direction for Forest Service Supplemental Specification development.

DISCUSSION: Specific supplemental specifications remove all references to Federal Acquisition Regulations (FAR). While others remove language already covered by provision or require reference back to a provision. The specifications appear to be a maintenance T-spec copied into the specified road package. Blading 30311(01) is not listed in the table of contents for the road package under the Big Thorne Stewardship.

RECOMMENDED ACTION: Future sales shall include all nationally required supplemental specifications or required supplements for use in other divisions in the specified road package. See list below:

FSSS 101.01 dated 01/22/2009 or FP-14 equivalent FSSS

FSSS 101.04 dated 11/06/2007 or FP-14 equivalent FSSS

FSSS 104.03 dated 02/22/2005 or FP-14 equivalent FSSS.

FSSS 106.01 dated 07/31/2007 or FP-14 equivalent FSSS.

FSSS 107.08 dated 03/29/2005 or FP-14 equivalent FSSS.

FSSS 201.06 dated 02/18/2005 or FP-14 equivalent FSSS.

Supplemental specifications shall include the information listed in FSH 7709.56–72.2-Use of Specifications. See supplements from other regions for examples of blading and brushing requirements.

FINDING 2: Supplemental specifications did not have any approval dates.

DISCUSSION: There was no way to tell that the supplements used in the specified road package were approved at a national, regional, or forest level for use. The supplemental specifications used to modify the FP must not replace or modify mandatory Division 100 FSSS.

RECOMMENDED ACTION: Future sales shall include supplemental specifications that are approved by the appropriate authority whether at the national, regional or forest level. Supplemental specifications shall include the information listed in FSH 7709.56–72.2-Use of Specifications.

ISSUE 4: The Big Thorne Project did not follow national policy in implementing the Gate System.

FINDING 1: For the Big Thorne project, Gates 1-6 were not implemented sequentially.

DISCUSSION: FSH 2409.18, Chapter 10 states that each gate must be closed out prior to initiating the next gate. The project record and supporting documents clearly show overlap in all of the Gates except for Gate 6. This includes Gate 2, the NEPA stage, continuing all the way through Gate 5. NEPA needs to be completed and the decision signed prior to moving forward with the rest of the project.

When the Roadless Rule exemption was rescinded, the project dropped 2,500 acres and roads in the Inventoried Roadless Areas from the original pool of units. Due to this change a second Gate 1 was initiated, and a key part of Gate 1 should have been documentation of whether the revised proposal is economically feasible. This was not completed. A project plan was included for the initial Gate 1, but it is not clear that an updated Gate 1 document was signed. The project plan located within the project record corresponds with the initial Gate 1 completed in 2010, but there is no plan completed in 2012. Gate 1 is used to inform Gate 2, and failure to fully complete the revised Gate 1 prior to initiation of Gate 2 caused issues moving through the NEPA process.

RECOMMENDED ACTION: For future projects, ensure policy direction is followed by moving through the gate system sequentially and ensuring each gate is closed before the next one is initiated. Gate 2 should be emphasized, ensuring that NEPA is completed prior to moving on to Gate 3. Ensure all required documentation is included in the project record.

ISSUE 5: Use of Designation by Prescription (DxPRE) is not following direction or achieving results as described in the provision.

FINDING 1: The WO-Special Provision K-C.3.5.5 Designation by Prescription (4/04) is not being properly used.

DISCUSSION: Approved for use in April 2004, this provision requires the purchaser marking of leave trees prior to harvest. The way the provision was used in Big Thorne IRTC does not require any purchaser marking of leave trees prior to cutting. The current (05/15) version of this provision allows for purchaser selection of cut and leave trees without prior marking, but also requires a companion provision for inspection, which is not present in the April 2004 provision.

Directives supporting the use of Designation by Prescription are found in FSM 2440, which were updated effective May 23, 2015. The previous version of this directive supported the April 2004 version of the Designation by Prescription special provision, which required purchaser marking of leave trees for approval prior to cutting. Any changes to national directives at the regional level must result in a more restrictive interpretation and not a less restrictive interpretation of the WO-FSM/FSH (FSM 1113.2-Supplements).

RECOMMENDED ACTION: Develop a method for adapting national policy to meet regional needs that is within the regional authority. Changes to national timber sale contract provisions requires approval by the WO-Director of Forest Management. The team noted that current regional policy, by File Code 2430 letter dated September 2, 2015, has updated the previous letter of direction.

FINDING 2: Designation by Prescription provision is not being administered as required by the contract resulting in a heavier than expected BA retention and lower volume removal.

DISCUSSION: Field observations (Big Thorne Unit 24) and Forest monitoring of the Big Thorne and Tonka IRTC contracts provide a mixed picture with regards to whether BA objectives are being met. Overall it would appear that there is a tendency for the purchaser to remove less than the prescribed BA by species, favoring removal in the larger diameter, more valuable species groups such as western red cedar and spruce. A thorough analysis should be conducted to determine if there is a skew in volume removal that is not consistent with the cruise and appraisal

to the larger diameter trees and higher value species such as western red cedar and spruce and away from hemlock.

Discussion with District and Forest personnel indicate that there is a wide variance in the amount of volume being removed from acre to acre. Whether this is intentional or by accident, the provision, as written, does not indicate that this is the desired result, and that the 50 percent or 25 percent reduction by species should be distributed through all of the species and across the cutting unit.

RECOMMENDED ACTION: Reevaluate the BA retention requirements and establish a method for determining compliance that can be administered during the harvesting process. If the results of cutting under current contracts are acceptable to the responsible line officer, then an adjustment should be made to the timber designation in the contract, cruise, and appraisal methods to account for this fall down in total volume and increased BA retention.

FINDING 3: Prescriptive timber designation criteria based on BA by species is not adequate to achieve a predictable end result and the inspection process is not well defined by the DxPre provision.

DISCUSSION: The prescriptive timber designation that relies only on BA of trees by species to be removed has resulted in an uneven pattern of cutting and acceptable removal is difficult to verify by inspection.

The prescriptive criteria in K-C.3.5.5 requires that a table be attached to describe the BA to be removed in each cutting unit. The table that is supplied also contains two additional prescription requirements as follows:

> The Forest Service will provide a table to the contractor showing the approved BA removal by species for each cutting unit. The Forest Service will also provide a table that converts diameter at breast height (DBH) to BA.
>
> The contractor will be required to submit a unit by unit record of the BA of each species cut each day and will stop cutting the species when the BA limit is reached. This record will also provide a DBH by species for each tree cut.

The Forest Service has provided the BA by species table to the contractor. No record was found of how the purchaser's unit-by-unit record of BA of each species cut each day were analyzed or used to determine compliance. There was an indication that these "cutting cards" supplied by the contractor's timber fallers for the Big Thorne IRTC were being kept on the resource specialist's desk at the Thorne Bay district office but the team was unable to follow up due to time limitations. The timber sale administrator determines if proper BA removal is occurring by cumulative, individual tree BA tally from the purchaser and comparing that to unit BA by species as a whole. The individual tree BA tally is not valid until the unit is completed.

RECOMMENDED ACTION: The cutting card system of inspection should be replaced in future contracts with a BA/acre sampling system that is not reliant on the purchaser's own data to monitor the progress of cutting. The system should measure compliance on an acre basis using a standard BA variable plot sampling method.

Consider changing the characterization of the individual tree selection, uneven-aged management system, to "variable density thinning" with a range of spacing tolerances and some additional selection variables such as species and minimum and/or maximum diameter. The current limitation of no more than a 2-acre opening with no spacing sideboards is not enforceable.

FINDING 4: Non-contract documents are being used to reference contract requirements under DxPre.

DISCUSSION: A separate, non-contractual requirement for determining how to implement the BA removal/retention criteria is provided to the contractor and is called a "Prescription Addendum" in addition to the BA table. This addendum includes further explanation of how the prescription is to be interpreted and inspected. This is not referenced in the contract. It indicates that a variable plot sampling method should be used by the SA to determine if "appropriate BA by species is being retained." The inspection method detailed in this addendum is separate from the "cutting card" inspection.

There is only one criteria established for this DxPre in the contract and that is BA to be cut by species. The Big Thorne IRTC required either 25 percent of the BA is to be cut (75 percent retention) or 50 percent of the pre-treatment BA cut in DxPre units. If additional criteria are required they should be incorporated into the DxPre provision and made part of the sample contract prior to advertisement.

In general, it is difficult to see that BA targets are being met by DxPre. Inspection is based on contractor/purchaser supplied data with no defined process for independently confirming whether the criteria is being met. This obfuscates the acceptability of the end result. This form of contractor self-inspection should provide for independent inspection by the Government, such as is done in service and construction contracts.

RECOMMENDED ACTION: Incorporate timber selection criteria from the prescription addendum into the contract language that describes how timber is to be selected. Use the 5/15 version of the DxPre provision in future contracts and include a companion inspection provision that incorporates the inspection language from the addendum. Design the field cruise based on the prescription designation guide, and use the same method for the inspection procedure in the companion special provision.

FINDING 5: Included timber is not being required for removal.

DISCUSSION: Utility grade Sitka spruce and hemlock are subject to optional removal provision K-C.1.2#. (05/10). This provision requires the contractor to pay for, but elect not to, remove this material. This material may not be getting cut in proportion to its presence in the DxPre stands partially because it is not required to be removed. All hemlock–without regard for product, is shown as a species required to be cut in the contract. The contractor has indicated that the utility will not be removed so it is likely to represent a higher percentage of the retained hemlock component in the residual stand when that product is the only product in individual trees.

Note that the lump sum payment for this utility product is based on the advertised volume in a scaled sale. This is problematic because the estimated volume is based on a lower precision estimate, and therefore is less reliable, than would normally be found in a presale measurement

contract. Estimating the volume under this BA removal designation is very difficult for the cruiser to do with any accuracy.

RECOMMENDED ACTION: Timber that is not required to be cut and removed should be classified under Special Provision K-C.1.1-Timber Subject to Agreement. This volume may be considered as add-volume for attainment purposes but should not be considered sold volume at the time of contract award because it is well known and expected that the contractor/purchaser will opt to leave it in the woods. The effects of leaving all of the utility hemlock, either standing or down, should be a consideration in the silvicultural prescription.

The Region 10 Special Provision K-C.1.2# Optional Removal provision should be restricted to products that generally can be expected to be removed during normal market conditions, but may be subject to periodic downturns in the market.

ISSUE 6: Temporary Roads are Left Open

FINDING 1: Temporary roads are being left open to provide the public with access to firewood areas.

DISCUSSION: Temporary roads are a challenge with respect to travel management. Region 10 has completed travel management motor vehicle use map (MVUM) designation as well as identification of the minimum road system. Forest Service policy prohibiting motor vehicle use, except as authorized by the MVUM, is problematic for Line Officers that would like to leave timber sale temp roads open to the public for several years following commercial activities. Delaying temp road decommissioning is also problematic for the SA and the CO as road decom may be the final work remaining for contract close out. The National Forest Management Act (NFMA) requires temp road closure and revegetation within 5 years of project completion, and leaving these roads open, but not technically open on the MVUM, diminishes public understanding and acceptance of the Agency's travel regulations.

RECOMMENDED ACTION: Address the time period for leaving temporary roads left open for public access in the NEPA decision and how the MVUM will address these opportunities. Address how temporary roads will be closed after the sale is closed using funding from KV or other sources to maintain compliance with NFMA. Temporary roads to be left open must be shown on the contract area map as "Remain Open" (G.6.3.1). This is not a discretionary decision that can be made by the CO after the sale is awarded.

ISSUE 7: Region's appraisal program does not reflect the latest selling values.

FINDING 1: The Region has not updated the appraisal program to their most recent set of cost and selling value data.

DISCUSSION: The appraisal program should reflect the most recent cost and selling value information available. Other tasks in the appraisal arena may be impeding the effort to maintain cost information that is up to date.

RECOMMENDED ACTION: This task should be given priority and completed as soon as possible.

V. OBSERVATIONS

Observations do not require any specific action but the region is encouraged to review and develop strategies to address the observations.

1. FINANCIAL ACCOUNTABILITY

The official source document for reporting scale volumes should be the certificate from the Third Party Scale Organization (TPSO) and does not need to be manually duplicated on a FS-2400-66b Additional Scale Volume Report. The Forest should continue to provide a clear audit trail, by summarizing the multiple certificates into a monthly volume by Species, Product, and Unit of Measure value using a spreadsheet; however, the official source is the certificate of volume. The WO will work with the regional measurements staff and the new accounting system (Forest Product Financial System-FPFS) developers to provide for a transfer of electronic scale from the TPSO to FPFS.

A Raft Inventory tracking system is no longer being used as designed in the 1980s. The Tongass timber resource assistant receives the Raft ID from the TPSO with the scaling certificate. The certified scale value is currently being manually entered into ATSA twice, one with a Raft ID and "hauled" volume and then manually entered as Volume Scaled with the associated Raft ID. This redundancy can be eliminated by discontinuing the Raft Inventory process in ATSA. There is still a need to identify a decked value for billing with charges, but the estimated deck value is not tracked by a Raft ID.

2. DELEGATION OF AUTHORITY

Regional Forester letters delegating contracting authority do not need to include bonding officer authority. All COs are bonding officers by delegation and further delegation is irrelevant.

The Regional Forester delegates authority to the named individual CO to dispose of timber under the Regional Forester's authority. The Tongass NF Supervisor then has the additional task of assigning individual contracts to the two Forest COs.

3. LAW ENFORCEMENT

Based on the lack of documentation of interactions with the sale preparation and sale administration personnel, it appears that LE&I personnel should strive to work closer with timber sale administrators including conducting joint timber sale inspections and attending pre-work meetings.

4. ENGINEERING

The unit is showing Method of Measure on the Schedule of Items, Estimate of Quantities and Project Work Descriptions sheets. Method of Measure is not valid when using FP-03 (or FP-14). All quantities are an Estimated Quantity unless denoted on the plans as a Contract Quantity as stated in FP-03 Section 109 and associated required national Forest Service supplemental specifications (FSSS).

Deposits for Reconstruction Engineering Services (DRES) were not collected on either project the team reviewed. While this this is an optional provision, DRES can be used as a source of funding for engineering work associated with timber sale/steward projects.

The utilization standards listed in FSSS 212 (no date) does not include minimum diameter at DBH. The region should consider changing the supplement to remove specific utilization standards and instead reference the standards listed in A.2 of a stewardship or regular timber sale contract. FSSS 201.06 dated February 18, 2005, gives the appropriate language. Small trees not meeting utilization standards that need to be cut should be treated as slash.

Complex road stream crossings should employ the more rigorous Aquatic Organism Passage (AOP) design protocol. Consideration is given to environmental restoration goals and objectives, particularly stream protection and restoration, with the Big Thorne stewardship contract that includes four AOP culvert replacements. Engineering has coordinated with other staffs in meeting stream restoration objectives employing a simplified AOP design method.

There was miscommunication with the design engineer in identifying all of the road segments needing work, which resulted in specified road changes as the Big Thorne project was administered. These changes resulted in stumpage rate adjustments and subsequently decreased potential retained receipts. Further design changes may result in the need to pay with CMRD.

Region 10 timber sale contracts include temporary road construction unlike anywhere else in the country as soft muskeg soils cannot support logging trucks or equipment without a significant amount of rock to create road templates up to two or more feet thick. Much discussion revolved around temporary and specified roads. While observed temp road construction does not conflict with policy, the intent of many of these road templates may be to store them for future use, which is more in line with maintenance level 1 National Forest System roads. Road cost is a significant factor in sale marketability as new specified roads that are designed by an engineer may be 50 percent more expensive. Temporary roads should be carefully considered as timber sales are designed. Specified roads may be more appropriate where the road template is intended to be used in the future and where resource protection, stream geomorphology, or topography are concerns.

Region 10 Engineering is directly involved in supporting the timber program with CMRD funding. The regional engineering group has a good understanding of and working relationships with other regional directorates. The National Construction Certification Program including certification for timber sale engineering representatives (ER) and construction inspectors is managed well with a dozen certified timber sale ER's and Construction Inspectors

5. NEPA

The Big Thorne project NEPA contract did not include the Statement of Objectives and Statement of Work that were crafted by the Tongass NF. This resulted in several issues throughout the project when it came to enforcing certain parts of the contract. There needs to be clear communication between the CO and the Line Officer, and a level of oversight provided to ensure the appropriate measures and language are included in the contract.

There were times with the Big Thorne project where more coordination and oversight should have been provided by the Line Officer and the interdisciplinary team (IDT) to the NEPA contractor. For example, the Logjam environmental impact statement (EIS) was used by the NEPA contractor as a template; however, there were many significant differences between the Big Thorne and Logjam projects, and it should have been clarified that the Logjam EIS was an example, not a template. Additionally, several standards and guidelines had been changed since the Logjam project. Several of these issues became apparent at the beginning of the process and more direct oversight and direction should have been provided to try and prevent future problems. There are also instances where the NEPA contractor seemed to make decisions rather than following the direction of the Line Officer or the IDT.

The Prince of Wales IDT ended up doing a considerable amount of work that they wanted the NEPA contractor to do, preventing them from completing other NEPA analyses and adding additional cost. When difficulties with the NEPA contractor continued, it may have been more efficient to use more people from the three IDTs across the Forest, considering the political and external pressures for this project and using a contractor for some of the smaller projects to keep other NEPA projects moving. Depending upon circumstances specific to a project, using a contractor may not always be the most efficient or effective choice.

Gate 2 was completed by the NEPA contractor; it is important that FSM direction be followed and Gate 1 be completed prior to Gate 2. This becomes even more important when using a contractor. The Gate 1 unit pool was rendered ineffective by the rescission of the Roadless Rule exemption and deletion of the associated harvest units and volume. This significantly modified the alternatives being analyzed. A new Logging System and Transportation Analysis (LSTA) unit pool was created to meet the purpose and need and additional field recon was needed for the units added to the project at this time. Field reconnaissance of new units was occurring at the same time NEPA was already being completed for the existing unit pool.

The notice of intent (NOI) and scoping letter for Big Thorne were sent out approximately one month prior to the Roadless Rule exemption being rescinded. The Forest should have been thinking about the possibility of the exemption being rescinded and preparing for it, to the extent possible. If they saw that the Roadless Rule exemption was likely going to be rescinded, it's possible it might have been better to wait to issue the NOI and scoping letter and to have a more complete Gate 1.

6. ORGANIZATIONAL AND WORKFORCE EFFECTIVENESS

Mission critical succession planning to fill vacancies in timber resource positions is not keeping ahead of the turn-over. Recently hired employees lack critical experience, while higher rates of absenteeism have led to a backlog of processing harvesting data and maintaining documentation. On the Tongass NF, timber resource duties at the supervisor's office are divided into two positions, reducing efficiency through workload distribution while not contributing to closing the backlog of work.

The loss of experienced timber sale resource staff to support TIM and ATSA is impacting the Region. The Tongass NF timber resource specialist is providing regional support and representation on the national timber sale accounting cadre in addition to assigned duties. While regional needs are less than a full-time equivalent, inexperienced and absent district staff require

timely support and ongoing training. The Forest is conducting district log accountability audits and is actively working to resolve issues. Changes in financial accountability direction and systems requires leadership and support to district resource staff.

Currently the pre-award and post-award business processes are separated between two timber resource specialists on the Tongass NF. Normally, the timber resource position handles the solicitation, bid opening, award and sale administration that includes expertise in both TIM and TSA business processes. This organization of major duties maintains a continuity of contract financial administration over time and supports consistency and coordination of solicitation through post-award activities.

The Forest could develop a workforce structure that provides critical part-time regional support, blends ATSA and TIM support duties more efficiently, and identifies opportunities to capitalize on the current staffing to establish a "trainee" position. For example, combine part-time regional duties with the Forest position (GS-11/12). With the combining of pre-award and post-award, use the full-time equivalent (FTE) to fill a lower-graded position to absorb the remaining Forest-level duties (GS-9). Create a trainee position (GS-5/6) at the Forest or a District depending on workload and location of trainer.

The Tongass NF is now operated and managed as one forest administrative unit with staff and offices across the communities that comprise the Forest. While the single administration of the Forest conforms to the common agency structure, coordination, cooperation, and collaboration can be slowed or opportunities completely missed because staff and line employees are located in different locations and on different islands.

Experience and longevity among both the regional and Forest staff is evident. A veteran staff has seen and experienced much, which contributes to the ability to focus under intense political and public pressure. In the near-term of 1-3 years, the Alaska Region should recruit replacement staff so that the eventual transition is both measured and orderly. The senior staff can provide information, perspective, and context to the replacement employees about living and working on a unique National Forest. Mentoring and succession planning will become more important as experienced personnel retire. The Forest Engineer is aware of this challenge and is prioritizing workload assignments while encouraging newer employees to gain experience and advance through the engineering representative (ER) certification program. If timber sale activities significantly decrease, as some have forewarned, the region would face a painful realignment and reorganization with significant budget reductions. If the Region 10 timber program were to decline significantly, staffs including engineering would lose capacity in personnel and facilities that would be very difficult to maintain and would be difficult to restore.

7. SALE PREPARATION-APPRAISALS

Appraisals (Volume Appraised Versus Volume Cut): Appraisal group volumes used for the Big Thorne Sale do not reflect the volumes actually being cut. While the appraisal lists hemlock (a severely deficit appraisal group) at 48 percent of the total sawtimber sale volume; the actual hemlock sawtimber volume being cut is much less. If that trend continues, the true value of this sale based upon the appraisal group volumes cut is much greater than the current appraised value. Based upon the appraisal, required removal of hemlock sawtimber reduces the value of the sale in excess of $50.00/mbf. Fixed costs (road construction, etc.) are not included in this figure since

they would have to be covered by the remaining appraisal group volumes if the hemlock sawtimber volume were not considered. Under the current appraisal, required removal of the hemlock sawtimber (34,040 mbf) represents a reduction in sale value exceeding $1,700,000.00. If the hemlock sawtimber volume is not being removed, then sale value based upon what is actually occurring on-the-ground has been under-represented.

Appraisals (Appraisal Average Stem Size versus Cut Stem Size): Based upon the site visit during the review, there was a predominance of larger stems being cut in the helicopter (uneven-aged management) unit. If this observation is representative of the entire sale, there are appraisal implications. The average dbh, average volume per tree, and average volume per piece cut are probably skewed compared to values used in the appraisal. When compared to the values derived from the sale cruise information and used in the appraisal, actual logging costs associated with handling of this material are likely to be less costly. The value of timber actually cut would then be higher than the amount estimated in the appraisal.

Appraisals (Utility Logs): Currently the Region includes this material at a fixed rate ($2.00). However, they require payment for the entire amount shown in the appraisal and listed in the contract. For the Big Thorne Sale, the volume of utility logs is second only to the hemlock appraisal group (27,524 mbf). While listed on the 2400-17 as optional, payment is required. Removal is optional. If payment is required, then this material should be appraised. Given the low-value to non-existent market for this material, the results from appraising this material will often (and maybe always) result in a deficit sale. To require payment for utility logs and to take credit for volume sold, this material should be appraised. If that process results in a deficit situation, then the material could be offered as truly optional at a fixed price such as under Special Provision K-C.1.1#-Timber Subject to Agreement.

8. REVIEW PARTICIPATION

Participation by the wildlife biologist, fisheries biologist, archaeologist and landscape architects were a noticeable absence from the specialists assigned to the Region and the Forest. Other than an office presentation by the IDT leader (fisheries biologist) and District Wildlife Biologist, these disciplines were not represented in any of the review's field trips. The inclusion of specialists in wildlife, fisheries, and archaeology from both the Regional Office and Forest would have provided perspective and context for the mitigation measures and/or enhancement objectives surrounding issues related to terrestrial and aquatic organisms or cultural/historic resources.

VI. CONCLUSIONS

The WO Review Team recognizes that few of the recommended actions will be easy to implement, and that leadership and staff at the regional and Forest levels already recognize the need to take some of the recommended actions. The team believes that addressing these items in a "one team" approach may be the most effective way to get to the desired result. The review team and the entire WO-Forest Management staff support your objectives of supporting local communities with economically viable timber sales while protecting natural resources and the Government's many interests in Southeast Alaska.

Due to issues identified with the sale preparation and administration of Big Thorne, we recommend an independent review of those aspects be conducted as a follow up to this review.

We believe this will inform solutions and prevent similar issues in future timber and stewardship contracts. The WO Forest Management staff is available to provide support for problem solving and training upon request from the Region.

APPENDIX A: ITINERARY FOR THE REVIEW

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sat-Monday
June 12	June 13	June 14	June 15	June 16	June 17	June 18-20
WO Participants L48 points to JNU	**Intro with RF- Break for 9 AM RLT call.** RO Records/Programs Review Depart Juneau- Petersburg on Flight AS 64@ 2:45 PM JNU-P-Burg. Charter/LEI?	**Petersburg SO Entrance- Project Records- TSA, Big Thorne, Tonka, etc. LEI- local LEI, ENG with Dave Morton etc., Records review** AS 64 @ 4:20 PM- Petersburg to KTN	**Entrance with Forest Supervisor: (Meeting location is now Discovery Center-) Overview of Forest Plan Amendment effort, large scale planning efforts, Transition YG presentation by Spores: AFA/Industry Alcan sort yard-** 1:45 PM Charter flight(s) over POW and into Craig or Hollis (Rental dependent) Late PM intro to Island with Matt Anderson- Craig RD- BT Lessons learned etc. **We will plan presentations and pizza at District office until 6-6:30 ish to set the stage for field visits to Big Thorne and other items on the island on Thursday and Friday.**	**Viking Mill Visit- Big Thorne Project area** **Big Thorne Project area—Steelhead Creek area. Helicopter DxP unit, Possible active cable and or shovel logging. On the ground review of planning thru prep thru contract thru admin and accountability.** **Mike Sheets, Ted Sandhofer, Jim Bauer etc.**	**Small Mills, Active small sale?- Thorne Bay- Sandy Beach road units- cable-helicopter** Additional Sites dependent upon WO Team needs and desires to see. Charter Flight TB to KTN-= Depart TB at 3:00- WO Team. (Potential that return flight may depart Hollis instead- schedule will adjust accordingly) Petersburg Group Charter at 3:30	**Sat-Sun- review team prepare draft Report.** **Monday, June 20th- Closeout in Ketchikan Supervisors Office. RF via VTC if possible-** **9:45- dependent upon end of normal RLT call.** **L48 contingent schedule return flights beginning at about 1:30 PM southbound**
Overnight in Juneau @ Goldbelt Lodge	**Overnight in Petersburg @ Scandia House**	**Overnight- Ketchikan @ Cape Fox**	**Overnight – Craig @ Ruth Anne's**	**Overnight Craig @ Ruth Anne's**	Overnight Ketchikan @ Cape Fox	2 Nights Ketchikan @ Cape Fox

Alaska Rainforest Defenders

A regional environmental organization established in 2011 (formerly GSACC)

Box 6064 Sitka, Alaska 99835
defenders@akrainforest.org

December 16, 2019

Attn: USDA Secretary Perdue
Alaska Roadless Rule
USDA Forest Service, Alaska Region
Ecosystem Planning and Budget Staff
P.O. Box 21628
Juneau, Alaska 99802-1628
Submitted via: www.fs.usda.gov/project/?project=54511

Re: Alaska Roadless Rulemaking

Dear Secretary Perdue,

These are timely comments of the Alaska Rainforest Defenders ("Defenders") for the proposed USDA Forest Service Alaska Roadless Rulemaking process. Exhibits were sent to you by postal mail earlier today, on a thumb drive.

We urge that you select the No-Action alternative.

Defenders' members use the Tongass National Forest for recreation, commercial fisheries, subsistence, wildlife viewing, scientific research and other activities. We have a long-standing interest in the ecological integrity of the Alaska Alexander Archipelago and its importance to local and regional economies, both cash and subsistence. In particular, our board members have engaged in considerable advocacy on behalf of iconic Tongass wildlife species, such as the Alexander Archipelago Wolf, Queen Charlotte Goshawk, black and brown bear, and Sitka black-tailed deer and have a long history of participation in and dependence on southeast Alaska's commercial salmon fisheries.

As over 200 scientists wrote in January 2018:

> "Nowhere are the benefits of protecting roadless areas and similar ecologically important lands greater than on the Tongass. With towering old-growth trees that can live 700 to 1000 years, it is our country's largest expanse of native forest and one of the last remaining intact coastal rain forests in the world."[1]

We agree. The 2001 Roadless Rule is sound socio-economic policy for the socio-economic well-being of Southeast Alaska.

Roadless Rule exemption alternatives reflect a transparent attempt by the Alaska Governor's office, the Forest Service, and the Alaska's congressional delegation to expand the scale of clearcutting in some of southeast Alaska's most ecologically important ecosystems that provide roadless refugia for salmon and wildlife in areas otherwise surrounded by clearcuts. The decision to open up unlogged, unroaded areas is unacceptable.

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[1] Scientists letter on Alaska forest riders to Members of Congress United States Senate and House of Representatives. January 26, 2018. https:/www.dropbox.com/s/pukgfha9fn4x6j6/Scientists%20ltr%20re%20Alaska%20forest%20riders.pdf?dl=0

This proposed Rulemaking if approved, will continue the trend of mismanaging Southeast Alaska's public old-growth forests as a subsidized federal timber colony that provides high value cedar to Viking Lumber's de facto parent corporation in Washington State or other Pacific Rim wood processors far outside the region. The Forest Service would then manage its maturing second-growth forests as a plantation for some other out-of-state timber broker, delaying watershed recovery and permanently eliminating habitat for wildlife.

There have long been concerns for deer populations on many central and southern southeast Alaska islands affected by this rulemaking. The Forest Service and State of Alaska have authorized Viking Lumber and Alcan Forest Products/Transpac to destroy much of the best remaining publicly owned winter deer habitat throughout central and southern southeast Alaska. Further removals could cause local wildlife extirpations and force the few survivors into isolated patches of lower quality habitat.

There have been recent and severe declines in pink salmon harvests in Alaska Department of Fish and Game (ADF&G) regulatory districts in southeast Alaska. In 2016 the pink salmon fishery was a disaster and in 2018 returns were far worse. These declines make it essential for the Forest Service to consider whether the need to provide aquatic habitat for fishery resources used by hundreds of local fishermen and processors should take priority over perceived need to enable one or two timber companies to realize harvest cost savings of a million or two dollars.

A Taxpayers for Common Sense analysis using Forest Service budget data calculated that implementation of Tongass Advisory Committee's 2016 Forest Plan Amendment timber sales will generate taxpayer losses of $367.5 million over the next fifteen years.[2] Isn't that enough for the timber companies?

Southeast Alaska residents and numerous non-resident businesses that rely on the region's natural capital contained within coastal forest island ecosystems. Industrial activities associated with the removal of remaining old-growth forest and implementation of plantation forestry for recovering second-growth forests will also render the southeast Alaska island shorelines and interior areas undesirable or even inhospitable for visitors to the region who come for recreation - particularly sport fishing and hunting.

Defenders requests that you cease this misguided Rulemaking exercise to build new roads into Tongass wildlands.

Defenders supports the no-action alternative, and we discuss our specific concerns in the following sections.

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[2] https://www.taxpayer.net/energy-natural-resources/u-s-forest-services-tongass-timber-plan-proposes-increased-costs-for-taxpa/

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I. Purpose & Need and socio-economic analysis

A. The DEIS hides the timber industry purpose of this rulemaking behind an ambiguous, meaningless stated purpose

The DEIS claims that the purpose of this rulemaking is to create "a long-term, durable approach to roadless area management … that accommodates the unique biological, social and economic situation found in and around the Tongass.[3] This statement is so ambiguous as to be meaningless, and masks the true narrow purpose of this action - the Forest Service wants to remove Roadless Rule protections in order to expand the old-growth acreage available for large timber sales to "meet the needs of industry."[4] The State of Alaska's

[3] DEIS at 1-4.

[4] Alaska Roadless Rulemaking Cost Benefit Analysis at 30.

petition to which this rulemaking responds makes clear its primary purpose is to increase the acreage available to federal timber sale purchasers.[5]

The Forest Service projects that the additional acreage may result in cost savings to timber operators, and thus enable the Forest Service to offer positively appraised timber sales.[6] Specifically, the Forest Service hopes that Roadless Rule exemption alternatives would enable two federal timber sale purchasers to realize $1-2 million in annual harvest cost savings.[7] The DEIS admits that the proposed rulemaking will not increase employment levels or have any other positive economic impacts.[8] In other words, the singular goal of this is to allow the two companies who purchase large timber sales from the government opportunities to realize some cost-savings by authorizing them to clearcut some of the last remaining stands of high volume old-growth forest from the southern portion of the Tongass National Forest.[9]

It is beyond dispute that this rulemaking would benefit only one of two private companies. As shown in the Forest Service's 2016 market demand study, Viking Lumber monopolizes the small amount of federal timber utilized for mill production (*see chart*).

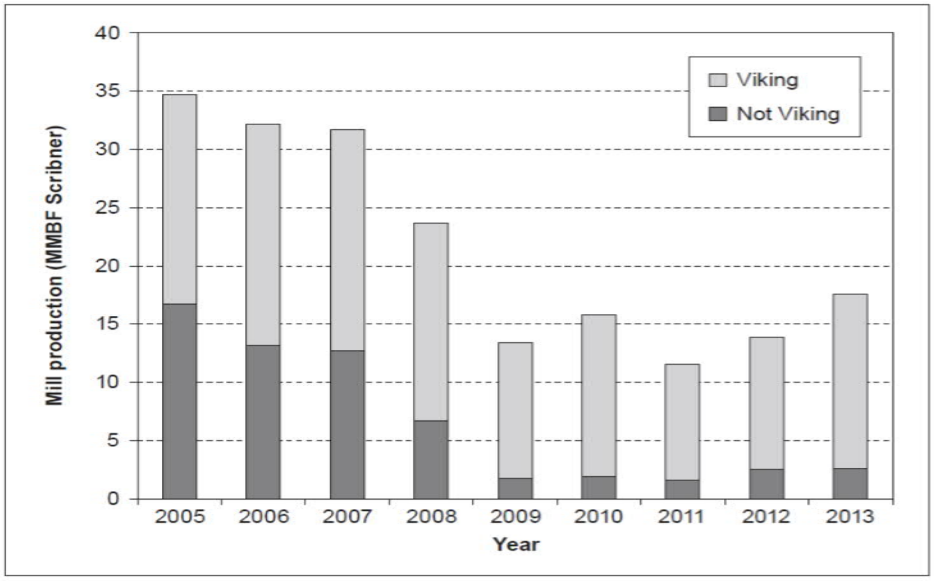

Figure 2—Lumber production, Viking Lumber Company and all other southeast Alaska producers.

[5] State of Alaska. Petition for Rulemaking to exempt the Tongass National Forest from application of the Roadless Rule and other actions. January 19, 2018. *Available at:* https://www.fs.usda.gov/nfs/11558/www/nepa/109834_FSPLT3_4406959.pdf. Some aspects of this action purport to address non-timber infrastructure purposes. Those purposes are superfluous. This comment letter focuses on the effort to repeal prohibitions on timber harvest and road construction. The focus of the Roadless Rule itself was on timber and timber road construction due to the public cost and potential scale of environmental degradation.

The stated non-timber purposes are disingenuous. The petition focused exclusively on southeast Alaska's "forest sector" and made no mention of any other resource concerns. The petition references "timber" 23 times in the eight page document. The petition requested an exemption for the Tongass National Forest and not the Chugach National Forest. If the rule really obstructed these potential projects on the Tongass then the petition would have requested exemptions for both Forests. The only difference between the two Forests is the absence of a large timber sale program from the Chugach.

During the Sept. 25, 2018 Petersburg open house, state and federal officials could not name even one example of a project hindered by the Roadless Rule. The agency's handout stated that it had approved 57 projects within inventoried roadless areas, including for energy development (hydroelectric), mining exploration, and interties.

[6] Alaska Roadless Rulemaking Cost-Benefit Analysis at 38.

[7] *Id.* at 31.

[8] DEIS at 3-49.

[9] *See* Alaska Roadless Rulemaking Cost Benefit Analysis at 30.

The other company, Alcan/Transpac, currently holds 56 percent of sold and uncut Tongass timber and Viking Lumber currently holds 28 percent of sold and uncut Tongass timber.[10] This actual purpose is unlawfully and unreasonably narrow because it responds solely to timber operational objectives rather than to the Forest Service's multiple use management responsibilities.[11] The Forest Service cannot allow the perceived needs of private entities to narrowly define the scope of a proposed project.[12] Instead, agency actions must look to other relevant factors, including the views of Congress as expressed in the agency's statutory authority and other congressional objectives.[13] Congress enacted the National Forest Management Act in part to respond to "widespread public distress and scientific concern over the Forest Service's post-World War II shift to *massive, heavily subsidized timber production in the National Forests*."[14] The goal was to ensure that timber production would not be the "sole objective" of the Forest Service and to direct forest managers to protect other resources such as fish and wildlife habitats.[15] Defenders submits that the agency's true purpose reflects an overly narrow focus on providing timber for two companies.

B. The Socio-economic analysis fails to address how the Roadless Rule contributes to southeast Alaska's socio-economic well-being

All Roadless Rule exemption alternatives will do significant harm to the economic viability of southeast Alaska communities in general and further inhibit market-based economic growth by perpetuating a federal land use policy that has been unsuccessful for decades and inhibits the transition toward proven and successful 21st century southeast Alaska economic models. The Forest Service isn't planning this project for an industry in the conventional sense of businesses employing workers - this is merely a corporate welfare program for Viking and Alcan that simultaneously supports a massive number of federal, state, and other for-profit and not-for-profit corporate bureaucrats.

The Forest Service's myopic focus on supporting Viking or Alcan/Transpac fails to recognize the region's market-based transition away from federal timber dependency and toward a more diversified and sustainable economy that depends on Roadless Rule protections for fisheries and tourism.[16] NEPA requires federal agencies to disclose sufficient information as needed to ensure "informed decisionmaking and informed public participation." NEPA analyses cannot serve this essential function if they reflect misleading economic assumptions "by skewing the public's evaluation of a project."[17] NEPA thus requires that "[a]gencies shall insure the professional integrity … of the discussions and analyses."[18]

It is hard to understand how a rulemaking aimed at providing harvest cost savings for two companies is relevant to *regional* socio-economic well-being or the rural workforce. The timber industry makes no positive economic contribution to the majority of southeast Alaska communities and the habitat damage it causes reduces economic outputs from their primary

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[10] DEIS at 3-36.

[11] *See, e.g. National Parks Conservation Ass'n v. Bureau of Land Management,* 606 F.3d 1058, 1070 (9th Cir. 2010)(*cert. denied,* March 28, 2011); *City of Carmel-by-the-Sea v. U.S. Dep't of Transportation,* 123 F.3d 1142, 1155 (9th Cir. 1997).

[12] *Id.* (citing *Citizens Against Burlington, Inc.* 938 F.2d at 196).

[13] *Citizens Against Burlington, Inc.* 938 F.2d at 196.

[14] *Sierra Club v. Peterson,* 185 F.3d 349, 353-54 (5th Cir. 1999)(*superseded* on other grounds, 228 F.3d 559 (5th Cir. 2000).

[15] S. Rep. 94-893, *reprinted in* 1976 U.S.C.C.A.N. 6662, 6671.

[16] 40 C.F.R. § 1502.1; *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332. 349 (1989)

[17] *Hughes River Watershed Conservancy v. Glickman,* 81 F.3d, 437, 446 (4th Cir. 1996).

[18] 40 C.F.R. § 1502.24.

business sectors. Only two of the 24 smaller rural communities have any timber activity at all, while the rest depend primarily on fishing and tourism.[19] The amended Forest Plan FEIS addresses the needs of those two communities (both on Prince of Wales Island) separately with an old-growth set-aside for the cottage industry.[20] Larger communities such as Petersburg, Wrangell and Ketchikan that once participated in the timber economy have fully transitioned toward economies based on tourism and fishing.[21]

The planning record for the 2016 LRMP Amendment shows a broad decline in the U.S. share of the global timber economy - declines that reflect "powerful, on-going changes in the role the U.S. plays in global markets."[22] The competitive disadvantage is particularly significant for southeast Alaska timber.[23] The Pacific Northwest Research Station's own publications verify these significant downward trends.[24] These changes have weakened the Forest Service's timber sale program to the point of irrelevancy from a regional private sector perspective. Indeed, the private sector component of the industry is smaller than it was over a century ago.[25] Timber worker earnings are less than 1% of total employment related earnings in the region; federal timber generates a fraction of a percent (0.2%) of regional employment.[26]

The timber industry in southeast Alaska has become very small during the 21st Century and concentrated in just two communities. There have been no new sawmills established since 2000 and the overall number of sawmills declined by more than half to eight active operations since 2000.[27] The Forest Service's own data show that there are a total of 51.3 mill jobs in southeast Alaska - 43.1 mill jobs on Prince of Wales Island, 8 mill jobs in Hoonah, and 0.2 mill jobs in the three central southeast Alaska communities of Kake, Petersburg and Wrangell and no jobs in the larger communities of Ketchikan, Juneau and Sitka.[28] 15 MMBF of Tongass timber employed a total of 24 loggers in 2017 - most from out of state.[29]

Despite the industry's absence from most regional communities, the Forest Service recently threatened the central southeast Alaska communities of Kake, Wrangell and Petersburg with economic harm unless the agency succeeded in implementing the pending Central Tongass Project.[30] Petersburg timber employment declined from five to two people in between 1999

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[19] 2016 LRMP FEIS at 3-547-3-689.

[20] *Id.* at 3-152.

[21] *Id.* at 3-613, 3-639, 3-684-685.

[22] *See* 2016 LRMP FEIS PR Folder 763_02_000084 (Niemi 2016, Socioeconomic Comments on Timber Demand at 12).

[23] *Id.* at 14

[24] *See* 2016 LRMP FEIS PR Folder 763_02_000088, documents PNW RB-265 (Zhou 2013)) and PNW RB-266.

[25] *See* 2016 LRMP FEIS at 3-485, Table 3.22-4. 2016 LRMP FEIS PR 769_05_000340 at 10 (Southeast Conference 2014).

[26] *Id.* at 3; *Cf.* 2016 LRMP FEIS at 3-480, Table 3.22-2 (53,145 total jobs); *id.* at 3-485, Table 3.22-4 (federal timber provided 123 jobs) *Id.* at 3-481, Table 3.22-3; Raincoast Data 2017 at 3. *Available at* http://raincoastdata.com/portfolio

[27] Central Tongass Project PR 832_0357 at 2 (Parrent & Grewe 2018)

[28] Central Tongass Project PR 832-0537 at 4, Table 4 (Parrent & Grewe 2018)).

[29] Central Tongass Project PR 832_0614 at 4 (Daniels 2018); https://cara.ecosystem-management.org/Public/DownloadCommentFile?dmdId=FSPLT3_4326267 https://www.fs.usda.gov/project/?project=51766

[30] Central Tongass Project DEIS at 3-68; 3-316.

and 2007.[31] The two mills in operation in 2006 processed a total of 250 MBF of timber.[32] Forest Service data show that 2017 central southeast Alaska mill production is 34 MBF out of a total 15,544 MBF - or .002% of the mill production in the region - even though the Forest Service has 100 MMBF for sale in the Petersburg and Wrangell Ranger Districts.[33] The Forest Service already has 100 MMBF available in the Wrangell and Petersburg Ranger Districts.[34] The Petersburg economy did fine following the end of the pulp mill era because it is primarily based on commercial fishing.[35]

Further, it is unclear how many federal-timber loggers reside in southeast Alaska communities. Broadly, non-resident employment accounts for a significant amount of jobs in southeast Alaska's resource-dependent sectors.[36] The 2016 Forest Plan FEIS record similarly shows that overall, workers from areas other than southeast Alaska comprise a significant proportion of the natural resource-based work force, and nearly half of the timber related jobs in southeast Alaska are held by non-residents.[37] The number of actual timber workers across the region is so small that reports by the Alaska Department of Labor lump logging jobs with other natural resource-based job categories.[38] And, as noted by Forest Service personnel, the region's large timber sale purchasers import loggers from other states.[39] There is no existing logging company in Ketchikan, requiring Alcan to import workers from elsewhere.[40]

There appears to be little or no workforce interested in or available for the 20th Century-style jobs supplied by the companies that the Forest Service hopes will realize harvest cost savings from this rulemaking. The Southeast Conference reports a "graying" of the regional timber workforce and states that the "workforce is aging/in decline while the new workforce does not have the same work ethic or interest in physical work."[41] But the industry *itself* believes that young people can't or won't do physical work, and the Southeast Conference's report recognizes that "[l]ogging has become a socially unacceptably business to be in."[42] And these jobs can be unpleasant or even dangerous experiences.[43]

In sum, it is hard to understand how the Forest Service's goal of providing harvest cost savings to Viking Lumber and Alcan/Transpac is meaningful to southeast Alaska's socio-economic well-being or rural workforce. These companies function as federal timber brokers for raw log export markets with perhaps some small token amount milled by Viking Lumber to maintain the illusion of local employment. Allowing Viking Lumber and Alcan/Transpac to further liquidate publicly owned forests will harm the economic viability of communities

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[31] *Id.*

[32] *Id.*

[33] *Id.* at 3-315.

[34] *Id.*

[35] 2016 Forest Plan FEIS 3-662.

[36] *Id.* at 3-483.

[37] 2016 LRMP FEIS PR 769_05_000329 at 16-18, 22. (ADOL 2015).

[38] 2016 LRMP FEIS PR 769_05_000344; -000314; -000318; - 000319 (Alaska Department of Labor data).

[39] https://cara.ecosystem-management.org/Public/DownloadCommentFile?dmdId=FSPLT3_4326267

[40] https://www.fs.usda.gov/project/?project=51766

[41] http://raincoastdata.com/portfolio/southeast-alaska-2020-economic-plan

[42] *Id.*

[43] https://www.osha.gov/pls/imis/establishment.inspection_detail?id=314290701. https://www.ripoffreport.com/reports/phoenix-logging-company/klawock-alaska-99925/phoenix-logging-company-phoenix-loggingphoenix-logging-company-that-does-not-care-about-t-1276625.

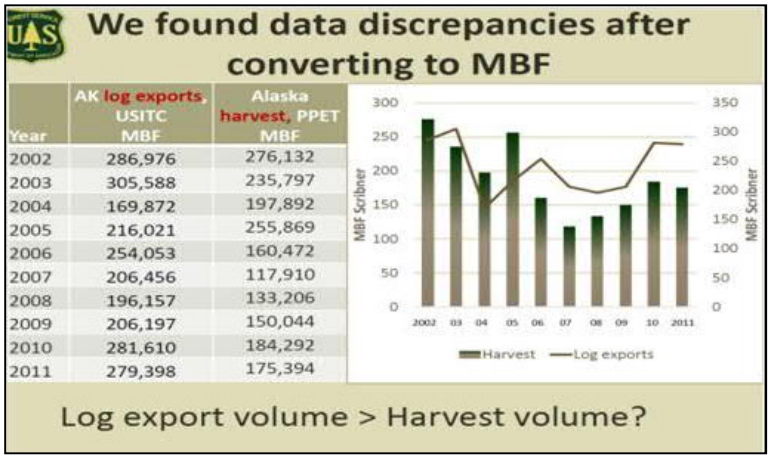
that depend on fisheries and wildlife. The DEIS arbitrarily fails to provide any meaningful information justifying Roadless Rule exemption alternatives and failed to confront significant economic issues and long-term changing local workforce needs.

C. The Alaska Roadless Rulemaking exemption alternatives support the 45th President's trade rivals

Our scoping comments requested that the DEIS address the timber economy decline and disclose that any cost savings benefit realized by Viking and Alcan will accrue to the United States' chief trade rival, China, where large timber sale purchasers send federal timber for processing. It is impossible to reconcile the region's socio-economic well-being with this rulemaking, which would extract timber from inventoried roadless areas mostly for processing in Asian mills under the practice of waiving its generous export policies.

In 2007, the Regional Forester developed a limited interstate shipment policy that it expanded in 2009 to allow timber sale purchasers to export 50 percent of total Sitka spruce and western hemlock sawlog volume.[44] The export policy further reduces the return to the local economy from the public spending on the timber program by diminishing local utilization of timber and local manufacturing employment. The 2016 Forest Plan FEIS makes clear that the Forest Service intends to authorize the export of roughly two-thirds of the timber removed from federal forests as unprocessed logs.[45] According to the Alaska Division of Forestry, raw log exports significantly reduce local employment – a position that recognizes that transportation and logging workers are less likely to be residents than sawmill workers.[46]

Federal timber in 2017 resulted in only 8.3 MMBF of mill production.[47] Given the Petersburg Ranger District's recent decision to authorize 100% raw log export from federal lands on Kuiu Island and longstanding practice of doing so elsewhere, it seems possible that the Forest Service may be planning to work with Alcan to export all of the company's federal timber from inventoried roadless areas to Chinese mills. The willingness to waive export policies designed to protect local businesses, elimination of scenic integrity objectives, and this rulemaking reflect Forest Supervisor Earl Stewart's desperation to meet Tongass Advisory Committee timber targets in order to maintain funding for the timber sale program.[48] The agency's data show that these companies ship so many logs overseas that export volume exceeds the actual timber take (*see image of slide, right*).



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[44] 2016 Forest Plan FEIS, Appx. H at H-4-5.

[45] *Id.* at 3-492-3-493, Tables 3.22-8, 3.22-9.

[46] http://forestry.alaska.gov/timber/index.

[47] Central Tongass Project PR 832-0537 at 6, Table 6a (Parrent & Grewe 2018).

[48] Exh. 2 (Stewart 2018).

This job transfer to foreign timber processors should be critical to ascertaining whether Roadless Rule exemption alternatives have any relevance to regional socio-economic well-being. The Central Tongass DEIS for example acknowledges that the majority of Alaska timber goes to China - 76% in 2015.[49] Why is the Forest Service spending millions of dollars providing timber for Chinese mills at a time when the President of the United States is waging war to address unfair trade practices?[50] This means the Forest Service is not only deceiving itself and the public with this project, but perhaps also even the 45th President of the United States, who is waging war on China to stop the very types of trade and manufacturing imbalances perpetrated by Alcan/Tranpac and Viking Lumber.

A log ship being loaded with whole-logs, at a wharf just north of the Viking Lumber mill. This load was exported to China. (Photo by David Beebe, Jan. 2017)

[49] Central Tongass Project DEIS at 3-317.

[50] https://www.nytimes.com/2018/09/17/us/politics/trump-china-tariffs-trade.html

II. Direct and Indirect Taxpayer Losses and Timber Theft:

A. The DEIS fails to explain how this rulemaking will increase timber sale program costs

When the Forest Service promulgated the Roadless Rule, the timber sale program in Region 10 (Alaska) was one of the two worst performing Regions by generating the largest losses per thousand board feet sold, and ten times the taxpayer loss of all other Forest Service Regions combined.[51]

Table 3-63. Estimated net revenue associated with reduced commodity harvest in inventoried roadless areas (1997 dollars).

Region	Reduction in commodity harvest volume from Alternative 2 (MMBF [a])	Net revenue associated with commodity harvest volume (dollars)	Reduction in commodity harvest volume from Alternatives 3 and 4 (MMBF [a])	Net revenue associated with commodity harvest volume (dollars)
Northern (1)	0.1	211	0.5	-14,995
Rocky Mountain (2)	3.4	-122,177	4.7	-82,741
Southwestern (3)	0.1	-39,802	0.2	-68,613
Intermountain (4)	4.0	24,092	5.7	70,519
Pacific Southwest (5)	0.5	36,842	2.7	116,898
Pacific Northwest (6)	1.3	-157,928	4.3	388,057
Southern (8)	1.6	113,911	2.6	179,017
Eastern (9)	3.0	32,402	6.5	237,903
Alaska (10)	72.8	-12,958,400	76.6	-13,634,800
Total	**86.7**	**-12,808,755**	**103.9**	**-13,067,851**

This poor performance primarily reflected higher administrative costs and higher road construction costs.[52] Road construction in Alaska was at least twice as expensive as in the lower 48, with permanent road costs estimated (in 2000 dollars/2018 inflation-adjusted dollars) at $140,000/205,000 per mile and temporary roads at $120,000/175,000 per mile.[53] Alaska, despite its small population, also had the second largest road maintenance backlog in the nation – largely because of the Tongass National Forest.[54]

The Roadless Rule was a fiscally responsible regulation because budget constraints allowed for effective management of only a small portion of the agency's road system.[55] Promulgation of the rule rested largely on the rationale that it makes little sense to build new roads, particularly in inventoried roadless areas, when the agency historically has had a huge backlog in unfunded, deferred road maintenance costs.[56] The Roadless Rule provided the greatest reduction of future maintenance costs for roads, planning costs, overall timber program costs, and other administrative costs.[57]

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[51] Roadless Rule FEIS at 3-298, Table 3-57 (Region 3 and Region 10 generated taxpayer losses of $178 and $179 per thousand board feet, respectively, 22 times as much the only other region that operated timber sales at a deficit).

[52] *Id.* at 3-303.

[53] *Id.* at 3-324

[54] Exh. 13 (Taxpayers for Common Sense 2004).

[55] Roadless Rule FEIS at 1-15.

[56] *Id.* at 1-5.

[57] *Id.* at 2-36.

The sole economic benefit resulting from this Rulemaking would be "estimated harvest cost savings" of $1 - 2 million for a timber sale purchaser in areas where timber extraction costs would otherwise be prohibitively expensive.[58] The DEIS and Cost-Benefit Analysis arbitrarily fail to recognize additional direct and long-term public costs associated with Roadless Rule exemption alternatives, including higher costs associated with road construction in inventoried roadless areas, costs associated with expanding the timber sale program, and long-term deferred maintenance costs.[59]

Because this rulemaking would undo a policy intended to ensure fiscal responsibility, the agency costs are critical to the pending decision. The Cost-Benefit Analysis references three separate Executive Orders related to costs and savings associated with new and repealed regulations.[60] But nowhere does the analysis candidly confront the cost control rationale underlying the 2000 Roadless Rule or disclose the true costs of public expenditures on the timber sale program that would result from Roadless Rule exemption alternatives.

NEPA's hard look requirement mandates that a cost-benefit analysis be reasonable.[61] This means that the analysis must "fully and accurately" disclose the costs.[62] There must be sufficient information to "balance a project's economic benefits against its adverse effects."[63] The analysis failed to provide the information the public needs to evaluate this rulemaking with respect to timber sale program costs.[64] Further, the Roadless Rule sought to reduce agency costs. The DEIS does not provide any explanation how the agency intends to reduce its backlog, violating the APA.[65]

The Cost-Benefit Analysis admits that the Forest Service spent $12.5 million annually to administer timber sales from 2005-2014, and in turn received $1.1 million in revenue.[66] This loss alone -$11.4 million per year - is alarming. Those loss disclosures rely on a Government Accountability Office (GAO) audit of the program that excludes timber road construction costs and other administrative costs associated with the Forest Service timber sale program.[67] Because of the staggering taxpayer losses associated with the Tongass National Forest's timber sale program, there have been several independent estimates that exceed the amounts shown in the GAO audit. *(See table, next page.)*

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[58] Alaska Roadless Rulemaking Cost-Benefit Analysis at 6.

[59] *Id.* at 37.

[60] *Id.* at 4-5.

[61] 36 C.F.R. § 219.12(g); 40 C.F.R. §§ 1502.14, 1502.16; 40 C.F.R. § 1502.24; *Natural Resources Defense Council,* 421 F.3d at 811-12.

[62] *Sierra Club v. Sigler*, 695 F.2d 957, 975-76 (1983).

[63] *Hughes River Watershed Conservancy*, 81 F.3d at 446.

[64] *Columbia Basin Land Protection Ass'n,* 643 F.2d at 594.

[65] *Organized Village of Kake v. U.S. Dept. of Agriculture,* 795 F.3d 956, 967 (9th Cir. 2015).

[66] Alaska Roadless Rulemaking Cost-Benefit Analysis at 38.

[67] *Id.;* https://www.gao.gov/products/GAO-16-456.

TAXPAYERS for COMMON SENSE

Twenty Years of Timber Losses in the Tongass National Forest 5

Tongass Timber Program: Receipts, Expenses, Losses (FY1999-2018)

($ in millions)

FISCAL YEAR	TIMBER VOLUME SOLD (MBF)	TIMBER RECEIPTS	TIMBER EXPENSES	NET RECEIPTS	TIMBER RECEIPTS: ($2018)	TIMBER EXPENSES ($2018)	NET RECEIPTS ($2018)
2018	9,211	$0.4	$18.1	-$17.7	$0.42	$19.07	-$17.65
2017	20,808	$1.0	$17.8	-$16.7	$1.04	$18.20	-$17.16
2016	13,535	$0.5	$18.5	-$18.1	$0.47	$19.40	-$18.92
2015	22,625	$0.3	$19.7	-$19.5	$0.29	$20.91	-$20.62
2014	105,523	$0.6	$22.4	-$21.8	$0.6	$23.8	-$23.1
2013	15,866	$0.6	$19.7	-$19.1	$0.6	$21.2	-$20.6
2012	52,483	$1.9	$21.5	-$19.6	$2.0	$23.5	-$21.5
2011	44,190	$3.3	$18.0	-$14.8	$3.7	$20.1	-$16.5
2010	45,632	$1.9	$22.3	-$20.4	$2.2	$25.7	-$23.5
2009	22,670	$0.6	$26.4	-$25.7	$0.7	$30.8	-$30.1
2008	5,351	$0.4	$23.5	-$23.1	$0.5	$27.4	-$27.0
2007	30,392	$0.3	$25.1	-$24.8	$0.3	$30.4	-$30.1
2006	85,007	$0.8	$27.9	-$27.1	$1.0	$34.8	-$33.8
2005	65,075	$0.4	$34.4	-$34.0	$0.5	$44.2	-$43.7
2004	87,072	-$4.3	$36.9	-$41.2	-$5.7	$49.1	-$54.8
2003	36,489	$2.0	$31.0	-$29.0	$2.7	$42.3	-$39.6
2002	24,372	$1.3	$33.4	-$32.2	$1.8	$46.7	-$44.9
2001	49,592	$1.8	$35.0	-$33.2	$2.6	$49.6	-$47.1
2000	170,329	$6.9	$23.8	-$16.9	$10.0	$34.7	-$24.7
1999	61,426	$5.3	$33.8	-$28.5	$8.0	$51.0	-$42.9
2009-2018 TOTAL	**362,544**	**$11.0**	**$204.4**	-$193.4	**$12.1**	**$221.8**	-$209.7
1999-2018 TOTAL	**977,649**	**$25.9**	**$509.4**	-$483.5	**$33.8**	**$632.0**	-$598.2

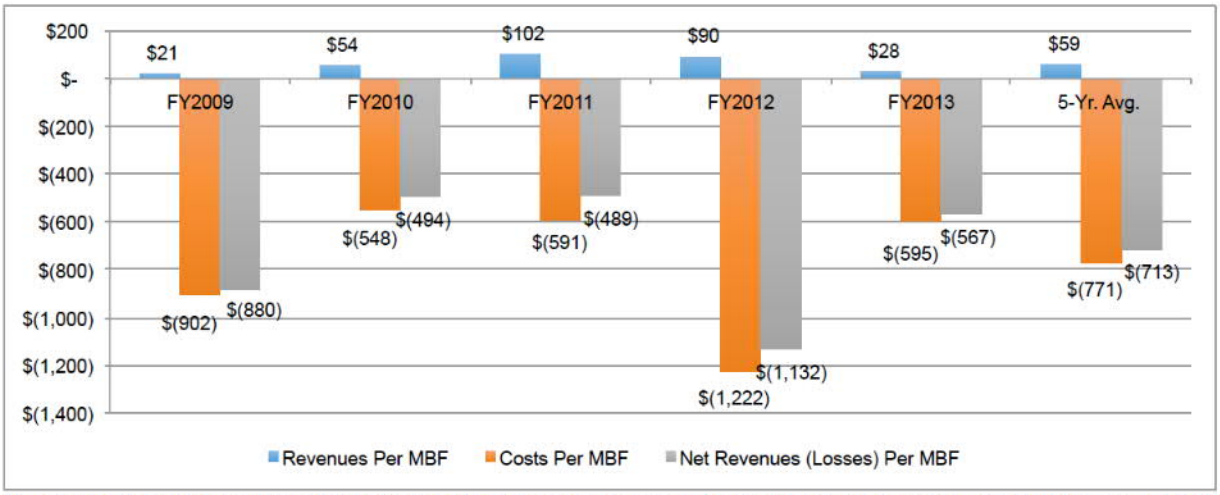
One major problem with the Cost-Benefit Analysis is that the cost disclosures omit the cost of timber road construction. Taxpayers for Common Sense's table (*above*) shows that the Tongass National Forest spent $632 million from 1999-2018 on timber sale preparation, reforestation *and timber roads*.[68] When adding in road construction and maintenance costs, the Tongass National Forest's taxpayer losses rise to $33.8 million a year.[69] Based on these data, the taxpayer losses were $612,000 per million board feet of timber sold over two decades.[70] Headwaters Economics utilizes similar timber budget cost categories and

[68] Exh. 10 (Taxpayers for Common Sense 2019).

[69] *Id.*

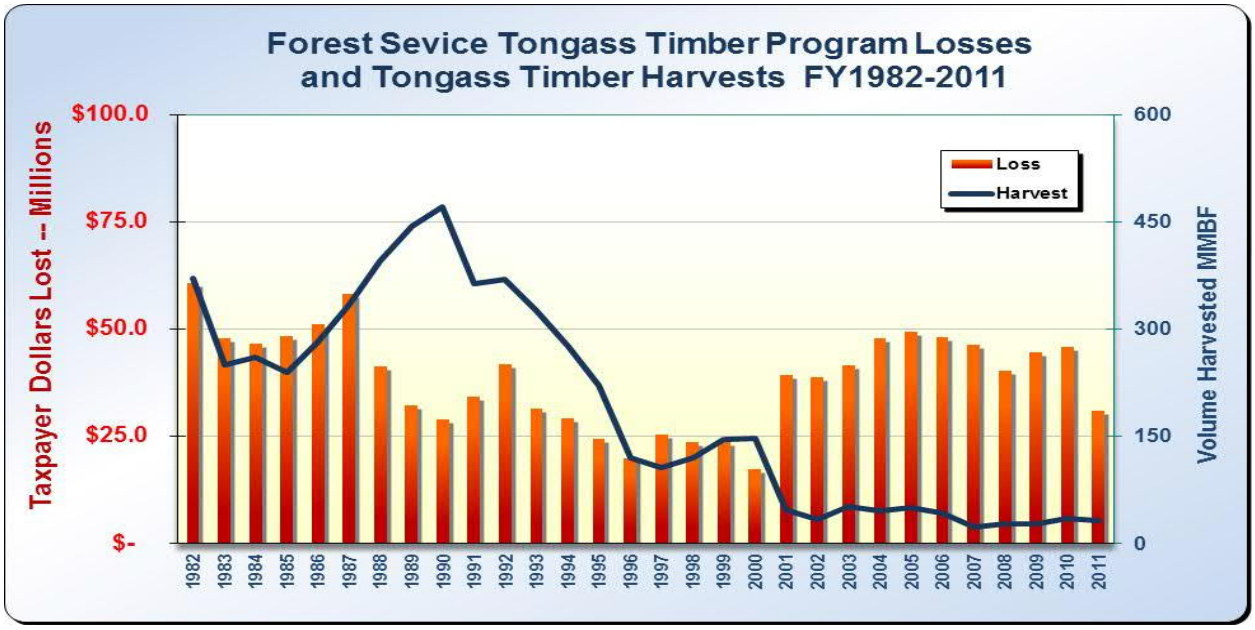
[70] *Id.*

identified an average taxpayer cost of $771,000 per million board feet sold between 2009 and 2013.[71] Federal timber sale expenditures exceeded $22.3 million per year in southeast Alaska.[72] Revenue returns were $1.7 million, or an annual loss of $20.5 million.[73]



Source: Costs are from the budget table in this report; revenues and cut volume are from U.S. Forest Service Cut and Sold reports.

The taxpayer losses caused by the timber sale program are even worse when factoring in "overhead costs" such as the personnel and facility costs.[74]



Taxpayer losses caused by this rulemaking may be even worse because Tongass National inventoried roadless areas are remote, difficult to access thus have higher sale preparation

[71] Exh. 11 (Headwaters Economics 2014).

[72] *Id.*

[73] *Id.*

[74] Exh. 12 (Mehrkens 2016).

costs.[75] A related problem is that the Cost-Benefit Analysis ignores the adverse cost consequences of expanded timber sale acreage: more timber extraction = higher taxpayer costs.[76]

This means that exemption alternatives could add millions of dollars in taxpayer costs needed to subsidize large timber sale purchasers.[77] As noted by Taxpayers for Common Sense, taxpayer costs have declined over the past decade largely because of declines in extraction levels.[78] The current Forest Plan projects nearly half a billion board feet in Tongass National Forest timber removals over the next decade.[79] If fully implemented at current costs, the plan could generate a taxpayer loss exceeding a third of a billion dollars using the Headwaters Economics estimated taxpayer cost of $771,000 per million board feet. Similarly, Taxpayers for Common Sense estimates that the Tongass National Forest losses could increase over the next four years to $180 million based on plans to sell 290 million board feet of timber.[80]

In other words, if Roadless Rule exemption alternatives increase the amount of logging, there will be a corresponding increase in taxpayer subsidies needed to support Alcan and Viking.

B. Culvert Costs to Communities

The Forest Service's budget also is relevant to another taxpayer cost caused by the timber sale program - habitat loss that causes costs to commercial fisheries. The absence of barrier culverts and stream crossings from inventoried roadless areas is an important reason why inventoried roadless areas function as biological strongholds and refuges for salmon – unroaded or low road density watersheds are more likely to support healthy populations.[81] Barrier culverts can block access to habitat and adversely impact salmon stream productivity, by reducing spawning success, impairing juvenile growth and rearing, and obstructing migration. Removing them immediately benefits salmon production because salmon immediately re-colonize the previously inaccessible habitat.

A Roadless Rule rationale related to the significant adverse impacts associated with barrier culverts: reduced habitat connectivity, fish species vulnerability to local extinctions, and reduced ability to respond to changing environmental conditions.[82] In particular, the cumulative impacts of road networks and multiple stream crossings threatened major adverse effects to fish habitat.[83]

The Roadless Rule responded to the Forest Service's concern that its deferred maintenance backlog (which included culvert replacement) was increasing along with rising repair costs and declining funding.[84] At the time, deferred maintenance backlog was $8 billion and the agency could only fund 20 percent of its existing road system.[85] The Tongass National Forest

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[75] Roadless Rule FEIS at 3-303; 2016 TLMP FEIS at 3-441.

[76] Alaska Roadless Rulemaking Cost-Benefit Analysis at 3-29-30; Exh. 10 (Taxpayers for Common Sense 2019).

[77] Roadless Rule FEIS at 3-325, Table 3-73.

[78] Exh. 10 (Taxpayers for Common Sense 2019).

[79] 2016 TLMP FEIS at 3-493, Table 3.22-9.

[80] Exh. 10.

[81] Roadless Area Conservation FEIS at 3-160.

[82] *Id.* at 3-166.

[83] *Id.*

[84] *Id.* at 1-5.

[85] *Id.*

alone accounted for a deferred maintenance backlog was nearly $1 billion (in 2002 dollars).[86] In 2019, the Forest Service estimates its funding/repair ratio is even worse, with a total maintenance backlog of $5.2 billion and a budget of $450 million.[87] These costs and harm to fish and commercial fishing communities dependent on the productivity of Forest Service lands were a primary policy purpose underlying the Roadless Rule.

The DEIS violates NEPA because it fails to take a hard look at the value of inventoried roadless areas in light of the serious fish passage problems throughout areas managed for the timber companies.[88] It also fails to provide a reasoned explanation for reversing a policy protecting fish, and disregards the fish facts, violating the APA.[89]

Roughly two decades ago – at the same time the Forest Service promulgated the Roadless Rule – ADF&G surveyed 60 percent of the Forest Service's roads to assess fish passage problems in the region.[90] This survey showed that 66 percent of the culverts on Class I streams (179) and 85 percent of the culverts on Class II streams (531) were inadequate for fish passage.[91] The Forest Service made an effort to address some of these problems between 1998 and 2006, spending between $1.5 million and $2 million annually to fix roughly 50 sites per year.[92] The culvert repair program ended in 2006 due to funding reductions.[93] Now there are 1,100 culverts blocking over 260 stream miles of fish habitat, with most of them concentrated in the Petersburg and Prince of Wales (Thorne Bay and Craig) Ranger Districts.[94]

The DEIS provides a brief discussion of fish passage obstruction that fails to disclose the current number of blocked culverts, number of stream miles impacted or the average number of blocked culverts addressed each year.[95] It does admit that funding for fixing fish passage problems is "uncertain" and that the lack of funding may harm fish.[96]

Roadless Rule repeal alternatives would add numerous stream crossings within the Prince of Wales and Central Tongass Project inventoried roadless areas, where nearly 800 red culverts already block at least 170 miles of spawning habitat.[97] There are currently 1,100 red culverts across the Tongass National Forest blocking 270 miles of salmon habitat.[98] Taxpayers will need to fund 1,000 miles of road construction to meet Tongass Advisory Committee timber targets which would require at least another 200 culverts.[99] Conservative

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[86] Exh. 13. Taxpayers for Common Sense. 2003.

[87] https://naturalresources.house.gov/download/hanna-autumn-written-testimony.

[88] *See Natural Resources Defense Council v. Forest Service,* 421 F.3d 797, 811 (9th Cir. 2005).

[89] *See Organized Village of Kake v. U.S. Dept. of Agriculture,* 795 F.3d 956, 967 (9th Cir. 2015).

[90] Exh. 15. Flanders, L.S. & J. Cariello. Tongass Road Condition Report. ADF&G Habitat Restoration Division Tech. Rpt. No. 00-7. June 2000

[91] *Id.*

[92] 2008 TLMP FEIS at 3-73.

[93] *Id.*

[94] 2016 TLMP FEIS at 3-117; USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact Statement at at 3-135 – 3-143; Central Tongass Project DEIS at 3-160.

[95] DEIS at 3-112-113.

[96] *Id.* at 3-148.

[97] Central Tongass Project DEIS at 3-160; Prince of Wales Landscape Level Analysis FEIS.

[98] 2016 TLMP FEIS at 3-117.

[99] DEIS at 3-144; Exh. 15 (there is one culvert per 5 miles of road along Class I streams and one culvert per 2.25 miles of road along Class II streams); https://naturalresources.house.gov/download/hanna-autumn-written-testimony.

estimates indicate that each salmon spawning stream mile is worth $10,000, red culverts cost commercial fishermen $2.7 annually, $27 million over the past decade, and $27 million next decade.[100]

In the Central Tongass Project area, there are 432 existing red crossing blocking 99 miles of habitat.[101] The Forest Service may repair three of those barrier culverts in 2020.[102] On Prince of Wales Island alone there are 447 red pipes.[103] The Forest Service plans to fix fourteen of them in 2020, but only has funding for three (*see photo*).

Roadless Rule exemption alternatives will result in planned and costly road construction in inventoried roadless areas, further increasing the agency's maintenance backlog. The DEIS does not confront the existing maintenance problems. Further, the Forest Service's refusal to fix existing barrier culverts reduces salmon productivity with real costs to commercial fishermen that recur each year. The DEIS and Regulatory Impact Assessment/Cost-Benefit Analysis arbitrarily ignore these real costs to commercial fishermen and never balances them

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[100] Foley, et al. 2012. A review of bioeconomic modelling of habitat-fisheries interactions. In: International Journal of Ecology, Vol. 2012. Doi:10.1155/2012/861635; Exh. 46, Knowler, D. et al. 2001. Valuing the quality of freshwater salmon habitat – a pilot project. Simon Fraser University. Burnaby, B.C.: January 2001; Knowler, D.J., B.W. MacGregor, M.J. Bradford, and R.M. Peterman. 2003. Valuing freshwater salmon habitat on the west coast of Canada. In: Journal of Environmental Management, 69: 261-273 (Nov. 2003). Available at: www.sciencedirect.com/science/article/pii/S0301479703001543.

[101] *Id.* Central Tongass Project DEIS at 3-169.

[102] Exh. 21, 2020 Central Tongass Project Activity List.

[103] USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact Statement at 3-131, 137, 154.

against the project purpose of a one-time savings of $1 or 2 million for Alcan/Transpac or Viking Lumber.[104]

C. Local Forest managers will sacrifice roadless values

The 2000 Roadless Area Conservation Rule FEIS identifies a concern that "local forest managers will sacrifice roadless values to influential, local commercial interests."[105] This rulemaking would rely on local forest managers to maintain roadless values.[106] The DEIS fails to disclose serious issues regarding the Tongass National Forest's ability to competently manage a timber sale program. The Tongass National Forest (the agency) has a serious bias that is in part an institutional attachment to the timber industry and in part an appetite aimed appropriating taxpayer funds for its money losing timber sale program. These problems create "a substantial financial interest in the harvesting of timber" that causes the agency "to be more interested in harvesting timber than in complying with our environmental laws."[107]

A major part of the agency's financial interest is that its own funds depend on timber program outputs.[108] The desperation to reduce deficit timber sales has motivated decisions to reduce scenic integrity objectives.[109] There are serious questions about whether local officials can make unbiased decisions about conserving roadless values during the timber sale process due to the Forest Service's strong financial interest in the outcome.[110]

Because of these problems, Defenders' scoping comments requested that the Forest Service cease this rulemaking process because of (for example) the Petersburg Ranger District's and Prince of Wales ranger districts' inabilities to administer timber sales, as demonstrated by chronic problems related to timber sale oversight, contractual and appraisal issues. As reported in 1996 by the Public Employees for Environmental Responsibility (PEER), the Tongass National Forest has a long history of permitting timber operators such as Viking Lumber Company to operate in a lawless manner in Southeast Alaska, ignoring timber export violations, scaling fraud, and outright timber theft.[111] For example, ground-truthing the recent Tonka Timber project showed that Viking would clearcut deer winter range prescribed for selective cutting, and expand cutting units beyond the prescribed acreage to whatever size Viking deemed fit.

In 2016, the Washington Office reviewed the Alaska Region's timber sale and administration processes for two Viking Lumber timber sales – the Tonka Timber Sale on Lindenberg Peninsula and recent Big Thorne Project on Prince of Wales Island. The review showed that: (1) instead of improving "forest ecosystem health," the Tongass National Forest allowed Viking to high-grade the most ecologically valuable trees rather than the trees intended for removal to achieve the desired "forest ecosystem health" effects; (2) the Forest Service failed to conduct timber-theft prevention inspections and (3) all monitoring and reports of timber

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[104] Alaska Roadless Rulemaking Cost-Benefit Analysis at 35, Table 6 (claiming that Roadless Rule repeal alternatives will have zero costs to commercial fishermen).

[105] Roadless Rule FEIS at 1-4.

[106] 84 Fed. Reg. at 55524.

[107] *See, e.g. Earth Island Institute v. U.S. Forest Service,* 442 F.3d 1147, 1177 (9th Cir. 2006).

[108] Exh. 2 (Stewart 2017).

[109] DEIS at 3-69-70, 3-295; Exh. 1 (Heithecker 2018).

[110] *See, e.g. Sierra Forest Legacy v. Rey,* 577 F.3d 1015, 1022-23 (9th Cir. 2009)(Noonan, J. concurring)(explaining that "[i]n the instant case the decision-makers are influenced by the monetary award to their agency, a reward to be paid by the successful bidder as part of the agency's plan."

[111] Exh. 3. PEER. 1996. Stealing the Tongass.

removals, etc. were self-reporting by Viking Lumber Company.[112] These problems are a particular concern given that a major purpose of this project is to "improve forest ecosystem health" through timber removal prescriptions implemented by Viking.

PEER's review showed that the Petersburg Ranger District's failure to inspect Viking's activities and require adherence to the timber sale contract for the Tonka sale cost taxpayers $2 million alone – more than twice the amount Viking paid for the timber.[113] On-the-ground operators admit that harvest prescriptions or contract terms were irrelevant to what happened on the ground – they cut only according to Viking Lumber's instructions.[114] Appraisal methods resulted in artificially low appraisal rates for higher value species such as Alaska Yellow Cedar and Sitka Spruce.[115] The Big Thorne Project caused similar taxpayer losses in addition to the usual costs of Tongass National Forest timber sales.[116] And the logging and haul costs were much lower than estimated by the Forest Service, resulting additional windfalls to Viking Lumber.[117] Similar issues have arisen with regard to the Forest Service's second growth timber projects purchased by Alcan/Transpac.[118]

Ironically, after receiving these windfalls, Viking Lumber wants the Forest Service to give it more taxpayer money from the Big Thorne contract because it says the Forest Service economic analysis undercut its profits through poorly estimated tow and haul costs.[119] How can this be? Didn't Viking enter the contract at its own risk after reviewing the cost estimates both during the NEPA and contract process? Even if there was a legitimate problem, the proper procedure is for Viking Lumber is to file a claim and have it reviewed by the Federal Court of Claims which has expertise in settling such claims. But even though the long history of timber theft and maladministration on the Tongass National Forest is disturbing, there is nothing more shocking than Regional Forester Becky Nourse's response to the Washington Office's review of the timber sale program: we should directly give Viking more taxpayer money because they didn't earn as much on the Big Thorne timber sale as anticipated.[120] Wasn't the review aimed at requiring the Forest Service to take steps to eliminate windfalls to Viking, rather than increase them? Given the accountability problems,

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[112] Exh. 5. Washington Office Timber Sale Review; Exh. 6 PEER. 2017. Inspector General Audit Request; *See, e.g.* https://www.peer.org/assets/docs/fs/4_3_17_Timber_Sale_Review.pdf and https://www.peer.org/news/news-releases/forest-service-scalped-on-tongass-timber-sales.html

[113] Exh. 4. Tonka Timber Sale DXPRE Post-Harvest Monitoring Results.

[114] *Id.*

[115] USDA Forest Service Washington Office Activity Review of timber sale administration. sale preparation, stewardship contracting, NEPA, and timber theft prevention. Region 10. June 2016. https://www.peer.org/assets/docs/fs/4_3_17_Timber_Sale_Review.pdf

[116] *Id.*

[117] *Id.*

[118] Exh. 9 (PEER).

[119] Exh. 8. Pendleton 2018.

[120] Exh. 7. Nourse, R. 2017. Memo to Forest Service Chief Tom Tidwell re: Results of the Big Thorne IRTC Supplemental Review. Defenders adds that the Washington Office's review of the Alaska Region's problems included a significant critique of the Forest Service's NEPA contractor, Tetra Tech – the company that refused to analyze the cumulative effects of timber sales in this DEIS in addition to making false statements about the agency maintaining scenic integrity objectives and other errors. The Big Thorne Project planning record, for example, showed that Tetra Tech billed the Forest Service and received compensation for work it did not do, raising further questions about agency and contractor accountability. If there was an error in the analysis, why do taxpayers have to pay? Doesn't Tetra Tech indemnify the Forest Service for its screw-ups? If not, why not? And shouldn't Tetra Tech be responsible for covering Viking's $2 million windfall from the Tonka contract?

how do we know Viking didn't already receive a significant windfall because it got stewardship credits for projects it never completed or only partially completed?

Now, after adding to the taxpayer costs of the program through poor oversight and erroneous cost analyses, the Forest Service would expand this lawless activity into inventoried roadless areas.

In sum, the Tongass National Forest and Alaska Region of the Forest Service lack the institutional capacity and will to administer a large timber sale for a lawless timber operator like Viking. There is no evidence that the agency has taken any steps to correct this problem. Defenders submits that these issues also bear significantly on the agency's ability to conserve roadless values. How can the Forest Service rely on Viking Lumber to apply Forest Plan Standards and Guidelines for other forest values such as den, nest or riparian in the absence of responsible oversight? The DEIS failed to disclose and discuss the Forest Service's present ability and capacity to ensure the accountability of its timber sale program.

III. Comments on Climate Change and affected resources

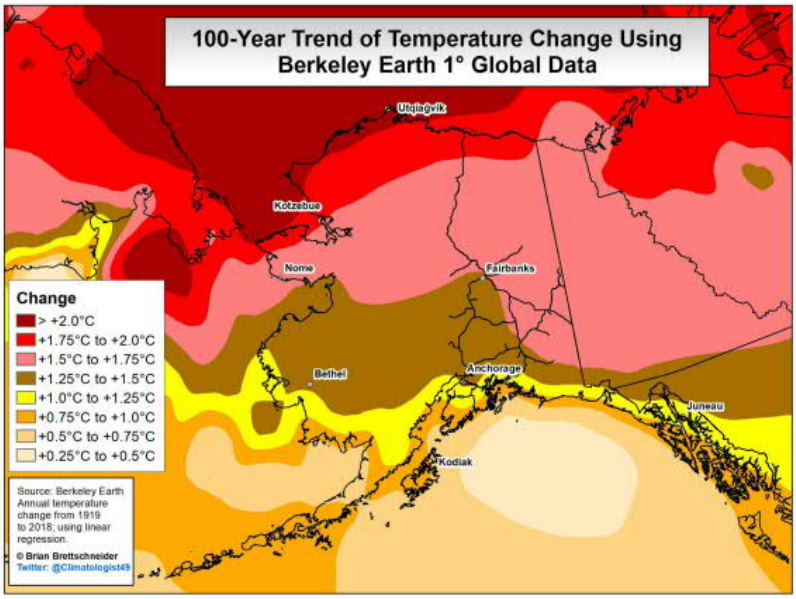
Our scoping comments requested that the DEIS evaluate this project in terms of how logging impacts climate change and consider and disclose threats posed by climate change to project area forest resources.[121] We also requested that the DEIS consider recent and alarming climate patterns. Old-growth logging (in particular) and also second-growth logging contribute to global carbon emissions and climate change has significant ramifications for forests and biodiversity. The DEIS failed to fairly discuss real threats to fish, wildlife and vegetation resources that resulting from a measurably and dramatically warming climate or consider the value of intact roadless areas as buffers against changing environmental conditions. The DEIS acknowledges that the climate is warming in general and that climate models project future warmer, wetter conditions.[122] It is clear that in general the state is warming.

100-year trend in Alaska's annual temperatures (1919-2018)

https://twitter.com/Climatologist49/status/1127318444062281728

Brian Brettschneider @Climatologist49 11 May 2019

100-year trend of annual temperatures (1919-2018) using the Berkeley Earth global temperature data set for Alaska. [Note: uses a different color scale than previously posted map]



[121] We added, for example, that rapidly changing environmental conditions in the region necessitated a discussion of the effect of new clearings and additional roads on abnormal heating and drying of the forest.

[122] DEIS at 3-122.

The DEIS identifies the 2018 National Climate Assessment as the most recent synthesis of climate impacts in Alaska.[123] That document reviewed statewide climate change effects known through 2016.[124] The discussion of the cumulative effects of climate change on forest resources then relies on the analysis in the 2016 Forest Plan FEIS and repeats its conclusions:

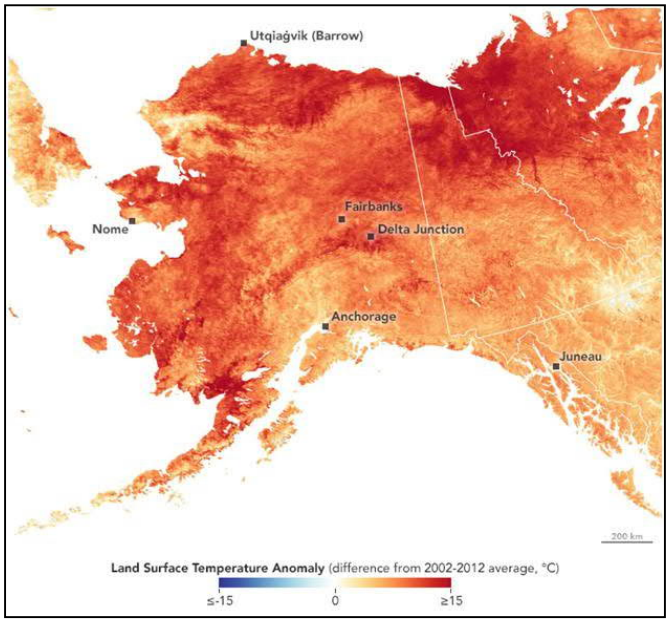
> Climate change could impact the resources currently managed by the Forest Service as well as how the Forest Service manages the Tongass in the future. While there is general agreement among scientists that the climate of Southeast Alaska is warming, there is considerable uncertainty concerning the scope of the effects of climate change on the forests of Southeast Alaska and how best to deal with possible changes to the many resources managed on the Tongass.[125]

The Forest Service reaches this conclusion without considering or identifying obvious recent changes specific to the southeast Alaska environment. NEPA imposes "a continuing duty to gather and evaluate new information" relevant to environmental impacts.[126] The Forest Service cannot rely on the analysis in the 2016 Forest Plan FEIS and must consider recent and ongoing changing environmental conditions in a supplemental EIS.

> When new information comes to light, the agency must consider it, evaluate it and make a reasoned determination whether it is of such significance as to require implementation of formal NEPA filing requirements. Reasonableness depends on the environmental significance of the new information, the probable accuracy of the information, the degree of care with which the agency considered the information and evaluated its impact....[127]

A 2019 update on climate change effects in the state explains that over the past four years southeast Alaska has experienced record temperatures and a prolonged drought.[128] Alaska's record heat wave in 2019 was newsworthy throughout the state and nation, and should have been obvious even to the out of state preparers of this DEIS.[129]

2019 started off as a hot year in southeast Alaska.[130] Alaska Hit With a Hot March (*see map at right*).



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[123] *Id.*

[124] *See, e.g.* Markon et al. 2018.

[125] DEIS at 3-128.

[126] *Warm Springs Dam Task Force v. Gribble,* 621 F.2d 1017, 1023-24 (9th Cir. 1980)

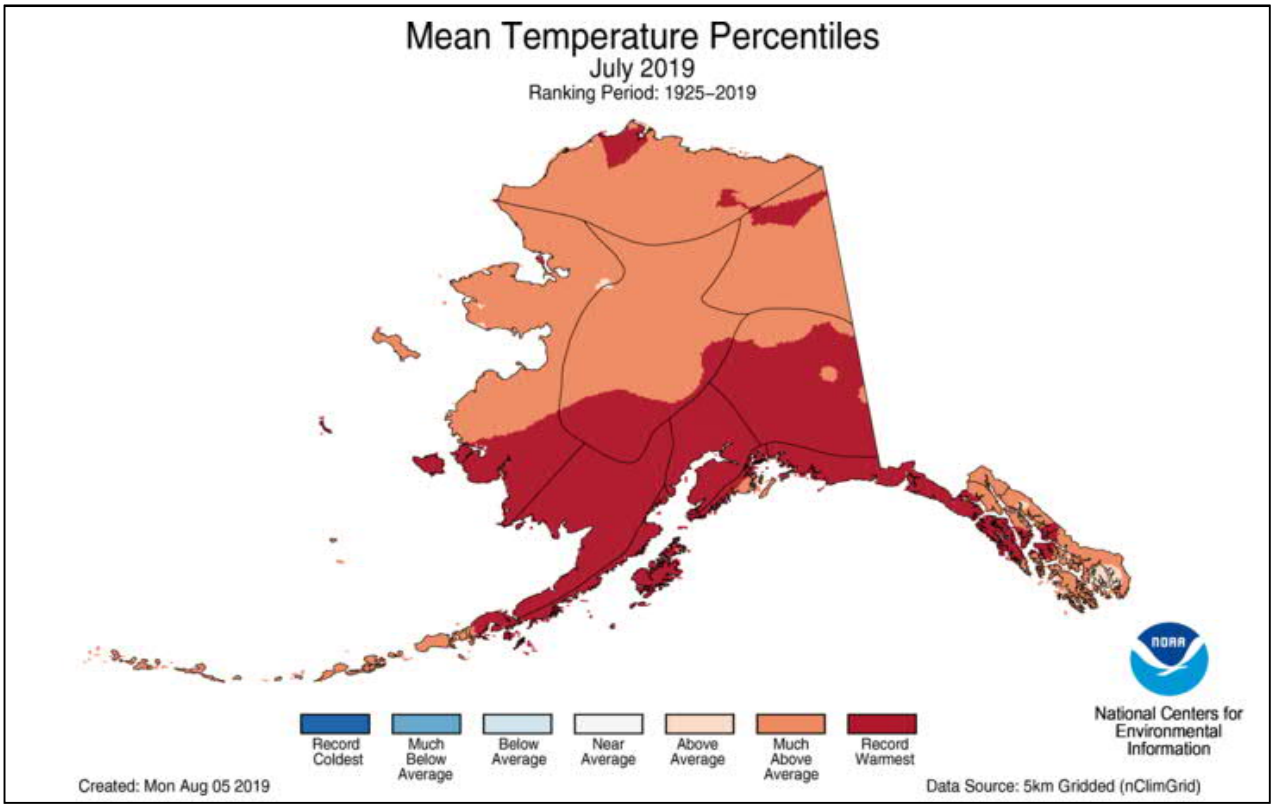
[127] *Id.*

[128] Exh. 14. Thoman, R. & J.E. Walsh. 2019. Alaska's changing environment: documenting Alaska's physical and biological changes through observations H.R. McFarland, ed. International Arctic Research Center, University of Alaska Fairbanks.

[129] https://www.nbcnews.com/news/weather/record-heat-alaska-melts-glaciers-hints-bigger-problems-may-be-n1034766; https://www.alaskapublic.org/2019/08/15/alaskas-summer-heatwave/.

[130] https://earthobservatory.nasa.gov/images/144796/alaska-hit-with-a-hot-march

By July, temperatures reached record levels, as shown here:



These changes are occurring at a rapid rate. It is unreasonable for the Forest Service (and Tetra Tech) to continue to regurgitate analysis that dates back to the 2008 TLMP FEIS. The following sections describe specific resource concerns.

A. Cedar decline; high-grading of large trees and cedar

Our scoping comments requested that you consider cedar and large-tree old-growth high-grading, cedar decline and provide information about regeneration in logged areas. Our scoping comments requested that the DEIS also discuss the Alaska Region's developing strategy for cedar conservation and how it is relevant to this rulemaking. Because of the forest-wide significance and because of the extent of cedar decline, the analysis needed to identify cedar composition and condition in the roadless areas, and consider whether leaving them intact would contribute to the persistence of the species.

The DEIS should have provided enough information to assess the impacts of removing high levels of yellow cedar and how this project fits in with biome-wide red cedar removals. An important purpose of the Roadless Rule was to protect large, undisturbed blocks of habitat for native vegetation.[131] Climate change is "altering conditions for tree recruitment, growth and survival and impacting forest community composition."[132]

The Forest Service has also disproportionately removed high volume and large-tree old-growth, particularly from islands where the agency is planning large timber sales: Etolin Island, Kupreanof Island, Mitkof Island North Central Prince of Wales Island, Wrangell

[131] Roadless Rule FEIS at 1-4.

[132] Exh. 24. Bisbing et al. 2019. From canopy to seed, loss of snow drives directional changes in forest composition.

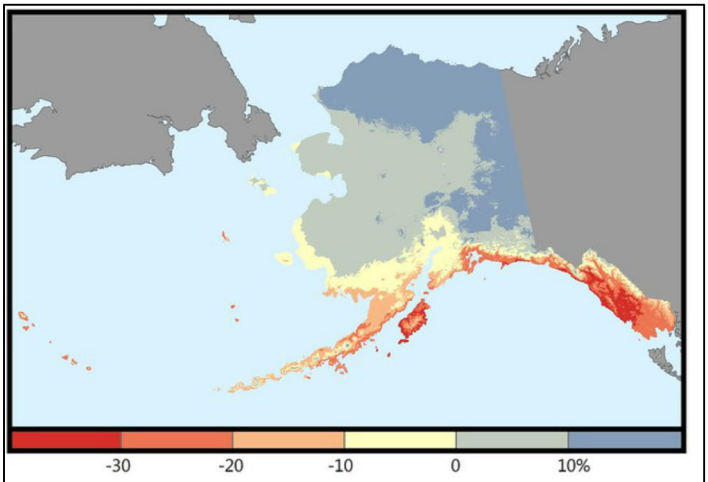
Island, and Zarembo Island.[133] This rulemaking will exacerbate high-grading of both cedar species and large-tree old-growth forest which have the highest importance for biodiversity.[134] The Roadless Rule exemption would remove protections for165,000 acres of old-growth and *59,000 acres of high-volume old-growth*." [135]

In NRDC v. U.S. Forest Service, the court identified an agency failure to provide an analysis regarding the disproportionate harvest of high-volume old-growth.[136] The court noted the special ecological value of these forest types for wildlife and instructed the Forest Service to assess reasonably foreseeable continued high-grading.[137] Importantly, the court directed the agency to consider these issues in programmatic analyses.[138] The DEIS needed to disclose the effect of continued high-grading old-growth forests, whether or how to lessen the cumulative impact of the practice and assess potential impacts of reasonably foreseeable future high-grading both high-volume old-growth and both cedar species.

Cedar high-grading is a significant issue in part because it results in clearcutting large forested areas with ecological effects to old-growth dependent wildlife that range from bear denning habitat to nesting habitat for avian species.[139] As explained in a recent review of British Columbia's logging practices, "the treatment of cedar is the very definition of high-grading: logging one species to the exclusion of another."[140] Throughout British Columbia and southeast Alaska, cedar is one of the few species that generates profits for timber companies.[141]

It is also a significant issue because yellow cedar decline is the most severe tree die-off ever recorded in North America, spanning half a million acres by 2013.[142] Yellow cedar does not regenerate after logging, meaning that lifting Roadless Rule protections will eliminate the species from those areas.[143]

Climate change – particularly a reduced snowpack – caused cedar decline through shifts in the frequency of freezing and thawing events in late winter and reduced snow cover.[144] The Forest Service projects further future reductions in the regional snowpack (*see map at right*).



As warming in Alaska continues, the amount of snowpack remaining at the end of winter will change. The snow-water equivalent, or the amount of water held in the snowpack, on April 1, is predicted to increase in some parts of Alaska, and decrease in others. In the map above, you can see the changes predicted by 2050. (USDA Forest Service)

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[133] DEIS at 3-58; 3-67; 3-105.

[134] *Id.* at 3-55.

[135] Roadless Rulemaking Cost-Benefit Analysis at 38.

[136] *NRDC v. U.S. Forest Service,* 421 F.3d at 815.

[137] *Id.*

[138] *Id.*

[139] Exh.21. Nelson, J. Vanishing Heritage: the loss of ancient red cedar from Canada's rainforests.

[140] *Id.*

[141] *Id.*

[142] Hennon, P.E. 2012.; Hennon, P.E. & D. Wittwer. 2013.

[143] *See* Prince of Wales Landscape Level Analysis FEIS at 3-337 (yellow cedar comprises less than 1 percent of second growth forests); Central Tongass Project DEIS at 3-62.

[144] Exh. 13.

Yellow and red cedar comprise 9.7 and 5.9% of the Tongass National Forest's growing stock, respectively but timber companies have removed these species disproportionately.[145] Their 2007 respective values - $140/MBF and $116/MBF vastly exceeded the $4/MBF value of the Forest's most prevalent species, western hemlock.[146] Both cedar species are more prevalent in southern and central southeast Alaska where the agency implements its timber sale program.

The recent Big Thorne and Logjam sales on Prince of Wales Island, for example, targeted the two cedar species as 34 percent and 28% of the sale – at least double or more those species' actual presence on the Forest. The Prince of Wales Landscape Level Analysis timber sales target cedar, which comprises 29% of project's timber volume.[147] Timber companies have already removed old-growth from 380,950 acres on the island, including 192,275 non-federal acres and 80,445 acres over the last 30 years.[148] Sealaska Corporation and the Alaska Mental Health Trust are major landowners there, and will likely log another 93,980 acres of old-growth on the island, under State of Alaska regulations which do not limit clearcut size.[149]

Fresh non-federal cut on Prince of Wales. Credit: Colin Arisman.

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[145] Wilson, B. 2002. Cedar harvest on the Tongass National Forest. (Unpublished). Alaska Region Forest Management.

[146] Housely, R., K. Vaughn & S. Alexander. 2007. Timber market analysis of the effects of export and interstate commerce on timber sale value and volume. Forest Service, Region 10.

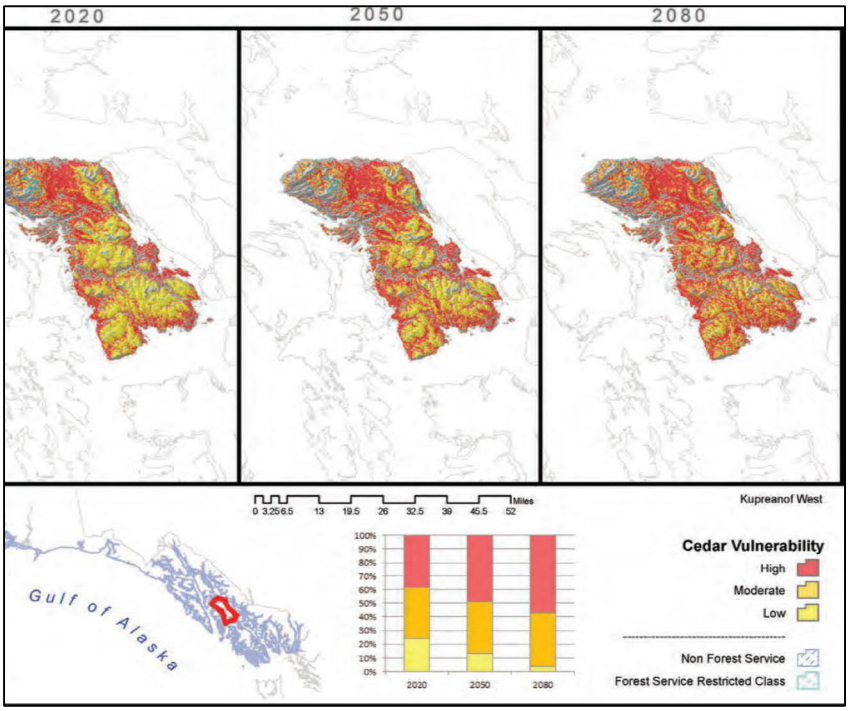
[147] Prince of Wales Landscape Level Analysis FEIS at 3-111.

[148] *Id.* at 3-361.

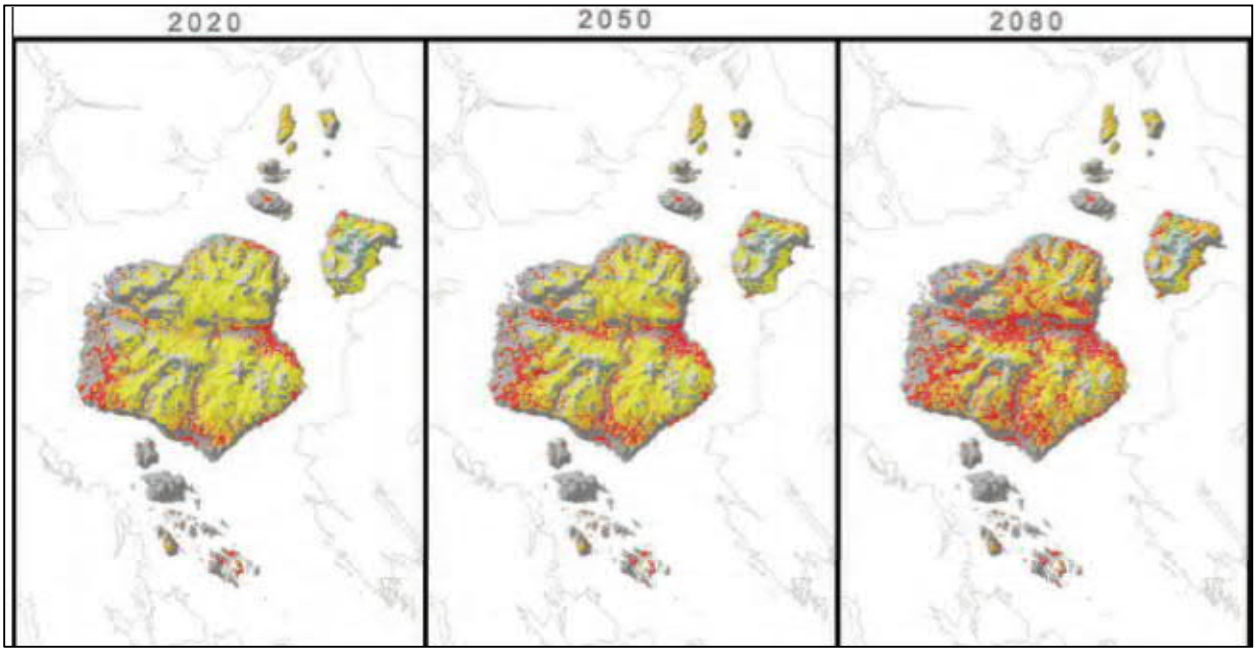
[149] *Id.*

The DEIS mostly ignores cedar decline except for a few scattered paragraphs, even though the Forest Service has mapped and projected current and future levels of cedar decline and could provide a meaningful analysis. There is available data to show where yellow cedar on central southeast Alaska islands has the highest likelihood of persisting over the next 80 years, and where there is high risk of further decline.[150]

Western Kupreanof Island, for example, contains 6.6 percent of the yellow cedar acreage in southeast Alaska, and 12.1 percent of the acreage in decline. (*See maps at right*)



Will there be any yellow cedar left of Zarembo Island if the Forest Service proceeds to add inventoried roadless areas to the Central Tongass Project Timber Analysis Areas?



This rulemaking would worsen high-grading of cedars and of large-tree and high-volume oldgrowth forest. Climate change is threatening successful tree regeneration by causing unprecedented climatic and disturbance conditions and changes in forest community composition.[151] The DEIS fails to inform the public whether the agency expects the species to persist in one portion of an area or another or consider cedar decline with an analysis

[150] Central Tongass Project PR 832_0539.

[151] Exh. 24 (Bisbing et al. 2019).

describing the impact in a way that informs whether or not to remove Roadless Rule protections from areas where the species persists. This broad level of analysis is not acceptable under NEPA.

B. Climate Change Impacts and Fisheries

Southeast Alaska communities are heavily dependent on the salmon fishery, which supports 1 in 10 jobs in the region.[152] In 2017, 1,784 gillnet, seine and troll salmon permit holders harvested 50.1 million salmon in southeast Alaska, generating an ex-vessel value of $169 million.[153] The Tongass National Forest produces 95% or more of southeast Alaska's pink salmon harvest taken mostly by seine fisheries and roughly two-thirds of the coho harvest taken mostly by troll fisheries.[154] The troller fleet is the second largest fleet in the state, with over 1,000 active permit holders, 80 percent of whom are Alaska residents.[155] These earnings employ thousands of processing workers and support nearly every business in every community, with a total economic impact estimated at $700 million annually.[156]

Defenders' scoping comments requested that the DEIS candidly discuss and disclose the current status of southeast Alaska's salmon populations and the risks presented by the proposed action such as the cumulative impacts of climate change and logging. For example, a 2009 study, "Global climate change and potential effects on Pacific salmonids in freshwater ecosystems of southeast Alaska" identified numerous climate change effects, including likely risks of pre-spawner and egg and embryo mortality events for pink and chum and degraded sockeye lake habitat and juvenile coho rearing habitat.[157] The article noted that the "most pervasive anthropogenic effect" on salmon habitat is timber extraction.[158]

Habitat conservation – such as maintaining intact roadless areas – will be important to the survival of sustainable fishery populations as changes in climatic conditions "will impose greater stress on many stocks that are adapted to present climatic conditions."[159] In particular, there are risks to freshwater habitat associated with changes in disturbance events, thermal regimes, precipitation changes and lower summer stream flows and experts believe "[i]mpacts to salmon populations in specific streams and rivers are likely" and thus recommend "considering *thermal refugia for salmonids where possible*."[160] Bryant's conclusions are consistent with expert findings that anticipate major hydrological changes, with significant consequences for ecosystem productivity.[161]

The discussion of impacts to fish in the DEIS provided the boilerplate language that the Forest Service has utilized since 2008 to avoid confronting climate change impacts on fish:[162]

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[152] http://www.thealaskatrust.org/seabank-annual-report-web

[153] *Id.*

[154] *See* Exh. 18 Johnson, A.C., J.R. Bellmore, S. Haught, and R. Medel. 2019. Quantifying the monetary value of Alaskan National Forests to commercial Pacific salmon fisheries.

[155] *Id.*

[156] *Id.*

[157] Bryant 2009. Global climate change and potential effects on Pacific salmonids in freshwater ecosystems of southeast Alaska.

[158] *Id.*

[159] Haufler, J. 2010.

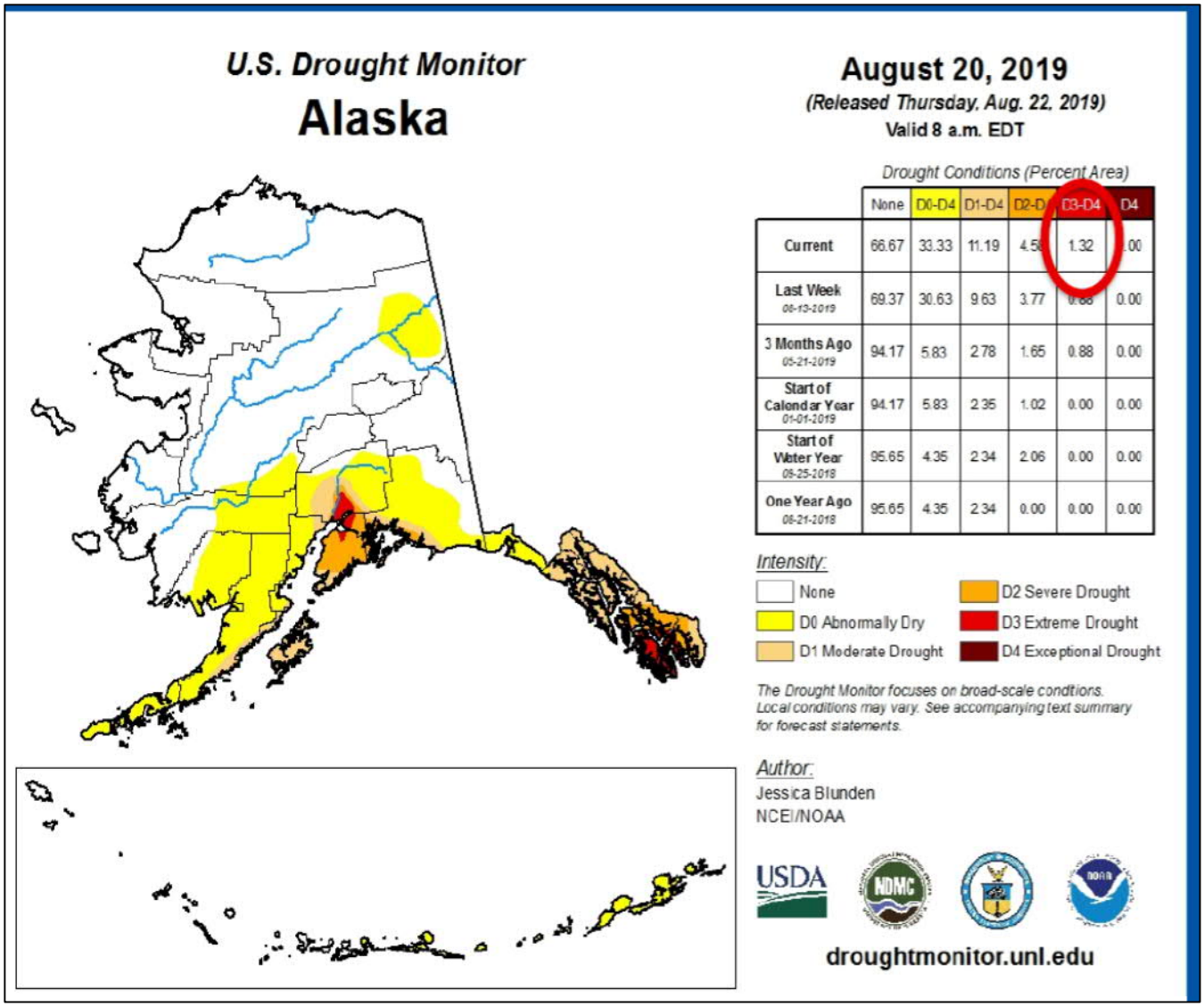
[160] *Id.*

[161] *Id.*

[162] DEIS at 3-119; 2008 TLMP FEIS at 3-93.

> … there is general agreement that the climate is warming, precipitation will increase in the fall and winter but decrease in summer in snow- and rain-dominated watersheds. However, there is uncertainty surrounding specific predictions and even more uncertainty regarding the effect of these changes on resources including fish. The cumulative effects of climate change are not clear….

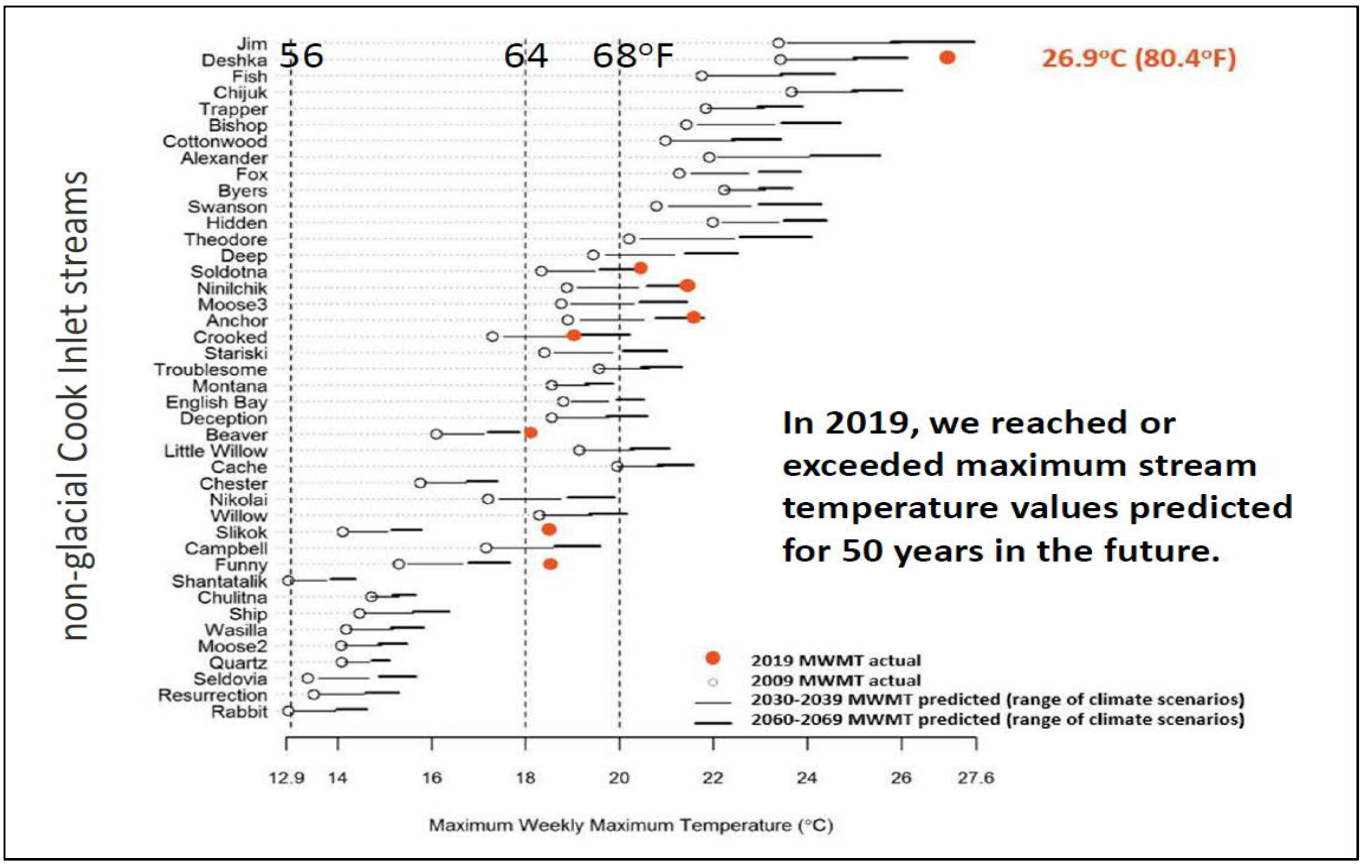
It is unreasonable to continue ignoring current environmental changes in NEPA analyses. Southeast Alaska - particularly areas of planned timber sales, has just experienced a prolonged drought with record low rainfall.

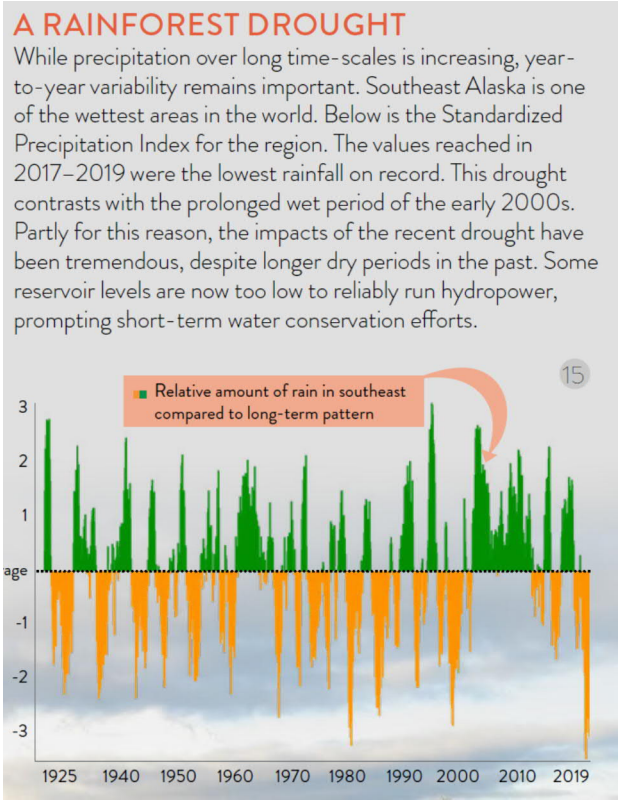


	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	66.67	33.33	11.19	4.58	1.32	0.00
Last Week 08-13-2019	69.37	30.63	9.63	3.77	0.88	0.00
3 Months Ago 05-21-2019	94.17	5.83	2.78	1.65	0.88	0.00
Start of Calendar Year 01-01-2019	94.17	5.83	2.35	1.02	0.00	0.00
Start of Water Year 09-25-2018	95.65	4.35	2.34	2.06	0.00	0.00
One Year Ago 08-21-2018	95.65	4.35	2.34	0.00	0.00	0.00

The Forest Service either has quit monitoring stream temperatures in southeast Alaska or is failing disclose the results. But 2019 stream temperatures elsewhere in Alaska far exceeded the 13° Celsius (56° Fahrenheit) threshold for fish, in some cases reaching 80°.[163] (*See chart and first panel, next page.*)

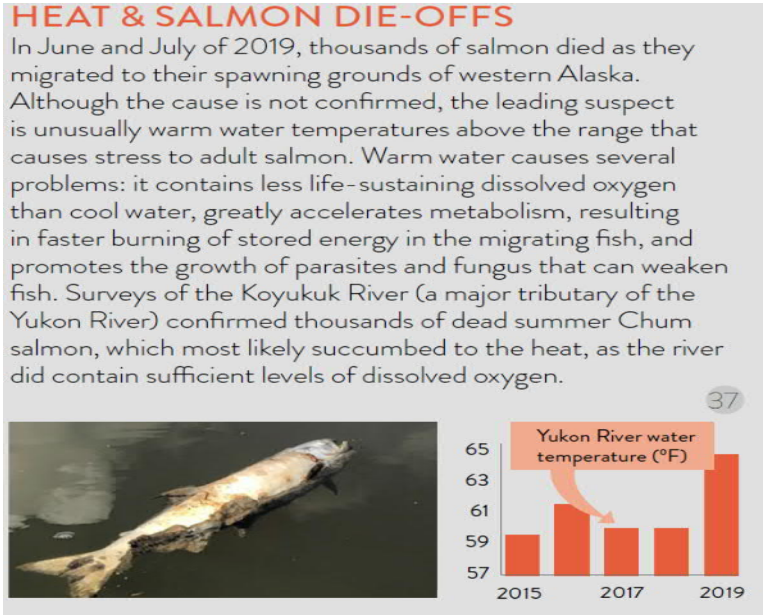
[163] Exh. 17 (Mauger 2019).





See Exhibit 14.[164]

Warm stream temperatures cause pre-spawning mortality, *as shown here*:



[164] Exh. 14. (Thoman, R. 2019).

It is unreasonable to ignore the cumulative effects of logging, road density and climate change on salmon. There are strong negative correlations between logging road density, timber extraction and salmon productivity.[165] For example, NMFS has found that logging degrades salmon habitat by ...

> "... removal and disturbance of natural vegetation, disturbance and compaction of soils, construction of roads and installation of culverts. Timber harvest activities can result in sediment delivered to streams through mass wasting and surface erosion that can elevate the level of fine sediments in spawning gravels and fill the substrate interstices inhabited by invertebrates. The most pervasive cumulative effect of past forest practices on habitats for anadromous salmonids has been an overall reduction of habitat complexity from loss of multiple habitat components. Habitat complexity has declined principally because of reduced size and frequency of pools due to filling with sediment and loss of LWD (large woody debris).... As previously mentioned, sedimentation of stream beds has been implicated as a principal cause of declining salmonid populations throughout their range."[166]

Forest Service planned timber sales will occur in areas most at risk to these cumulative effects. There is substantial deferred maintenance and chronic sedimentation affecting fish habitat throughout Prince of Wales Island.[167] The Forest Service would add 122 miles of new road construction within 300 feet of fish habitat, cause peak flow rate increases in nearly a quarter of the project area watersheds, increase risks of sedimentation and low summer stream flows, and add 436 stream crossings.[168] In the Central Tongass Project area, there are 432 existing red crossing blocking 99 miles of habitat, and the Forest Service proposes 700 new stream crossings, including 128 on anadromous streams.[169] For some watersheds, the agency proposes to remove between 20 and 40 percent of existing forested habitat.[170] As with the Prince of Wales timber project, there are a number of watersheds already in poor condition, with existing high risks of peak flows.[171] And these are just the issues on federal land. Non-federal logging by Sealaska or for the purpose of improving mental health in Alaska may have even more cumulative impacts on freshwater bodies, estuaries, sedimentation and microclimates, as suggested by this photo.

Photo credit: Colin Arisman

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[165] Halupka et al 2000.

[166] Endangered and Threatened Species: Threatened status for Southern Oregon/Northern California Evolutionarily Significant Unit (ESU) of coho salmon. 62 Fed. Reg. 24588 at 24593 and 24599. May 6, 1997.

[167] 2003 Tongass Roads Analysis; Big Thorne FEIS at 3-285-286.

[168] USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact Statement at 3-135 – 3-143.

[169] *Id.* Central Tongass Project DEIS at 3-160.

[170] *Id.* at 3-160.

[171] *Id.* at 3-171-176.

It is unreasonable to assume that allowing timber entries into remaining roadless refugia would be harmless to salmon fisheries in light of rapidly changing environmental conditions. 2016 was a pink salmon fishery disaster for southeast Alaska.[172] Across southeast Alaska the 2018 pink salmon run failed to meet even low expectations, with a 7.3 million fish harvest - the lowest since 1976 and over ten million fewer fish than fishermen caught during the 2016 disaster year.[173] In 2017, pink salmon harvests in some of the traditionally most productive areas around eastern Prince of Wales Island 5 percent of the average harvest for that area.[174] These numbers are alarming. Now, ADF&G's 2020 pink salmon forecast notes drought conditions and marine heat waves as likely causes of low juvenile pink salmon abundance indices and its 2020 forecast for a 12 million fish harvest - a third of the recent decadal average:[175]

> **Forecast Discussion:**
> The 2020 harvest forecast of 12 million pink salmon is approximately one third of the recent 10-year average harvest of 35 million pink salmon. A harvest near this forecast would also be approximately 60% of the average even-year harvest since 2006. The 2019 peak June–July juvenile pink salmon index value (1.20) ranked 21st out of the 23 years that SECM information has been collected. Pink salmon harvests associated with juvenile indices below a value of 2.0 have ranged from 8 to 37 million fish (mean=21 million fish).
>
> The low juvenile abundance index in 2019 was not unexpected. Pink salmon escapements in the parent year (2018) were very poor throughout northern Southeast Alaska inside waters and the escapement goal was not met in that subregion, which may have resulted in below optimal egg deposition. Escapement and harvest of pink salmon in the Northern Southeast Inside subregion have been very poor since 2012 and the 2020 forecast indicates this pattern is likely to continue. Pink salmon escapement goals for the Southern Southeast and Northern Southeast Outside subregions were met in 2018, but harvests were well below average. The low juvenile abundance index in 2019 may also indicate that brood year 2018 pink salmon experienced poor freshwater and/or early marine survival. It is possible that drought conditions present in Southeast Alaska from the parent year 2018 spawn through the spring of 2019 reduced spawning success or negatively impacted overwinter survival of developing juvenile salmon, but the exact reasons for the low juvenile abundance are not known. Juvenile pink salmon caught in the 2019 SECM survey trawls, however, were among the largest (in length) in the 23-year time series (Figure 3) and were in good condition, which indicates favorable nearshore marine conditions in the spring. The size of juvenile pink salmon was similar to the large size of juveniles observed during the marine heat wave of 2014–2016 (Figure 3) and returns from those juvenile years were all below average.
>
> Like many recent years, a potential source of uncertainty regarding the 2020 pink salmon return is the anomalously warm sea surface temperatures in the Gulf of Alaska in 2019. Warm temperatures that persisted throughout the Gulf of Alaska from fall 2013 through much of 2016 (Bond et al. 2015; Di Lorenzo and Mantua 2016; Walsh et al. 2018) returned in 2018 and strengthened in 2019. Compared to sea surface temperatures since 1997, when NOAA first started the SECM project, surface temperatures in the Gulf of Alaska in 2019, immediately offshore of Southeast Alaska, were the warmest of the time series in July, the 4th warmest in August, and 3rd warmest in September[1]. Sea surface temperatures were well above average across the entire Gulf of Alaska during that time[2]. Pink salmon that went to sea from 2014 to 2018 returned in numbers below expectation and below recent odd- and even-year averages. The impact of warm sea surface temperatures on the survival of pink salmon that went to sea in 2019 is unknown and adds uncertainty to the forecast.

The Forest Service's 1995 Anadromous Fish Habitat Assessment made numerous findings and recommendations related to reducing the impacts of industrial clearcut logging on salmon habitat in southeast Alaska. The Assessment explained that:

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[172] https://www.kfsk.org/2018/08/29/southeast-pink-salmon-catch-lowest-in-over-four-decades/

[173] https://www.kfsk.org/2018/08/29/southeast-pink-salmon-catch-lowest-in-over-four-decades/

[174] Exh. 27. ADF&G 2018.

[175] Exh. 28, ADF&G 2019.

> The cumulative effects of frequent disturbances in the Pacific Northwest have been shown to substantially reduce the quality of freshwater fish habitats resulting in negative consequences for species, stocks, and populations of fish that depend on them, even if coniferous cover is left in buffer strips along the fish-bearing streams. Fish-bearing streams represent only a small portion of stream mileage in any watershed. Because recovery of fish habitat from the effects of extensive logging in a watershed may take a century or more, recovery may never be complete if forests are clearcut harvested and watersheds are disturbed extensively on rotation cycles of about 100 years. Few refuges remain in a watershed that fish can use during such widespread, intense, and recurrent disturbances.
>
> ...Should freshwater habitats be degraded for long periods, salmon and steelhead stocks will eventually be confronted simultaneously with low marine productivity and degraded freshwater habitat. The likely result of such double jeopardy could be high, long-term risk of extinction. [176]

Given current trends in pink salmon production, the proposed Rule exemption would present the "double jeopardy" situation described above. It would be reckless to proceed with this rulemaking because of likely long-term adverse impacts on the salmon themselves and salmon dependent species such as bears and commercial fishermen.

The Forest Service needs to produce a revised DEIS that considers climate change impacts on all roadless values and inventoried roadless area resources.

IV. Wildlife habitat impacts

Defenders' scoping comments requested that the Forest Service analyze roadless values for wildlife, consider population trends and provide a reasonable level of location specific information. This analysis needed to provide more than a quantitative approach to measuring productive old growth losses at various scales. Instead, there needs to be consideration of specific inventoried roadless area habitat features that contribute to wildlife viability and abundance, particularly in light of the high degree of natural fragmentation combined with fragmentation in roaded portions of the Tongass.

The DEIS instead provided a generalized analysis admitting that timber extraction in newly opened areas and associated road construction or reconstruction could decrease the value of these roadless areas to wildlife through increased habitat fragmentation and reduced landscape connectivity, with additive effects on species vulnerable to overharvest and wide ranging species that require large expanses of roadless refugia. But then the Forest Service deferred analysis of the magnitude of the effects to project level analyses. There are multiple problems with this approach. There is a heightened need for roadless refugia in the areas where the agency plans landscape-scale clearcut logging.

A. The Forest Service must analyze the cumulative impacts of Roadless Rule exemption alternatives and planned logging on wildlife

The Forest Service has completed or initiated the three timber projects it intends to use over the next fifteen years to meet the Tongass Advisory Committee's (TAC) timber targets pursuant to the 2016 Forest Plan: the Prince of Wales Landscape Level Analysis, Central Tongass Project and South Revilla Integrated Resource Project. Together, these three massive timber sales will remove nearly a billion board feet of timber from over 60,000 acres.

Under any of the Roadless Rule repeal action alternatives, the Forest Service would increase the scale of clearcutting and road construction under the Prince of Wales Landscape Level

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[176] U.S. Forest Service. 1995. Report to Congress: Anadromous fish habitat assessment. Pacific Northwest Research Station, Alaska Region. R10-MB-279.

Analysis.[177] The Prince of Wales Island project alone would remove nearly two-thirds of a billion board feet of timber over the next fifteen years.[178] The Prince of Wales Island project is monstrous compared to the recent Big Thorne Project, which was until now the largest Forest Service timber sale in decades and authorized Viking Lumber to eliminate the last remaining stands and travel corridors in the central part of the island.[179]

Timber companies have already logged 380,950 acres on the island, including 80,445 acres over the last 30 years, with another 93,980 acres of non-federal old-growth at risk in the near future.[180] The Forest Service has already considered timber entries into Prince of Wales Island inventoried roadless areas, but deferred those entries pending this rulemaking.[181] The Forest Service has also initiated planning road construction activities in the islands inventoried roadless areas.[182] The island's deer population supports substantial and increasing hunting effort, causing concerns among subsistence users.[183] The 2017 deer season was the worst in memory for local hunters, causing increased concern about the impacts of clearcuts and wolves. Some residents are now questioning Forest Service plans to sacrifice the island to keep Viking Lumber in operation, and believe "there's a limit on how much you can donate to the cause."[184] The DEIS needed to fully analyze implications of removing Roadless Rule prohibitions on this island by providing information about deer population trends, hunting effort, and the importance of island deer for both island residents and residents of other islands who harvest Prince of Wales Island deer due to deer deficits elsewhere.

For the pending Central Tongass Project, the Forest Service has also already planned to maximize the acreage available for clearcutting and road construction by authorizing entries into inventoried roadless areas.[185] Again, the agency deferred action on these entries pending the completion of this rulemaking.[186] The DEIS fails to mention the planned Forest Plan amendment to reduce scenic integrity objectives as part of this project, and instead assumes those objectives would provide extensive habitat that provides connectivity and contributes to the Conservation Strategy. But the Central Tongass Project would authorize the timber companies to clearcut in an undisclosed portion of 12,084 acres of formerly protected low elevation important habitat near the beach fringe.[187] The failure to consider this project-specific dismantling of the Conservation Strategy and similar efforts illustrates why this DEIS needed to provide more location specific analysis.

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[177] USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact Statement at 2-36. R10-MB-833e. U.S. Forest Service, Alaska Region. October 2018. P. 3-66 – 24 IRAs.

[178] *Id.* at 2-23, 27.

[179] *Id.*

[180] *Id.* at 3-361.

[181] *Id.* at 2-36.

[182] https://naturalresources.house.gov/download/hanna-autumn-written-testimony.

[183] Exh. 31 (ADF&G 2015).

[184] https://www.alaskapublic.org/2017/12/18/wolves-and-logging-both-cut-into-prince-of-wales-deer/.

[185] USDA Forest Service. 2019. Central Tongass Project Draft Environmental Impact Statement Vol. 1 at 3-26. R10-MB-832a. U.S. Forest Service, Alaska Region. July 2019. There are 43 IRAs in the CTP project area (p. 3-51).

[186] *Id.* at 3-26.

[187] *Id.* at 3-69-3-70.

The only other old-growth timber sale project proposed over the next decade is the South Revilla Integrated Resource Project, which also includes plans to reduce scenic integrity objectives.[188] Roadless Rule repeal alternatives would vastly expand the acreage available for clearcutting and road construction associated with that project.[189]

A major flaw with the DEIS is the failure to consider cumulative impacts to wildlife caused by Roadless Rule exemption alternatives combined with these projects, which represent planned logging for the next decade. NEPA requires that agencies consider cumulative actions in determining the scope of environmental impact statements, meaning actions "which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement."[190] As explained by the Supreme Court, under NEPA, "proposals for … actions that will have cumulative or synergistic environmental impact upon a region … pending concurrently before an agency … must be considered together."[191]

In general, the 9th Circuit has explained that:

> [P]rojects need not be finalized before they are reasonably foreseeable. NEPA requires that an EIS engage in reasonable forecasting. Because speculation is implicit in NEPA, we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as a crystal ball inquiry.[192]

In the specific context of requirements to evaluate pending plans for timber extraction, in Blue Mountains Biodiversity Project v. Blackwood, the 9th Circuit explored the Forest Service's refusal to evaluate the cumulative impact of multiple logging projects occurring in the same watershed in the NEPA analysis for a salvage logging project.[193] The logging projects would have logged 40 - 55 MMBF of timber from the same watershed, involve steep slope logging and entail 20 miles of road construction.[194] The court found that the projects were reasonably foreseeable and required a cumulative impacts analysis based on prior development of the projects as part of a forest recovery strategy and prior disclosure of sale names, quantities and timelines prior to the release of the NEPA analysis for the project.[195] The 9th Circuit also reviewed a similar case in 2015, and determined that the pending timber project was reasonably foreseeable based on BLM's "focus on details" so that "many elements of the Cottonwood project were already firmly established."[196] As explained in Natural Resources Defense Council v. U.S. Forest Service, "where several foreseeable projects in a geographical region have a cumulative impact, they must be evaluated in a single EIS.[197] The

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[188] https://www.fs.fed.us/sopa/components/reports/sopa-111005-2019-10.pdf; https://www.fs.usda.gov/nfs/11558/www/nepa/108739_FSPLT3_4403638.pdf.

[189] https://www.fs.usda.gov/nfs/11558/www/nepa/108739_FSPLT3_4403638.pdf.

[190] 40 C.F.R. § 1508.25

[191] *Kleppe v. Sierra Club,* 427 U.S. 390, 410 (1976); *see also Natural Resources Defense Council v. Forest Service,* 421 F.3d 797, 815 (9th Cir. 2005).

[192] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.,* 668 F.3d 1067 (9th Cir. 2011)(citations and internal quotation marks omitted).

[193] *Blue Mountains Biodiversity Project v. Blackwood,* 161 F.3d 1208, 1215 (9th Cir. 1998).

[194] *Id.*

[195] *Id.*

[196] *Soda Mt. Wilderness Council v. U.S. BLM,* 607 Fed. Appx. 670, 672 (9th Cir. 2015).

[197] *Natural Resources Defense Council v. Forest Service,* 421 F.3d 797, 815 (9th Cir. 2005)("where several foreseeable projects in a geographical region have a cumulative impact, they must be evaluated in a single EIS").

Forest Service must prepare a revised DEIS that provides more location-specific information about wildlife species.

B. The DEIS failed to provide a detailed analysis of impacts to Sitka black-tailed deer and deer winter range.

We have significant concerns about the lack of high value winter deer range remaining on the Tongass, particularly in central and southern southeast Alaska and consequently the impacts of this Rulemaking on remaining deer habitat. Many of the inventoried roadless areas opened up to clearcutting abut past clearcuts where canopy closures are now or will soon be occurring. Logging in inventoried roadless areas may also further fragment or directly remove the little remaining winter deer habitat. Many southeast Alaska islands and mainland are already heavily fragmented and contain large portions of what is currently, or soon to be, unsuitable deer habitat due to canopy closure in the extensive created openings and second-growth stands.

In the Alaska National Interest Lands Conservation Act (ANILCA), Congress announced the following policy: "[c]onsistent with sound management principles, and the conservation of healthy populations of fish and wildlife, the utilization of public lands in Alaska is to cause the least adverse impact possible on rural residents who depend on subsistence uses of the lands."[198] Congress intended for federal agencies to incorporate a factor of safety into resource management decisions:

> The committee intends the phrase "the conservation of healthy populations of fish and wildlife" to mean the maintenance of fish and wildlife resources and their habitats in a condition which assures stable and continuing natural populations and species mix of plants and animals in relation to their ecosystems, including recognition that rural residents engaged in subsistence uses may be a natural part of that ecosystem; minimize the likelihood of irreversible or long-term effects of such populations and species; and ensures maximum practicable diversity of options for the future. The greater the ignorance of resource parameters, particularly of the ability of a population or species to respond to changes in its ecosystem, the greater the safety factor must be.[199]

The Forest Service has failed to meet this standard for decades by disproportionately removing deer winter range. Most of the logging in southeast Alaska occurred on low-elevation, south facing slopes favored by deer. The DEIS identifies declines in deer habitat capability and admits that there will be long-term reductions in carrying capacity and long-term population declines.[200] These disclosures alone warrant maintain intact inventoried roadless areas to provide for rural subsistence uses. And the analysis needed to take the extra step of analyzing those reductions in areas with planned timber sales, and consider actual population trends.

There is a lack of high value winter deer range in the Petersburg and Wrangell Ranger Districts - whether on Mitkof, Kupreanof or Wrangell Island. Many of the proposed timber analysis areas abut past clearcuts where canopy closures are now or will soon be occurring. Most central southeast Alaska islands are already heavily fragmented and contain large portions of what is currently, or soon to be, unsuitable deer habitat due to canopy closure in the extensive created openings and second-growth stands.

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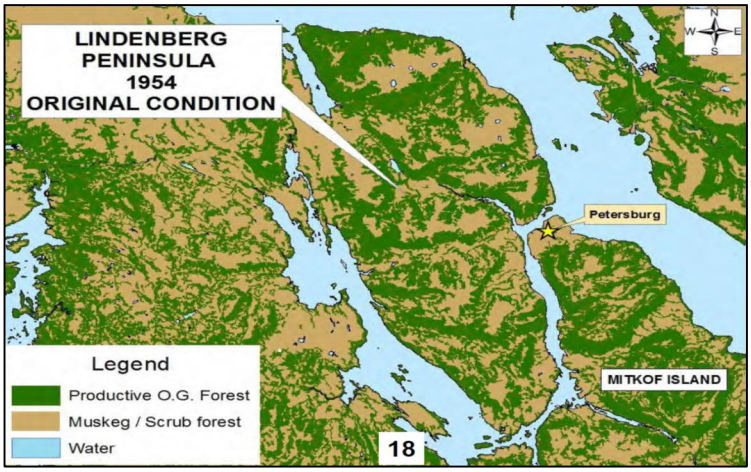
[198] 16 U.S.C. § 3112(1).

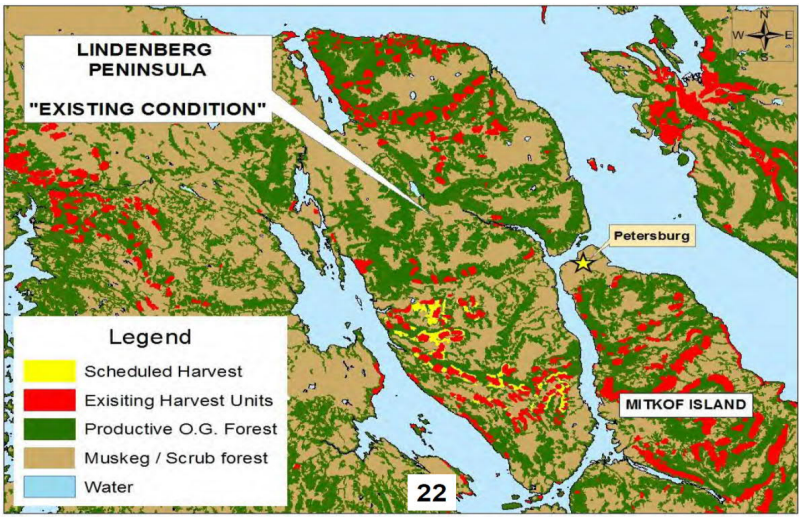
[199] Senate Committee on Energy and Natural Resources, Alaska National Interest Lands Conservation Act, S.Rep. No. 413, 96th Cong., 1st Sess. 233 (1979), reprinted in 1979 U.S.C.C.A.N. 5070, 5177.

[200] DEIS at 3-79, 3-95.

The Petersburg and Wrangell Ranger Districts disproportionately removed deer winter range for decades. According to a conservation assessment included in the TLMP planning record, most of the logging in these ranger districts occurred on low-elevation, south facing slopes favored by deer - for example, the southern portion of Mitkof Island.[201] Timber companies have already removed half of all the large-tree old growth forest from Kupreanof and Mitkof islands.[202] Nearly a quarter of the prime winter deer habitat in those two islands is gone.[203] More than half of the winter deer habitat is in areas managed for timber.[204] These losses warranted a fuller analysis and disclosure of the habitat features for deer within inventoried roadless areas on these islands. As shown by graphics prepared by the Alaska Department of Fish and Game, the disproportionate effect of past high-grading deer winter habitat and existing habitat loss is staggering in portions of these islands.



Had the Forest Service conducted an adequate location-specific analysis, the agency could have and should have produced a map showing where inventoried roadless areas provide remaining deer habitat on the landscape in its current condition:



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201 https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/alaska/seak/era/cfm/Documents/PDFs/4.17_Kupreanof-Mitkof.pdf.

202 *Id.*

203 *Id.*

204 *Id.*

The Forest Service has also removed similarly disproportionate levels of large tree forest/winter deer habitat from Wrangell, Etolin and Zarembo islands.[205] The recent Wrangell Island NEPA analysis indicated a loss of more than a third of deer winter habitat below 800 feet in elevation. Previous Forest Service analyses indicated lower deer numbers are lower on Wrangell Island than on surrounding islands based on browse indications, pellet density data and hunter harvest information. These low population numbers may reflect the significant loss of winter deer habitat in many Wrangell Island landscape units. Pending state timber projects have had or will have a significant impact on whatever high value winter deer range remains on the island. Indeed, an older Forest Service analysis, the Shady project EA, noted that "any additional loss of important deer habitat could reduce the ability of an already depressed population to recover."

Despite this historically high habitat loss, declining population trends and predation risks from wolves and black bears, the DEIS improperly minimizes adverse impacts to deer. For example, the Central Tongass Project DEIS acknowledges that the deer model results showing deer density already below the target of 18 deer/square mile in many project area Wildlife Analysis Areas with further reductions expected due to additional timber take.[206] Then:

> Timber harvest would decrease the estimated carrying capacity for deer over the long-term due to reductions in the amount of winter habitat capability. Within WAAs where timber harvest is planned under Alternatives 2 or 3, current deer habitat capability calculated using the deer model on all WAAs except WAAs 5012 and 5018 are below the 2016 Forest Plan guideline of 18 deer per square mile, and suggests the project would result in higher risk that there could be insufficient numbers of deer for sustainable wolf populations and human harvest.[207]

In other words, out of 13 Wildlife Analysis Areas recently analyzed, only two would *theoretically* support enough of deer to maintain wolf populations and human harvest. And because the Forest Service failed to look at local population trends, the DEIS ignores actual deer availability within the two WAAs that would meet the guideline - deer are extinct or nearly extinct on Kuiu Island. ADF&G pellet surveys from north Kuiu Island have historically been the lowest of any surveyed WAA in the project area.[208] The status of deer populations on individual islands warrants detailed analysis in order to assess actual availability of the resource and to assess the true significance of inventoried roadless areas on specific islands. For example, northern Kuiu Island became a predator pit, combining high levels of predation with a population decimated by severe winters, accompanied by a period of intensive logging.

The following map, submitted during the administrative appeal process for the 2008 Kuiu Timber Sale, illustrates the level of existing deer winter habitat loss in that project area (*see maps, next page*):

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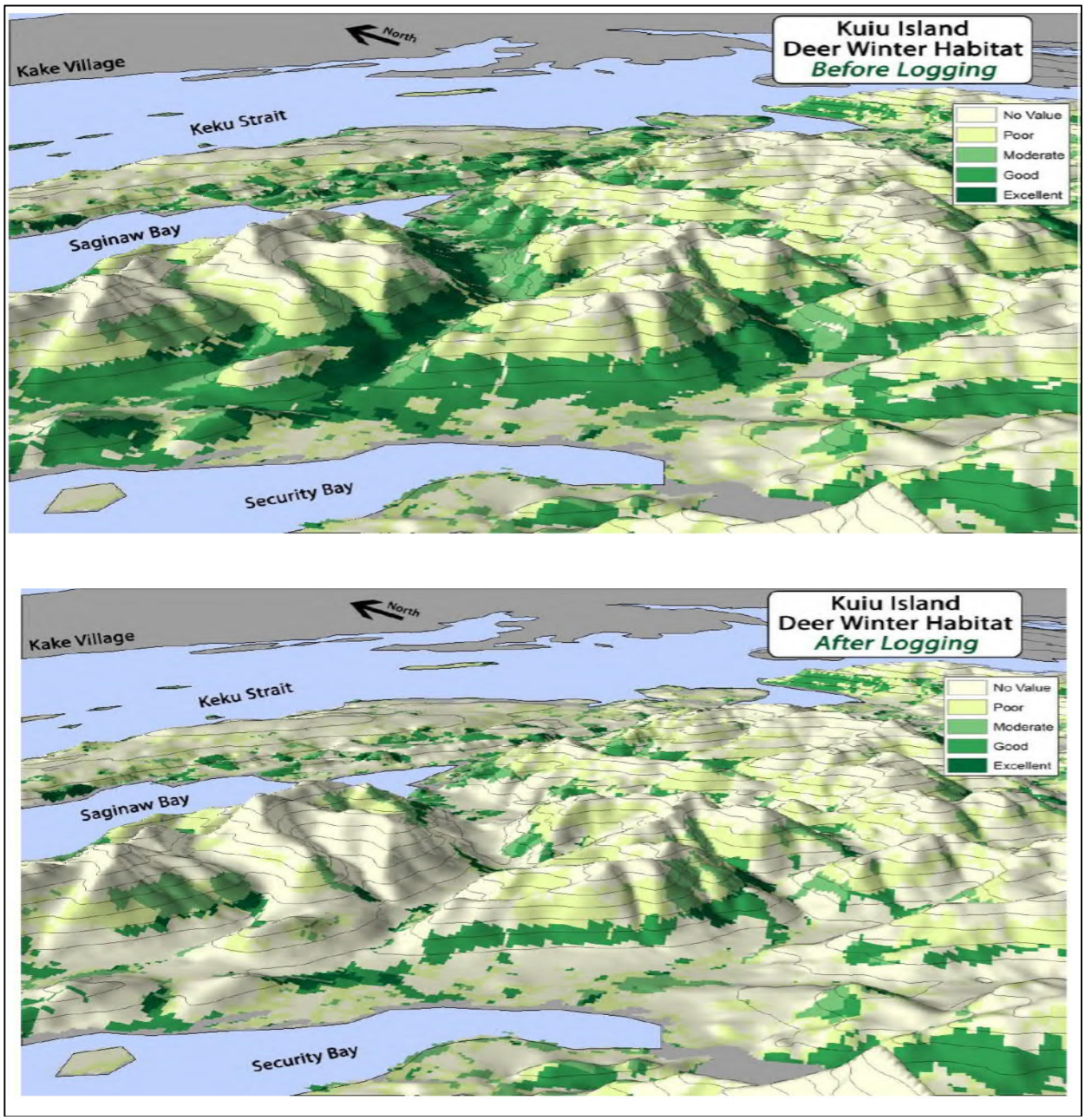
[205] https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/alaska/seak/era/cfm/Documents/PDFs/4.18_Wrangell_Zarembo_Etolin.pdf.

[206] Central Tongass Project DEIS at 3-149.

[207] *Id.* at 3-141.

[208] Central Tongass Project PR 832_0602 at 9.



Now there are no deer - unquestionably, a major impact.

Another interesting feature shown in the graphic is that there is north-facing deer winter habitat - a habitat quality the agency should have considered had the DEIS provided adequate site-specific analysis. For example, the Zarembo TAA is the entire northeast portion of the island, meaning that deer moving the hillside to the beach fringe necessarily use north facing habitat. But the DEIS restricts its definition of "high and moderately high value winter deer habitat" to only south-facing slopes and fails to distinguish between different forest stand qualities as deer habitat. As explained in wildlife expert Matt Kirchhoff's comments on the recent Prince of Wales Island timber project, the failure to identify habitat qualities for deer and separately consider actual deep snow habitat is a major flaw.

I am pleased to see the Forest Service recognizing the importance of large-tree old growth as important wildlife habitat. I am surprised, however, that the FS is using HPOG instead of SD67 as the chosen descriptor for deep-snow habitat for deer. The Forest Service has consistently objected to the use of volume class as a wildlife habitat descriptor.[1] A stand of older, even-aged trees may have high volume, but the closed canopy makes it poor habitat for deer. By comparison, a gap-phase old-growth stand that features tall, or large diameter trees, is good at intercepting snow and providing forage.[2] In the FEIS, adding "SD67 stands below 800 feet elevation" as deep-snow habitat for deer would make a more meaningful, accurate analysis.

4. Deep-snow winter habitat (for deer) is poorly and inconsistently defined.

The DEIs does a good job of describing how deer move up and down the hillside, and into and out of different types of stands, in response to changing snow conditions. In times and in places where deer encounter deep snow, they depend on old-growth stands with large trees that effectively intercept that snow (either HPOG, or SD67). For reasons that are unclear, the DEIS departs from the definition used in the Forest Plan and redefines deep-snow habitat as HPOG *on south-facing slopes only* (but see footnote 3).[3] This is problematic because (a) many deer do not have access to south-facing habitat (if they inhabits a north-facing watershed), and (b) deer that inhabit north-facing habitat are most affected by snow, and are most dependent on deep-snow habitat.

The DEIS (page 176) suggests that reducing the deep snow habitat to south-facing slopes only is a way of presenting a "worst case" analysis. I don't understand that logic. The DEIS is reducing the extent of deep-snow habitat, shifting it to an aspect where snow is less deep, and where stand structure is relatively more even-aged.[4] All else being equal, stands that develop under a gap-phase disturbance regime (often N-facing) are more valuable to deer than even-aged stands. Those gap-phase old-growth stands are also favored by loggers, who have targeted them disproportionately.[5] Narrowing the definition of deep-snow habitat will have significant repercussions for deer and subsistence hunters—effects not captured in the DEIS "worst case" analysis. The FEIS should adopt the definition of deep snow habitat that includes *all* aspects, as in the Forest Plan.

Even in the absence of adequate habitat measurements and the omission of significant chunks of high value deer habitat, the information the Central Tongass Project DEIS clearly shows that maintaining intact inventoried roadless such as those on north Kupreanof Island are essential to providing some remaining refugia for deer:

> High and moderately high value deer winter habitat would be most reduced by Alternative 2 in WAA 5136 (Portage Bay). Under Alternative 2 there would be a 35 percent reduction from the existing condition in this WAA, resulting 49 percent of this habitat remaining compared to the historic (1954) condition in this WAA. Based on professional opinion, a removal 35 percent of the existing amount of high and moderately high deer winter habitat in any particular WAA would be a substantial change in a WAA's ability to sustain a healthy deer population through a severe winter. The high and moderately high value deer winter habitat remaining from the historic condition would also reach 49 percent in WAA 5132 (West Kupreanof) under Alternative 2.
>
> In WAAs which have experienced long-lasting declines in the deer population in the past, such as WAA 2007 (Mitkof) and WAA 5138 (Tonka) high and moderately high

> value deer winter habitat would also be further reduced. In WAA 2007, the percentage remaining (from historic) would go from 70 percent currently remaining to 62 percent under Alternative 2. In WAA 5138, the percentage remaining would go from 71 percent currently remaining to 63 percent under Alternative 2. As noted there are no thresholds for what percentage of important deer winter habitat is required to prevent declines during severe winters, though it is known that the risk of severe winters would be increased....[209]

Game Management Unit 1B (mainland) populations exist in isolated pockets and have patchy distribution" with "relatively low deer density overall (due to typically high snow accumulation).[210] Game Management Unit 3 island populations have fluctuated considerably, with population declines caused by severe winter weather made worse by reduced habitat capability caused by logging and predation by wolves and bears.[211] A recent period of severe winters (2006/2007) caused deer to concentrate on winter range, followed by high mortality due to malnutrition and predation.[212] ADF&G has cautioned that population recovery has been slower than anticipated - likely because of predation from bears and wolves.[213] Even worse, there are "unfavorable long-term changes in habitat conditions resulting from decades of clearcut logging."[214] The DEIS acknowledges that: "... managers are still concerned that existing wolf and bear predation, as well as major habitat alterations in some WAAs are limiting the population from recovery. It is highly believed that a substantial die-off could result again in these GMUs with another severe winter.[215]

In sum, the Rulemaking DEIS needed to fully account for the effects of a series of above average and record snowfall winters that caused serious impacts to central southeast Alaska deer populations. Specifically, from 2006-2009, the central Alaska panhandle, including Game Management Unit 3, experienced 3 consecutive winters with well above average snowfall. In fact, snow depths in combination with habitat loss at least partly influenced the Alaska Board of Game's January 2013 decision to limit the deer hunting seasons and bag limits in some areas.[216] As ADFG personnel explained, "maintaining adequate reserves of old growth will be important for maintaining deer numbers at higher levels once recovery of the deer population has occurred."[217] The Forest Service must take reasonable steps to ensure not just viable, but harvestable levels of wildlife populations, in particular - for deer. The DEIS acknowledges periodic severe winter snowfalls anticipated, and that the greatest climate change concern for wildlife was weather extremes, but never takes the step of identifying where these impacts are likely to be most severe and where preserving Roadless Rule prohibitions on timber extraction and road construction would best buffer future risks.

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[209] Central Tongass Project DEIS at 3-76.

[210] Exh. 29 (Lowell 2015).

[211] Exh. 30 (Lowell 2015).

[212] DEIS at 3-81.

[213] Exh. 30 (Lowell 2015).

[214] *Id.*

[215] Central Tongass Project DEIS at 3-247.

[216] KFSK. Board of Game shortens deer season near Petersburg. Joe Viechnicki. Jan. 15, 2013. https://www.kfsk.org/2013/01/15/board-of-game-shortens-deer-season-near-petersburg/

[217] ADF&G. Division of Wildlife Conservation. Feasibility Assessment for Increasing Sustainable Harvest of Sitka Black-Tailed Deer in A Portion of Game Management Unit 3. October 2012.

C. Impacts to Alexander Archipelago Wolves: consider abundance and significance of all Tongass populations

Defenders' scoping comments requested that the Forest Service consider and disclose a reasonable, place-specific population estimates for southeast Alaska wolves. Many areas of Southeast Alaska where wolves historically were abundant have conditions similar to the Prince of Wales Archipelago, where suppression of the population to a very low level has been a critical concern in recent years. Extensive logging and road construction have similarly changed conditions for deer and wolves on Kuiu, Kupreanof, Mitkof, Zarembo, Revillagigedo, and Wrangell Islands. In conjunction with the Prince of Wales Archipelago, those islands sustain most of the wolf population in Southeast Alaska.[218] Decline in sustainable predator-prey communities will occur throughout the most productive areas for deer and wolves in Southeast Alaska because those areas are correlated with the most productive forest stands selected for timber harvest.[219]

The DEIS improperly minimizes adverse impacts to wolves by using an overly broad scale of analysis and ignoring location specific impacts. It states that 38% of the range-wide population inhabits southeast Alaska and population trends are largely unknown.[220] It notes there is some population data available for Prince of Wales and surrounding islands that suggests an apparent decline of potentially 75 percent.[221] This decline does not cause concern for the Forest Service, however, because there are lots of wolves in British Columbia, meaning that Prince of Wales Island is a mere 4 percent of the species range and hosts only 6 percent of the range-wide population.[222] The Prince of Wales Island population may declined another 8 to 14 percent over the next three decades so that there would be gaps in species distribution on the island.[223] The DEIS ignores Game Management Unit 3 (GMU3) wolf populations entirely. This rulemaking is about southeast Alaska, and it is arbitrary to minimize impacts to wolves by relying on populations in another country to minimize impacts.

The combination of lower deer populations and heavily roaded areas in close proximity to population centers can creates scenarios incentivizing and facilitating unsustainable harvests of wolves through pack depletion. The DEIS is deficient in considering impacts to wolves which only briefly mention the increased risks the rulemaking would cause to the population due to reduced deer habitat capability and road density. The discussion fails, for example, to analyze these risks in detail or to include any site-specific analysis of project area wolf population status or critical issues such as the extent to which the project could increase human-caused mortality. The DEIS anticipates localized increases in hunter access would be expected, but then relies on future road closures without ever considering the effectiveness of those mitigating measures, such as agency's record of actually doing decommissioning or storage or approach to enforcement.[224]

Again the absence of location-specific analysis is a significant flaw – after minimizing the importance of the Prince of Wales Island population, the DEIS then ignores the relevance of impacts to wolves on other islands entirely.

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[218] Person et al. 1996.

[219] David Person Declaration on Big Thorne, 2015, at ¶13e].

[220] DEIS at 3-82.

[221] *Id.*

[222] *Id.*

[223] *Id.* at 3-105.

[224] *Id.* at 3-99-100.

Photo source: Person & Larson 2013.[225]

The Forest Plan recommends maintaining habitat sufficient to support 18 deer per square mile, and indicates that keeping total road densities between 0.7 to 1.0 miles per square mile may be necessary.[226] Most of the Wrangell and Petersburg Ranger District WAAs already fail to meet these criteria, and only two of them would have long-term deer densities exceeding the Forest Plan standard – both on deer-depleted Kuiu Island.[227] Road densities in all but two of the analyzed WAAs would exceed the standard, with heavily hunted areas such as Mitkof, Wrangell and Zarembo Islands realizing road densities of 1.38, 1.26 and 1.98 miles per square mile, respectively.[228]

The DEIS should have considered and disclosed a reasonable population estimates for central southeast Alaska wolves and break them down into the southern and northern GMU 3 islands complexes and then assess risks of pack depletion. ADF&G considers the wolves on the southern GMU 3 island complex (Etolin, Wrangell and Zarembo Islands) and the northern GMU 3 island complex (Kuiu, Kupreanof, Woewodski and Mitkof Islands) to be separate populations for management purposes.[229] The agency does have GMU 3 wolf population estimates that rely on Dr. Person's Prince of Wales Island research and reflect average territory and pack size from similar habitat.[230] Historical population estimates for the GMU 3 wolf population are between 125 and 235 wolves in 21 packs, based on the amount of suitable habitat below 1,800 feet in elevation.[231] These estimates may high based on the actual availability of deer on these islands. In 2012 an ADF&G Division of Wildlife Conservation white paper indicated that using the results from Dr. Person's Prince of Wales Island research were likely to over-estimate wolf populations in other areas:

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[225] Source: Person & Larson 2013. Developing a method to estimate abundance of wolves.

[226] Forest Plan at 4-91.

[227] Central Tongass Project DEIS at 3-143.

[228] *Id.* at 3-141.

[229] ADF&G 2012, IM Feasibility Assessment, Unit 3. All documents cited in this discussion about impact to wolves were submitted to repeatedly to multiple Tongass National Forest ranger districts and should be available for agency review in district files.

[230] *Id.* at 5; Lowell, R.E. 2006. Unit 3 wolf management report. Pages 38-44 in P. Harper, editor. Wolf management report of survey and inventory activities 1 July 2002-30 June 2005. Alaska Department of Fish and Game. Dec. 2006; Lowell, R.E. 2009. Unit 3 wolf management report. Pages 41–48 in P. Harper, editor. Wolf management report of survey and inventory activities 1 July 2005-30 June 2008. Alaska Department of Fish and Game. Juneau, Alaska. 2009.

[231] *Id.*

> However, Person et al. (1996) derived the region-wide estimate based on a calibration of wolf density in GMU 2, which represents some of the more productive habitat in Southeast Alaska with respect to deer, a primary prey of wolves. Also, the wolf estimate was based on habitat capability for deer, not actual deer population numbers. Consequently, the region-wide estimate of the 1990s may have been biased high.[232]

Because "[w]olf populations are closely tied to populations of deer," Dr. Person has stated that "[i]f deer populations decline substantially, wolf populations are very likely to decline eventually because of a reduced prey base."[233] For this reason, it is important to recognize that actual deer population numbers are extremely low in portions of GMU 3. Thus, it is unclear how many wolves inhabit the project area, but the numbers may be small enough such that this project could result in local extirpations.

The DEIS oversimplifies a very simple issue by merely quantifying deer densities and road densities. The DEIS needed to identify areas with existing levels of wolf take or disclose quantifiable criteria for unsustainable take levels that may result major impacts to the species such as pack depletion. Many areas in GMU 3 share significant similarities with areas on Prince of Wales Island identified as having high risk of chronic unsustainable harvests – areas with population centers and road connections that facilitate higher take levels.[234] The Central Tongass Project will likely incentivize higher wolf take levels by increasing competition between humans for smaller numbers of deer.[235]

In sum, as with the analysis of deer, the DEIS fails to provide sufficient site-specific discussion of baseline information about project area wolves and impact to them to meet the Forest Service's analytical responsibilities under NEPA and satisfy the wildlife viability provisions under NFMA and the Forest Plan.

D. Comments on analysis of impacts to Queen Charlotte Goshawks

There are significant uncertainties about the current status of goshawk populations and the adequacy of nest protection measures. The Fish and Wildlife Service's 2007 Status Review explained that Queen Charlotte goshawks in southeast Alaska are highly vulnerable to additional stresses - because of the low population level, "low survival or reproductive rates could not be sustained long before viability of the subspecies would be at risk." Population levels are unknown; according to the Status Review, southeast Alaska may support just a few to several hundred breeding pairs. These findings and other results from risk assessments and scientific studies demonstrate the risks of continued and serious population decline associated with further loss of habitat caused by old-growth logging. Queen Charlotte Goshawks will likely face at the very least additional localized extirpations on Prince of Wales Island. Many of the few remaining active nest sites and foraging areas are in southeast Alaskan old growth forest stands and will be at direct or indirect risk due to any logging in Roadless acres.[236]

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[232] ADF&G, Division of Wildlife Conservation. 2012. Status of Wolves in Southeast Alaska. October 2012.

[233] Declaration of Dr. Dave Person ¶23.

[234] Person & Logan 2012.

[235] Person, D. & T. Brinkman. 2013. Succession Debt and Roads.

[236] Sources for our discussion of impacts to the Queen Charlotte Goshawk include the 2007 U.S. Fish and Wildlife Status Review, 1996 Forest Service Conservation Assessment, Appendix N to the 1997 Tongass Land Management Plan, and numerous other studies - Smith, W.P. 2013. Spatially explicit analysis of contributions of a regional conservation strategy toward sustaining northern goshawk habitat; Mclaren, E.L. et al. 2005. Northern Goshawk (Accipiter gentilis laingi) post-fledgling areas on

The Forest Service's 1996 conservation assessment found that a "broad scale of analysis fails to consider distribution of habitat throughout southeast Alaska." Subsequent studies also have verified that it is unreasonable to rely on habitat measurements outside of known nests. Based on these findings, we question the approach of measuring impacts in terms of total and high-volume productive old-growth across the Forest.[237] This approach masks degradation to specific goshawk foraging habitat caused by logging in the vicinity of the nests. A site-specific analysis is possible and will generate a more accurate evaluation of impacts and viability risks.

The DEIS acknowledges questions about Forest Plan protections for Queen Charlotte goshawks but then relies on them to inform a conclusion that Roadless Rule exemption alternatives would only have localized effects by limiting the availability of nest sites.[238]

There are a number of historical known goshawk nests in roadless areas in southeast Alaska. The Forest Service needed to review readily available survey data and historical observations to inform the analysis of the value of roadless areas for this species. There are very few Queen Charlotte Goshawks. Individual impacts, such as impact to individual QCGs, can have more significant impacts in relation to other impacts on overall species viability - across the Alexander Archipelago:

> Cumulative impacts of multiple projects can be significant in different ways. The most obvious way is that the greater total magnitude of the environmental effects - such as the number of acres affected or the total amount of sediment to be added to streams within a watershed- may demonstrate by itself that the environmental impact may be significant. Sometimes the total impact from a set of actions may be greater than the sum of the parts. For example, the addition of a small amount of sediment to a creek may have only a limited impact on salmon survival, or perhaps no impact at all. But the addition of a small amount here, a small amount here, and still more at another point could add up to something with a much greater impact, until there comes a point where even a marginal increase will mean that no salmon will survive.[239]

The Ninth Circuit's explanation of sediment impacts to salmon has a direct bearing on how the DEIS should analyze risks to individual Queen Charlotte Goshawks in the project area. The cumulative effects analysis must explain how the proposed Rulemaking exemption, in combination with other past, planned and other ongoing projects threatens QCG viability in light of the low population of the species, and the importance of individual breeding pairs in the project area to the broader persistence of the species.

The DEIS needed to review the Forest Service's 1996 Conservation Assessment which included a risk assessment that identified areas with harvest rates exceeding percent by 1995 or 33% by 2055 as presenting "a higher risk of not providing the amount and distribution of habitat necessary to sustain goshawks." Where do Roadless area VCUs fit within these risk thresholds? NEPA analysis must address and answer these questions. It

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Vancouver Island, British Columbia. J. Raptor Res. 39(3): 253-263; Flatten, C., K. Titus, and R. Lowell, 2001. Northern goshawk population monitoring, population ecology and diet on the Tongass National Forest. Alaska Dept. of Fish and Game, Juneau, Alaska; Doyle 2005.

[237] *See Native Ecosystems Council v. U.S. Forest Serv* . 428 F.3d 1233, 1250 (9th Cir. 2005)(the Forest Service may “meet the species viability requirements by preserving habitat, but only where both the Forest Service’s knowledge of what quality and quantity of habitat is necessary to support the species and the Forest Service’s method for measuring the existing amount of that habitat are reasonably reliable and accurate”). The choice of analysis scale must represent a reasoned decision and cannot be arbitrary. *Pac. Coast Fed. Fishermen’s Ass’ns v. NMFS*, 265 F.3d 1028, 1037-38 (9th Cir. 2001).

[238] DEIS at 3-92-93.

[239] *Klamath-Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 994 (9th Cir. 2004).

also needed to review the locations of any known current or historical nests and any other observations of goshawk habitat use, including information about foraging habitat.

Again, the absence of site-specific analysis (literally, nest-site-specific analysis) is a serious flaw with the DEIS. There only 44 probable nesting territories in the Wrangell and Petersburg Ranger Districts, and yet the Forest Service refuses to analyze whether the nest sites are within or adjacent to inventoried roadless areas. It is a simple task: will exemption alternatives cause clearcutting within a goshawk home range in the vicinity of known historical nest sites?

There are significant uncertainties about the current status of goshawk populations and the adequacy of nest protection measures. The Fish and Wildlife Service's 2007 Status Review explained that Queen Charlotte goshawks in southeast Alaska are highly vulnerable to additional stresses - because of the low population level, "low survival or reproductive rates could not be sustained long before viability of the subspecies would be at risk." Yet this DEIS - without any site-specific analysis whatsoever, concludes that the project is a "no worries" thing for the species as a whole with just a few adverse impacts to individuals and habitat.

Population levels are unknown; according to the Status Review, southeast Alaska may support just a few to several hundred breeding pairs. These findings and other results from risk assessments and scientific studies demonstrate the risks of continued and serious population decline associated with further loss of habitat caused by old-growth logging. Queen Charlotte Goshawks will likely face at the very least additional localized extirpations on Prince of Wales Island pending implementation of the Prince of Wales project.

The DEIS must review the Forest Service's 1996 Conservation Assessment which included a risk assessment that identified areas with harvest rates exceeding 13 percent by 1995 or 33% by 2055 as presenting "a higher risk of not providing the amount and distribution of habitat necessary to sustain goshawks." Where do inventoried roadless areas provide habitat within VCUs meeting these risk thresholds? The DEIS fails to address and answer these questions.

Survey efforts during the 1990s identified only 62 known nest areas, concentrated in significant part (27/62, or 44%) in the central portion of the Alexander Archipelago (Stikine District) - in other words, nearly half of the historical Queen Charlotte Goshawk nest sites are within the jurisdiction of the Petersburg and Wrangell Ranger Districts. By 2005, experts had identified only 72 unique nest areas, with most of them reportedly inactive, and new nests were not being found. The DEIS provides no information about the locations of any known current or historical nests or any other observations of goshawk habitat use, including information about foraging habitat.

There have been six historic known QCG nests on Mitkof Island. All but one of the Mitkof Island watersheds (VCUs) exceed the 1996 Conservation Assessment risk threshold, particularly VCUs 4500, 4520 and 4530, which contain or are immediately adjacent to the few remaining goshawk nests on the island. The Forest Service's most recent (2014) survey identified nests or activity in only three areas. This means that the only information available shows that there is a substantial risk that the logging in managed lands is having the effect predicted by scientific experts as other historic nests may have been abandoned. There are substantial questions about impacts to the few remaining breeding pairs, particularly in terms of their home ranges. The Forest Service's most recent effort to degrade Mitkof Island with additional old-growth logging would have all prescribed additional clearcuts in the immediate vicinity of Queen Charlotte Goshawk nest sites. There has been a historical scientific concern regarding significant risks associated with further logging in this and other watersheds on the island:

> The [Overlook] project is well within the home range of the Queen Charlotte goshawk nest site known as the "Dry Straights" nesting area. The lack of a nest within the boundaries of this project area does not preclude this project from impacts to the existing adult pair by the potential alteration of important alternate nesting sites and existing highly suitable foraging habitat in the project area. Nesting home ranges for adult goshawks on this Forest range from 9,600 to 10,500 acres, winter home ranges averaging over 29,000 acres making the home range of this goshawk pair well within the boundaries of the project area.
>
> The Dry Straights nesting area is one of two know active goshawk nesting areas located on Mitkof Island this year. Impacts to important habitat should be considered in depth because many of the units are located in highly suitable goshawk habitat, located in low elevation high volume POG.
>
> VCU 450 is one of five VCUs where risk analysis conducted as part of the Forest Plan FEIS suggests the reduction of POG may present an elevated risk of not maintain habitat in this VCU to sustain goshawks. (Appendix to "Appendix N" of the FEIS TLMP REVISION, 1997). This predicted elevated risk conducted as part of the analysis of the Forest Plan and specific to this VCU should be disclosed ….

Similarly, previous Forest Service analyses such as the 1998 Wrangell Island Report indicated that there were Queen Charlotte Goshawk observations on Wrangell Island. Our review of Wrangell Ranger District EAs and other analyses raise serious concerns about breeding and nesting failures on the island. The DEIS ignored our request for a discussion of possible reasons for these failures. It does not specify how many surveys have been conducted or describe the survey methodologies. For example, there was an active nest found in the Shady project area, with a failed nesting attempt in 2001, and no successful nesting activity since that time despite goshawk observations in the project area (surveys done 2000 - 2003).

The Navy Timber Sale Project FEIS identified 7 known goshawk nests in WAA 1901 on Etolin Island. Expert comments in the record have indicated significant risks associated with further logging in the vicinity of the nests. The 2008 TLMP planning record shows that by 2005 the total harvest of productive old-growth in VCUs 4640 (the Anita Bay pinch-point) and 4670 - exceeded Forest Service risk thresholds. Only two other biogeographic provinces considered in the risk assessment had higher short-term levels of old-growth removals and higher long-term old-growth removals than the central Tongass biogeographic provinces.

In sum, the DEIS cannot provide an adequate NEPA analysis of impacts to Queen Charlotte goshawks in the absence of location specific information showing where inventoried roadless areas provide habitat features in areas of known Queen Charlotte goshawk nest sites and foraging habitat.

V. In Conclusion

Roadless Rule exemption alternatives would do irreparable harm to Tongass wildlands including their fish and wildlife populations, Alaskans who depend on intact Tongass ecosystems for their livelihoods, the tourism and recreation sectors, and all American taxpayers. Nearly two decades ago, the Forest Service determined that "the long-term ecological benefits to the nation of conserving [Tongass National Forest] inventoried roadless areas outweigh the potential economic loss to [southeast Alaska] communities."[240]

Now the agency would reverse course on the importance of long-term ecological benefits at a time of significant local deer deficits and plummeting pink populations, among other

[240] 66 Fed. Reg. at 3255.

resource concerns. Changing environmental conditions heighten the significance of the region's inventoried roadless areas.

Another major change occurring over the past two decades is that the region has fully transitioned to an economy dependent on fish, wildlife, scenery and recreation rather than timber. The no-action alternative is the only alternative that will prevent economic loss to the region and respond to the overwhelming opposition to exemption alternatives from hundreds of local economic experts – regional business owners. We urge you to drop this reckless rulemaking and this insufficient NEPA process, and instead direct the Alaska Region and Tongass National Forest to cease planning on all pending timber sales pending a full audit of agency costs and timber maladministration and to request that Congress redirect all timber program funding to fixing fish passage problems.

Sincerely,

Larry Edwards, president
Alaska Rainforest Defenders
907-752-7557

Mailed separately: The cited exhibits, on a thumb drive.

Prepared Testimony of Autumn Hanna, Vice President, Taxpayers for Common Sense

Legislative Hearing: *Roads to Ruin: Examining the Impacts of Removing National Forest Roadless Protections."*

National Parks, Forests and Public Lands and Subcommittee
United States House of Representatives Natural Resources Committee

November 13, 2019

Good afternoon Chairman Haaland, Ranking Member Young, and members of the subcommittee. My name is Autumn Hanna, and I am vice president of Taxpayers for Common Sense (TCS), a national, non-partisan budget watchdog organization.

Thank you for the opportunity to testify today on our budget concerns regarding the repeal of the Roadless Rule in the State of Alaska.

TCS has long supported reforming the U.S. Department of Agriculture's Tongass timber program and its associated road costs and are pleased to be a part of the discussion today.

The mission of Taxpayers for Common Sense is to achieve a government that spends taxpayer dollars responsibly and operates within its means. Over the years, we have identified, highlighted, reformed and eliminated wasteful spending and tax breaks in agriculture programs, Pentagon spending, corporate welfare, and infrastructure.

For nearly 25 years, TCS has worked to ensure that taxpayers receive a fair return on ALL resources extracted or developed on federal lands and waters. This includes oil, gas, coal, hardrock minerals, wind, solar and timber. Revenues collected from resource development represent an important source of income for the federal government and must be collected, managed and accounted for in a fair and accurate manner. As the rightful owners of these resources, taxpayers are entitled to fair market compensation, just like private landowners.

This morning, I will discuss our concerns with the timber program in the Tongass National Forest and how the repeal of the 2001 Roadless Rule in the State of Alaska would exacerbate our concerns.

Background

The U.S. Forest Service within the U.S. Department of Agriculture (USDA) manages 193 million acres of public forests and grasslands collectively known as the National Forest System. The Tongass National Forest (Tongass) in Southeast Alaska is the nation's largest at 16.7 million acres, roughly the size of West Virginia. Every year, the Forest Service prepares and conducts sales for the rights to harvest millions of board feet of timber from the Tongass. These sales have historically generated less revenue than the Forest Service spends to administer them, resulting in large net losses for U.S. taxpayers.

Whether a timber sale generates a net gain or loss to taxpayers depends on how much the Forest Service spends to prepare and administer it, and the amount of revenue collected when the sold timber is harvested.

The Forest Service follows what is known as the GATE system to plan, prepare, and offer timber for sale. This process includes six stages, or gates: initial planning, project analysis and design, timber sale preparation, advertisement of the sale, bid opening, and awarding the contract. Though the system builds in cost-efficiency and competition, over the years it has fallen dramatically short at recouping a fair return for taxpayer-owned timber in the Tongass.

For decades, the Forest Service has administered timber sales in the Tongass that have generated net losses for the agency, and thereby federal taxpayers. That is, the costs incurred by the Forest Service to administer its timber sales program have surpassed receipts generated from the resulting sales.
The U.S. Government Accountability Office (GAO) has criticized the Forest Service for preparing and conducting these "below-cost" timber sales in the Tongass since the 1980s.

A History of Taxpayer Losses

In its first report on below-cost timber sales, the GAO documented that the problem was widespread and identified 433 out of 1,630 sales in four Forest Service regions in fiscal year (FY) 1981 that had been sold for a collective loss of $64 million. Similarly, the report found that 42 percent of sales conducted in regions 1, 2, 4, and 6 in FY1982 had been below-cost and generated $92.8 million in total losses.[1]

In 1988, the GAO reported that the Forest Service's timber sales program in the Tongass alone had lost a total of $22.1 million in FY1986, equivalent to roughly $51.5 million today.[2] Over several years in the 1990s, the GAO returned to the subject and audited the Forest Service's timber program accounts for the Tongass and other forests.[3] According to budget data published by the agency, the Forest Service's timber program lost $210 million from FY1992 to FY1997, in today's dollars, or roughly $35 million per year. Even after allowing for the Forest Service's ridiculous accounting practice of accepting road credits instead of cash for timber,[4] which Congress rightly ended in FY1999, the Tongass timber program still lost more than $11 million per year on average over those six years.

Recent Estimates of Timber Sale Losses

In 2016, the GAO reported that from FY2005 to FY2014, the Forest Service expended an average of $12.5 million annually for timber-related activities in the Tongass and received only $1.1 million on average in receipts from timber harvest, resulting in an average net loss of roughly $11.4 million per year.[5] The agency was careful to note, however, that those totals did not take into account the millions of dollars the Forest Service spends annually to build and maintain roads in the Tongass National Forest. By the Forest Service's own admission "the vast majority" of roads in the Tongass were built for timber harvest purposes.[6] Road expenses are timber expenses.

Using the GAO's 2016 methodology, but including road expenses, my organization recently published a report reviewing the Tongass timber program's finances over the 20-year period from FY1999 to

[1] General Accounting Office, RCED-84-96, "Congress Needs Better Information on Forest Service's Below-Cost Timber Sales," June 28 1984. Regions 1,2,4 and 6 include every state from Kansas north to North Dakota and west to Washington, excluding California.
[2] General Accounting Office, RCED-88-54, "TONGASS NATIONAL FOREST: Timber Provision of the Alaska Lands Act Needs Clarification," April 11 1988.
[3] GAO, RCED-95-237FS; GAO, RCED-96-122R; GAO, RCED-99-24; GAO, RCED-99-174
[4] The Purchaser Credit Program allowed timber harvesters to accrue credits equal to their costs for building some timber access roads and then pay the Forest Service for the timber with those credits. For more information, see Congressional Research Service report 97-706, "Forest Roads: Construction and Financing," July 16, 1997. The program was ended through P.L. 105-277 §329
[5] GAO, "TONGASS NATIONAL FOREST: Forest Service's Actions Related to Its Planned Timber Program Transition," April 2016.
[6] U.S. Forest Service, "Final Environmental Impact Statement: Tongass Land and Resource Management Plan." June 2016. Appendix C, pg. C-4

FY2018.[7] Our report concluded that the Forest Service lost $600 million through its Tongass timber program over those 20 years, after adjusting for inflation, or roughly $30 million per year.

In our analysis, we included six budget line items as outlays associated with timber sales. These six budget accounts fund three types of Forest Service activity: timber sale preparation, reforestation, and road building. Other expenses that are necessary for timber sales but primarily serve other Forest Service missions, such as forest inventory and monitoring activities, were not included. That is, an average loss of $30 million per year is a conservative estimate of the Forest Service's losses in the Tongass over the last 20 years.

It is worth noting that the choice of methodology for calculating Forest Service expenses is almost rendered moot by the paltry revenues generated by the Tongass timber program. Over the last 20 years, the Forest Service collected just $33.8 million, in 2018 dollars, or $1.7 million per year on average. That level of revenue is insufficient to cover one-tenth of the agency's Forest Products budget account alone. The Tongass timber program is a money-loser any way you slice it.

Using the budget data available for 26 out of the last 33 years, we conclude that the Tongass timber sales have cost taxpayers more than $850 million dollars.

Unfortunately, these losses were not unpredictable as they occur year after year, sale after sale with little to no exception. Fundamentally, the system is flawed. The Forest Service has and continues to administer its timber program in a way that first and foremost protects the logging industry and its interests, rather than taxpayers. This bias is, in part, congressionally directed and must be corrected to protect U.S. taxpayers.

Road Costs and the Maintenance Backlog

Addressing timber sale losses becomes even more urgent when considered in the larger budget context. The Forest Service is in tight budget times. According to Forest Service testimony earlier this year before the Senate Energy and Natural Resources Committee, the agency faces an overall deferred maintenance backlog of more than $5.2 billion but has an annual budget of less than $450 million for all maintenance and infrastructure needs.[8]

The Forest Service cannot adequately maintain the existing 370,000 miles of roads in the National Forest System. The deferred maintenance backlog for these roads is currently around $3.2 billion.[9] New timber sales in roadless areas would increase the mileage of roads that must be maintained, further exacerbating Forest Service budget constraints, again, ultimately at taxpayer cost.

On the front end, National Forest System road construction costs are largely covered by the Forest Service, even though their primary intended use is to facilitate timber harvest. A Tongass roads analysis prepared for the Forest Service in January 2003, found that, "the availability of maintenance level 3, 4, and 5 roads (those open to passenger cars) in Southeast Alaska is sufficient to satisfy local demand for roaded recreation, subsistence, and community connectivity needs and demands in most districts."[10] Though the demands for transportation infrastructure for non-timber purposes have surely changed since

[7] Taxpayers for Common Sense, "Cutting Our Losses: 20 Years of Money-Losing Timber Sales in the Tongass." October 2019. https://www.taxpayer.net/energy-natural-resources/cutting-our-losses-tongass-timber/

[8] US Forest Service, "Reducing our deferred maintenance backlog," April 2019. https://www.fs.fed.us/inside-fs/leadership/reducing-our-deferred-maintenance-backlog

[9] Lenise Lago, Associate Chief, USDA-Forest Service, testimony before the Senate Committee on Energy & Natural Resources. June 18 2019. https://www.energy.senate.gov/public/index.cfm/files/serve?File_id=9D5D526C-2337-4002-9072-285BE733E072

[10] *Tongass National Forest Forest-Level Roads Analysis*, Prepared for Tongass National Forest Region 10 USDA Forest Service, January 2003.

2003, the Forest Service acknowledges that the demand for new roads in the Tongass is driven by timber harvest needs. Forest Service analyses for recent timber sales[11] and the new proposed Roadless Rule[12] all demonstrate that increasing the number of logging roads is fueling the administration's drive to open the Tongass to increased road construction.

Adding more miles to the road system in National Forests without devoting funds to pay for their maintenance will only increase that backlog. Any assessment of allowing timber harvest in roadless areas, which would require significant new road construction, must account for the maintenance costs associated with new roads.

Roadless Rule Exemption

Taxpayers for Common Sense has significant concerns regarding the fiscal implications and economic significance of the Forest Service's proposal for the management of inventoried roadless areas in the Tongass National Forest in Southeast Alaska (Alaska Roadless Rule).

The Forest Service's Alaska Roadless Rule preferred alternative would fully exempt the Tongass National Forest from the protection provided by the Roadless Area Conservation Rule (Roadless Rule).[13] Adopted by the Forest Service in 2001, the Roadless Rule generally prohibits road construction and commercial logging within national forest inventoried roadless areas, including 9.2 million acres in the Tongass National Forest.[14] A full exemption for the Tongass would have major adverse economic impacts nationally and regionally, while providing few if any benefits.

While developing the current proposed rule, the Forest Service put together five separate alternatives for altering the 2001 Roadless Rule, in addition to a no action alternative which would maintain the status quo. The first four of these alternatives would withdraw areas from the current roadless acreage to varying extents and create new categories for managing the remaining roadless areas with fewer or greater restrictions than the current roadless rule.

Specifically, under Alternative 2, the Forest Service would remove the roadless designation from 113,000 acres of the Tongass that are known to have had prior timber harvest or roads in them, known as "roaded roadless" areas. The agency would then apply the roadless designation to 133,000 new acres for a total of 9.22 million acres in roadless areas. More than half of this, 5.11 million acres, would then be further designated and managed under the new "Roadless Priority" category, which would impose fewer restrictions on roadbuilding and development than the 2001 Roadless Rule. In particular, development of leasable resources, like oil, gas, and coal would be allowed. The remaining 3.2 million acres in roadless areas would be managed under the new "Watershed Priority" category, which allows for roadbuilding and timber harvest in fewer circumstances than the 2001 Roadless Rule.

Under Alternative 3, the Forest Service would remove the "roaded roadless" areas from roadless protection, adjacent lands which are a "logical extension" of old road networks or harvest areas, as well as 826,000 acres which are protected from development by statute as "LUD II acres." The agency would then apply the roadless designation to 105,000 new acres, mostly on small islands, to create a total of 8.1 million acres in roadless areas. Of these, 3.2 million would be managed as Watershed Priority lands, 4.7

[11] See the Final Environmental Impact Statement (FEIS) for the Prince of Wales Landscape Level Analysis Project, page 331; or, the Draft EIS (DEIS) for the Central Tongass Project, page 360.
[12] U.S. Forest Service, DEIS for the Rulemaking for Alaska Roadless Areas, page 3-142. Hereafter referred to as the "Alaska Roadless Rule DEIS"
[13] U.S. Department of Agriculture, Proposed Rule, "Special Areas, Roadless Area Conservation: National Forest System Lands in Alaska," October 17 2019. 84 FR 55522
[14] U.S. Department of Agriculture, "Alaska Roadless Rulemaking Questions and Answers," April 2019. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd595057.pdf

million would be considered Roadless Priority lands, and 241,000 would be Community Priority lands, where small scale timber harvest would be allowed around certain cities and towns in Southeast Alaska. The Forest Service notes it plans to expand the land managed under this category in its final analysis.

Under Alternative 4, the Forest Service would remove 375,000 from roadless areas and manage the remaining 8.9 million acres under new categories that more permissive than the 2001 Roadless Rule to varying extents. The agency would manage 856,000 acres as "LUD II Priority" instead of removing the LUD-II lands from roadless areas. Another 7.3 million acres would be deemed "Roadless Priority" lands. Then uniquely, Alternative 4 calls for a new "Timber Priority" designation for certain roadless areas that would impose no restrictions on roadbuilding or timber harvest, and thereby defeat the purpose of managing certain parts of the forest as roadless areas.

Alternative 5 would remove 2.3 million acres from any roadless category, far more than Alternatives 2-4, in order to provide for "maximum additional timber harvest opportunity."[15] Those acres remaining within roadless area would be managed as either LUD II Priority lands, or Roadless Priority lands.

Finally, Alternative 6 would completely exempt the Tongass from the 2001 Roadless Rule, thereby removing all acres from roadless areas. It would not, however, provide for any more timber harvest opportunity than Alternative 5. This is the Forest Service's preferred alternative.

Each of the alternatives under consideration were developed and are described in the Draft Environmental Impact Statement (DEIS) accompanying the rule as opening up new areas of the Tongass to timber harvest and roadbuilding to varying degrees. This rule is and always has been about timber harvest. As the Forest Service materials indicate, the rule would not materially impact the ability to carry out energy, mining, communications, and infrastructure projects throughout the Tongass:

> *Exploration, mining, and mineral processing activities, including road construction and reconstruction, are presently allowed in [Inventoried Roadless Areas] and would continue to be allowed under all alternatives…*
>
> *None of the alternatives are expected to substantially affect the development of energy projects or related infrastructure.* (DEIS, page 3-51)

Despite its focus on timber development, the Forest Service maintains that the rule would not significantly change timber harvest levels in the Tongass. The basis for this claim is that the target for timber sales of 46 million board feet (MMBF) per year set in the 2016 Tongass Land Management Plan would not change under the rule.[16] This is misleading. Targets are not reality. Over the last four fiscal years, the Forest Service sold 19 MMBF, on average, or less than half the target. Last year, it sold only 9.2 MMBF.

The decrease in timber sales in recent years is not for lack of agency effort. In FY2018, the Forest Service offered an additional 23.6 MMBF of timber through three sales and did not receive a single bid.[17] The inability of the agency to find a purchaser for this timber after spending millions of dollars to prepare and analyze the three sales over the course of years represents an enormous waste of taxpayer resources.

After devoting considerable resources toward preparing timber sales, the Forest Service is often compelled to subsidize sales if it wants to open them up for bidding because of statutory requirements

[15] DEIS, page 2-15.
[16] U.S. Forest Service, "Alaska Roadless Rulemaking: Regulatory Impact Assessment and Cost-Benefit Assessment." Page 31.
[17] Alaska Roadless Rule DEIS, page 3-32.

enacted by Congress. In the Department of the Interior and Related Agencies Appropriations Act for FY1998, Congress stipulated that the Forest Service could not offer any timber sale in Region 10 (Alaska) including Western red cedar unless it used local sales values and manufacturing costs.[18] The provision has remained in some iteration in the annual Interior appropriations act ever since. When it appeared in the FY2000 appropriations act, the provision read that no timber sale in Region 10 could be advertised if indicated rates were deficit as determined through a "transaction evidence appraisal system."[19] By the FY2003 act,[20] this had become the "residual value" appraisal system, as it is known today.

The residual value appraisal approach assigns value to timber by first calculating its Selling Value, then subtracting all expected production costs and a profit and risk margin. Production costs are the sum of all manufacturing, logging, log transporting, *and road costs*.[21] If the indicated advertised rate – the selling value minus the production costs and the 15 percent profit and risk margin – is negative, the Forest Service is prohibited from advertising the sale.[22] In recent years, many of the timber sales prepared by the Forest Service have had a deficit appraisal.[23]

Instead of abandoning these projects, the Forest Service often attempts to make these sales appraise positive. It does this either by waiting for timber prices to increase, thus increasing the Selling Value in the formula, or by reducing the would-be purchaser's production costs. The Forest Service reduces harvester costs, primarily, by building roads. This means the Forest Service often spends millions of dollars more before offering the sale. For example, after failing to sell the Kuiu sale, for which a Record of Decision (ROD) was signed in 2008, the Forest Service spent more than $3 million constructing, reconstructing, and reconditioning 88 miles of roads in the sale area.[24] A revised Kuiu sale was subsequently re-offered in both 2016 and 2018 and still failed to attract a bid.

Building roads before advertising sales eliminates any possibility that the revenues gained from the sales will cover all Forest Service costs and guarantees a loss for taxpayers.

To re-state, because of a congressional mandate that all Tongass timber sales must appraise positive, the Forest Service spends millions of dollars on building roads to reduce harvester costs and guarantee harvesters a profit of at least 10 percent. The timber sale process in the Tongass is fundamentally skewed to protect the interest and profits of logging companies, with little or no regard for the cost to taxpayers.

The repeal of the 2001 Roadless Rule has been designed to provide the timber industry with access to any desirable location with little attention to the cost to the Forest Service. The focus of a federal agency should not be to cater to industry. If repealed, there is overwhelming evidence the economics of Tongass timber harvest would not improve, and the returns to federal taxpayers would decrease.

As the materials accompanying the proposed rule state, timber harvest in roadless areas as currently designated would require more road construction, on average.[25] These are significant costs. To make timber sales more economical for logging companies to meet annual statutory requirements, the Forest Service will likely end up covering more roadbuilding costs.

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[18] P.L. 105-83 §347
[19] P.L. 106-113, Div. B, Appendix C, §333
[20] P.L. 108-7 §318
[21] Forest Service Handbook, Alaska Region, Timber Appraisal Handbook, Chapter 10 – Residual Value Appraisals. Supplement 2409-22. December 11 2018.
[22] The calculated "Timber Property Value" – or the increase in timber value from processing - can be added to the calculation in certain circumstances to potentially eliminate the deficit.
[23] The Forest Service often notes it is hard to create timber sales that are economical in the Tongass, see the Roadless Rule DEIS, page 3-32
[24] Complaint in the U.S. District Court for the District of Alaska. Case 1:18-cv-00005-HRH, May 16 2018. https://earthjustice.org/sites/default/files/files/Timber%20Sale%20Complaint.pdf
[25] Alaska Roadless Rule DEIS, page 3-144

In 2017, the Forest Service began developing alternatives for the Prince of Wales Landscape Level Analysis project, which ultimately provided for the sale of 656 MMBF over the next 15 years. In developing this project, the Forest Service considered one alternative that would have allowed the sale and harvest of timber in current roadless areas. Through a Freedom of Information Act request, my organization received one of the agency's initial cost analyses for the alternative. Even under the assumption that constructing a mile of new road would cost the same in a roadless area as in a roaded area, the Forest Service found that roadbuilding in roadless areas would be more than twice as expensive per board foot of timber.

We expect the same to be true of roadbuilding in all roadless areas. Because many of these costs would necessarily be covered by the Forest Service to make sales economical, the proposed rule would likely result in significantly greater financial losses to the U.S. Treasury and American taxpayers. Over the years, our research and the research of several independent entities has shown that logging on the Tongass National Forest in Southeast Alaska cannot occur without significant federal taxpayer subsidies. Our most recent analysis of two decades of timber sales in the Tongass indicates these losses average $30 million per year.

Regarding the proposed exemption of the Tongass from the Roadless Rule, our study concluded that "[e]xempting those acres from the rule in the future would allow the USFS to expand timber sales to new areas, which would require comparatively more road construction for timber access. This would only drive up USFS expenses and deepen taxpayer losses from Tongass timber sales."

Conclusion

At nearly 17 million acres, the Tongass National Forest in Southeast Alaska is the largest in the United States and is an important resource and natural place for the entire country. Tourism and fishing are the foundation of the region's economy, but money-losing timber sales and costly logging roads too often take priority in the Tongass.

Tongass roadless areas provide other economic benefits for fish and wildlife. Tourism and commercial fisheries, make up approximately 25% of regional employment and are both directly dependent upon the protected roadless areas of the Tongass.[26] In contrast, timber industry employment has fallen by 80% since the 1990s and currently represents less than one percent of regional employment.[27]

We believe that exempting the Tongass National Forest from the Roadless Rule would result in adverse economic and associated environmental impacts. As I have discussed, these sales return a few pennies on each dollar expended. If the U.S. Forest Service moves forward on the proposed repeal of the 2001 Roadless Rule, heavily subsidized timber sales will expand and lock in taxpayer losses for many years to come.

The country is now facing a $23 trillion debt. Many things need to be done to resolve the nation's fiscal woes, not the least of which is ensuring federal taxpayers get the revenue they deserve for the resources they own and are not saddled with billions in subsidies and liabilities for resource development, including timber harvest.

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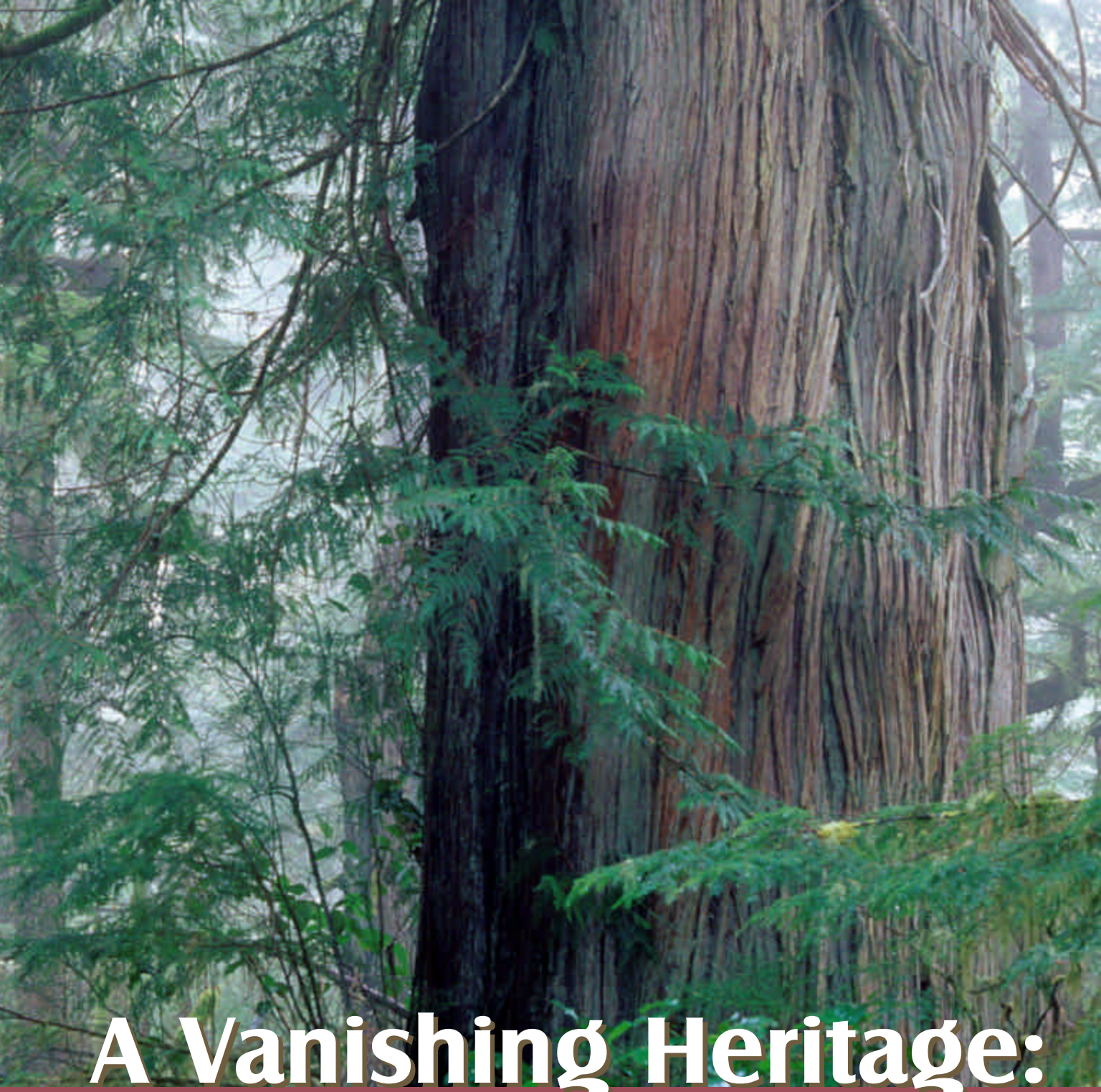
[26]Southeast Conference, "Southeast by the Numbers 2019," September 2019. http://www.seconference.org/sites/default/files/FINAL%20Southeast%20by%20the%20Numbers%202019.pdf

[27] Southeast Conference, "Southeast by the Numbers 2014," September 2014. http://www.seconference.org/sites/default/files/Southeast%20Alaska%20by%20the%20numbers%202014%20FINAL.pdf

During this time of sky-rocketing budget deficits, Taxpayers for Common Sense believes it would be more fiscally responsible to prioritize spending on current infrastructure before proposing new areas for constructing new and costly logging roads that offer little benefit to U.S. taxpayers.

Thank you for the opportunity to testify.

Red cedar (Thuja plicata) is found in the temperate coastal rainforests of North America. Meares Island. Adrian Dorst photo.



A Vanishing Heritage:

The Loss of Ancient Red Cedar from Canada's Rainforests

wilderness committee

David Suzuki Foundation

SOLUTIONS ARE IN OUR NATURE

Author Note

John Nelson has over 10 years experience researching forestry and environmental policy.

Also contributing to this report were: Cheri Burda, Jean Kavanagh and Bill Wareham of the David Suzuki Foundation, and Andrea Reimer of the Western Canada Wilderness Committee.

The Western Canada Wilderness Committee is Canada's largest membership-based citizen-funded wilderness preservation organization. We work for the preservation of Canadian and international wilderness through research and grassroots education. The Wilderness Committee works on the ground to achieve ecologically sustainable communities. We work only through lawful means.

David Suzuki Foundation
The David Suzuki Foundation is a registered Canadian charity that works through science and education to protect the balance of nature and our quality of life, now and for future generations.

A Vanishing Heritage:

The Loss of Ancient Red Cedar from Canada's Rainforests

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Red cedar. John Nelson photo.

Whitebeach Passage: This cedar cabin was constructed by the Namgis First Nation of northeastern Vancouver Island as part of their cultural rediscovery program. It is located on an ancient village site that has been used for over 5000 years by the Namgis Nation. The white beach in the foreground is composed of tiny pieces of clam shells discarded from meals over thousands of years. John Nelson photo.

A Vanishing Heritage:

THE LOSS OF ANCIENT RED CEDAR FROM CANADA'S RAINFORESTS

The western red cedar (Thuja plicata)[1] is a true icon of British Columbia and so significant it is the province's official tree. It is profoundly important to coastal aboriginal people, and an essential component of the coastal temperate rainforest ecosystem. In recent years, timber companies operating on the BC coast have increasingly targeted old-growth red cedar to maintain profit margins.

These highly valuable trees are processed into both commodity lumber and unfinished cants[2] for export, mainly to the United States. Research conducted for this report revealed that in twenty forest management areas on the BC coast, red cedar now comprises a substantially greater percentage of the timber actually cut than its proportional presence within the natural forest inventory.

Giant ancient cedars are becoming increasingly rare, leading to concern that in the future towering red cedar will become a relic found primarily on protected lands and that most forests will eventually only contain small, second-growth cedar trees. This would result in the loss of ecological, cultural and economic values associated with old-growth cedar forests.

This report examines the extent that red cedar is currently being logged on the BC coast, and looks at what will happen if this unsustainable practice continues. We examine some of the reasons why this targeting, or high grading, of red cedar is occurring and what the effect will be if this practice continues.

Red cedar in Eve River drysort. Bernie Pawlik photo.

Western Red Cedar

CULTURAL AND ECOLOGICAL HERITAGE

Western red cedar can grow to 70 metres high and frequently reach a diameter of over two metres at the base. The largest living specimen in the province measures 19 metres in circumference.[3] Growing at low to mid-elevations on the BC coast, and in the wet belt of the Rocky Mountain Trench, this species thrives in cool, moist climates with wet soil conditions. Favouring shady conditions, red cedar is a climax species whose buttressed tree trunks withstand the coast's high winds and whose supple branches bend under the weight of heavy snow. These trees provide unique habitat for a diversity of wildlife. In geological time, red cedar is a relatively recent addition to BC forests. Following the most recent ice age, some 14,000 years ago, the ecological process gradually established shallow soils that accommodated the reestablishment of forests. Emerging from a long succession of plant growth, red cedar and hemlock were the last species to take root in BC's modern forest.

Glacial refugia, such as the Brooks Peninsula and Haida Gwaii (Queen Charlotte Islands), provided a seed source for the establishment of cedar in land exposed after the retreat of the last glaciers.[4]

For thousands of years, aboriginal people removed bark and wood from still-standing trees to make clothing, dwellings and canoes. Known as culturally modified trees, they are found throughout British Columbia forests and hold great historical and anthropological significance.

Carbon dating has chronicled the arrival of cedar in southern British Columbia some 6,600 years ago[5] and on the north coast four to five thousand years ago.[6] Archeological evidence reveals that coastal aboriginal people, or First Nations, readily employed red cedar three thousand years ago.[7]

Despite this ancient legacy, ecologists are only just beginning to understand the tree's role in BC's climax coastal and inland rainforests, where it serves many biological functions including improvement of soil conditions by supplying calcium through the litter of cedar foliage on the forest floor.[8] Additionally, wildlife and plant

Drawings from Cedar. © 1984 by Hilary Stewart. Published in Canada by Douglas & McIntyre Ltd. Reprinted by permission of the publisher.

interactions are many. Cedar is often favoured as a perch for many species of birds of prey. Red cedar's production of *thujaplicin*, a naturally produced fungicide, prevents rot and allows portions of a tree – called snags – to last centuries in the forest even after a tree's death.[9] Cedars provide habitat for birds that nest in tree cavities and mammals, including several species of bats. The hollow cores in ancient cedars are favoured by black bears as winter hibernation dens.

CULTURAL TRADITIONS AND WEALTH

If salmon was the fuel for the indigenous people of coastal BC, then cedar formed their foundation. Ethnobotanist Wade Davis has concluded that the combination of salmon and cedar ". . . forged the most complex civilization ever to emerge without benefit of agriculture."[10] World renowned Haida artist Bill Reid wrote: "Oh, the cedar tree! If mankind in his infancy had prayed for the perfect substance for all material and aesthetic needs, an indulgent god could have provided nothing better."[11]

First Nations used cedar in all aspects of their lives. The wood was used to make canoes, paddles, planks and posts for traditional longhouses, bentwood boxes, bows, masks, bowls, and dishes. The fibrous inner bark was fashioned into clothing, hats, mats, masks, rattles, nets, twine, blankets, diapers, towels, and rope. The coarse outer bark was used for roofing material, canoe bailers, and canoe covers while the flexible branches were valued for making rope, fish traps, and baskets. Even the roots were used to make baskets and cradles.[12]

While First Nations did cut down entire cedar trees for canoes, ceremonial and house poles, more often they harvested bark and planks from living trees without killing them. Bark was stripped by groups of women and children while planks were removed from living trees, which continued to grow despite the missing part.

These cedars, called culturally modified trees or CMTs, include both living and dead trees. Living CMTs display a variety of different cultural marks including bark stripping, plank removal, tinder gathering, and test holes. These activities allowed First Nations to use the tree without killing it, ensuring that it could be used again by future generations. Dead CMTs include remnant stumps from felled trees, bark-stripped trees that have died, and windfallen logs from which planks were taken. Over centuries, stands of trees – and even entire islands – were managed sustainably by First Nations for the production of cedar products.[13] Some trees were peeled as soon as they reached the minimum size for bark harvesting, while others are believed to have been left to grow to a great size in anticipation of future canoe and plank production.

Longhouse: Cedar is the foundation of West Coast First Nations' culture. As shown in this 1880 photograph at Skidegate on Haida Gwaii, it was used for dwelling construction, fish-drying racks, and even clothing. Detail of British Columbia Archives: B-03823.

Logging Red Cedar: History and Current Status

Cedar trees are often used as perches for birds of prey, such as this western screech owl, as they hunt for song birds, mice, and rabbits. Ian McAllister/Raincoast photo.

TARGETING CEDAR

Indigenous only to North America, western red cedar is under threat because of a coast-wide strategy by timber companies to log the most valuable older stands in order to bolster revenues. This practice, commonly called high grading, sees timber companies target forest stands with the highest-grade trees to the exclusion of areas with inferior species or grades of trees. Companies often clearcut an area to get a specific tree species, and it is no accident that many clearcuts on the BC coast in the late 1990s were located in stands containing a high percentage of red cedar.

The price of cedar fluctuated greatly during the 20th century. At times cedar was considered nothing more than a weed or nuisance tree.[14] In the early part of the century, cedar trees were often ignored by fallers because they required too much physical energy to saw down. Cedar prices fluctuated wildly during the 1960s and loggers sometimes abandoned cedar logs they had just cut because the price had crashed. Some loggers even dumped cedar in lakes. Logging historian Ken Drushka remembers that "at one point, Florence Lake on Sonora Island had seven million feet of cedar floating in it – [all] number one grade."[15] Years later when the price of cedar increased, timber companies returned to these lakes and salvaged the discarded trees. In BC, cedar prices stabilized in the late 1960s after Oregon and Washington had liquidated their domestic supply of old-growth red cedar.[16] This historical treatment of cedar is the very definition of high-grading: logging one species to the exclusion of another. Today, instead of cedar being ignored, it is the target of coastal timber companies.

By the 1990s, as the demand throughout North America for old-growth timber rose significantly and supply declined, red cedar became one of the most valuable trees in BC's forests. During this period, the price of hemlock plummeted due to a lack of markets, specifically the loss of Asian markets due to severe economic problems. The loss of these important markets for hemlock created new stress on the BC coastal forest industry.

The serious financial challenges experienced over the past eight years by timber companies operating

"We have been logging more cedar than is in the [forest] profile and that is a reflection of the economics." [18] *Rick Jeffrey, Truck Loggers Association of BC*

"We're fairly heavily involved in harvesting cedar. Over the last several years, with hemlock prices so poor, most companies that have the opportunity have been targetting cedar because it's a high-value product in high demand. Mind you, government sees the value as well so there's been a struggle over stumpage at the same time." [19] *Don Bendickson, Ben West Logging, which harvests timber for Interfor and TimberWest*

"The coastal industry has been surviving by selling a greater percentage of cedar products. As most of the coastal forest is hemlock, the current dependence on cedar cannot be sustained." [20] *Brian Zak, president, Coast Forest & Lumber Association*

"[the coastal industry is] living off a 65-cent dollar and cedar." [21] *Duncan Davies, president, International Forests Products Ltd.*

"Forest companies have been harvesting cedar, which only accounts for 22 percent of the coastal forest, because it is one of the few species that they can profitably log."[22] *Vancouver Sun*

on the BC coast are due to a number of issues: depressed Asian markets, the Canada-U.S. softwood lumber trade dispute, low prices for hemlock, and the fact that easily accessible old-growth areas have been logged, causing the high operating costs of logging in remote, steep terrain. To counter these problems, timber companies operating on the BC coast have increasingly focused their logging efforts on cedar, which continues to command a high price. Cedar has kept companies solvent because it is used to make products considered recession-proof, such as roofing shingles, fences, siding, and outdoor furniture. And instead of expanding manufacturing industries in BC, timber companies sell BC old-growth cedar to U.S. manufacturers because it commands a higher price there than in BC.[17]

High grading of red cedar on the BC coast is well documented. The statements above show that cedar high grading has in fact been a deliberate strategy even though industry and government know the practice is unsustainable.

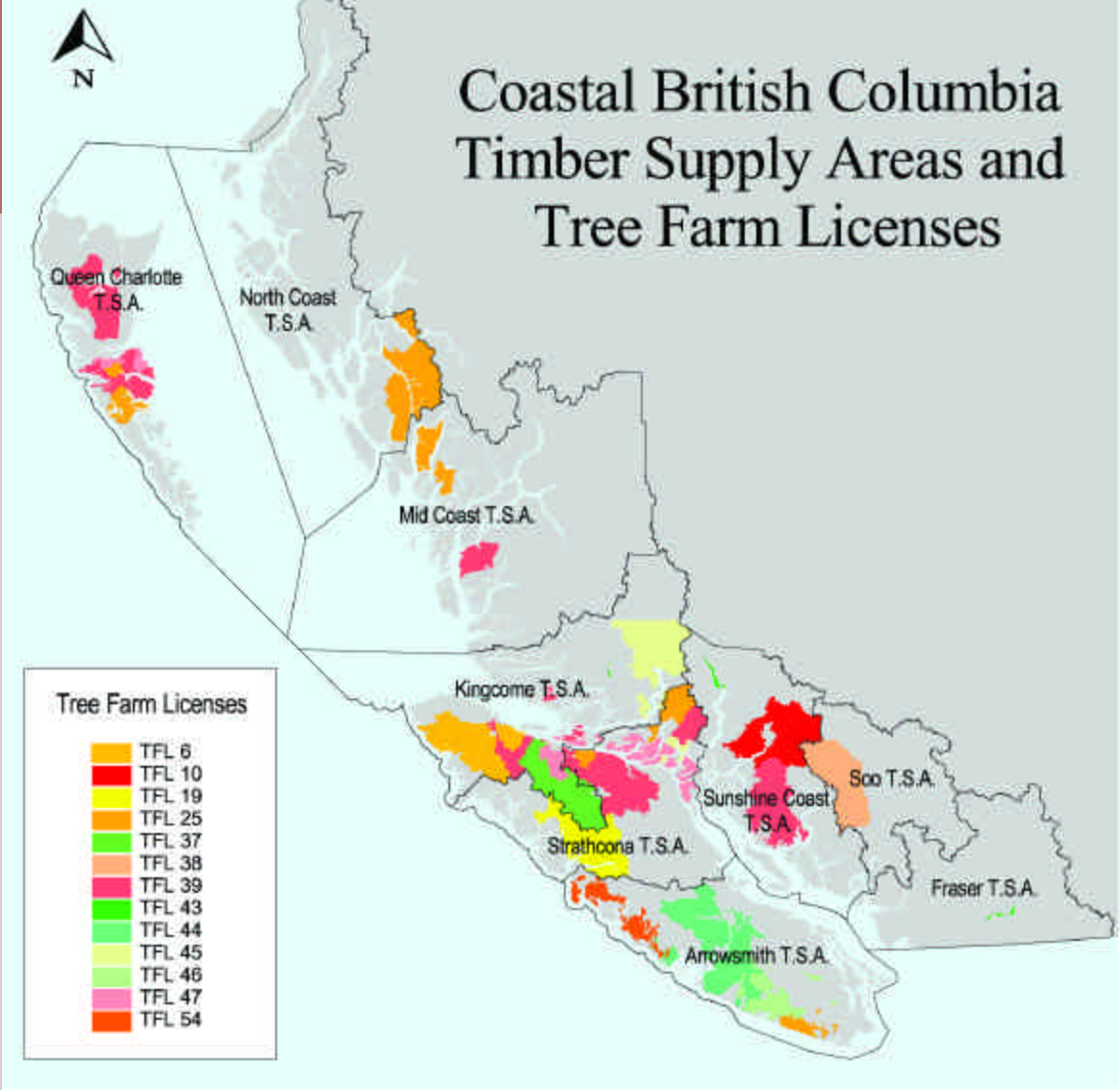
Logging truck loaded with old-growth cedar logs. Joe Foy photo.

Summary of Analysis:

	Most recently completed cut-control period	Cedar as a % of the most recently completed cut-control period	Red cedar as a % of the inventory on the Timber Harvesting Land Base	The difference between the % of red cedar in the actual cut versus the percentage of red cedar in the inventory
Arrowsmith TSA	1997 - 2001*	33%	22%	50%
Fraser TSA	1997 - 2001*	13%	7%	86%
Kingcome TSA	1997 - 2001*	54%	34%	59%
Mid-Coast TSA	1997 - 2001*	41%	21%	95%
North Coast TSA	1997 - 2001*	27%	21%	29%
QCI TSA	1997 - 2001*	34%	27%	26%
Soo TSA	1997 - 2001*	15%	5%	200%
Strathcona TSA	1997 - 2001*	30%	18%	67%
Sunshine TSA	1997 - 2001*	21%	12%	75%
TFL 6 & TFL 25 Port McNeill (WFP)	1995 - 1999	26%	23%	13%
TFL 10 (Interfor)	1995 - 1999	29%	19%	53%
TLF 19 (WFP)	1997 - 2001	24%	17%	41%
TFL 25 (WFP) (South Island FD)	1994 - 1998	22%	13%	69%
TFL 25 (WFP) (Campbell River FD)	1994 - 1998	28%	42%	-33%
TFL 25 (WFP) (Mid Coast Forest District)	1994 - 1998	43%	42%	2%
TFL 25 (WFP) (QCI Forest District) formerly TFL 24	1994 - 1998	39%	24%	63%
TFL 37 (Canfor)	1996 - 2000	12 %	11 %	9%
TFL 38 (Interfor)	1997 - 2001	33%	12%	175%
TFL 39 (Weyerhaeuser) (Sunshine FD)	1996 - 2000	19%	14%	36%
TFL 39 (Weyerhaeuser) (Campbell River FD - Blocks 2&5)	1996 - 2000	13%	8%	63%
TFL 39 (Weyerhaeuser) (Port McNeill FD - Blocks 3&4)	1996 - 2000	19%	11%	73%
TFL 39 (Weyerhaeuser) (Mid-Coast FD)	1996 - 2000	33%	31%	6%
TFL 39 (Weyerhaeuser) (QCI FD)	1996 - 2000	40%	25%	60%
TFL 43 (Scott Paper) (Chilliwack FD)	1995 - 1999	4%	0.3% **	1233%
TFL 43 (Scott Paper) (Sunshine FD)	1995 - 1999	37%	7%**	429%
TFL 43 (Scott Paper) (Port McNeill FD)	1995 - 1999	11%	8%**	38%
TFL 44 (Weyerhaeuser)	1995 - 1999	28%	16%	75%
TFL 45 (Interfor) (Campbell River FD)	1993 - 1997	27%	14%	93%
TFL 45 (Interfor) (Port McNeill FD)	1993 - 1997	16%	8%	100%
TFL 46 (TimberWest)	1993 - 1997	25%	15%	67%
TFL 47 (TimberWest) (Campbell River Forest District)	1995 - 1999	12%	9%	33%
TFL 47 (TimberWest) (Port McNeill FD)	1995 - 1999	10%	5%	100%
TFL 47 (TimberWest) (QCI FD)	1995 - 1999	57%	19%	200%
TFL 54 (Interfor)	1995 - 1999	49%	36%	36%

Note: all figures rounded
*** Cut-control periods differ for each Forest Licence (FL) within a TSA. FLs have the same cut-control period, this time period (1997-2001) is a close approximation for the cut-control periods of major Forest Licences in each TSA.**
**** Inventory data from Scott Paper is for all conifers, not just red cedar, as it is unlikely that red cedar would comprise more than 1/3 of the conifer inventory. It was estimated that red cedar was 1/3 of the following proportions of conifers in the TFL 43 inventory: 0.8% in the Chilliwack Forest District, 21% in the Sunshine Forest District, and 24% in the Port McNeill Forest District.**
Note: inventory and cut figures for TFLs 39 and 44 include Schedule A private land - all other management units are for public land only.

Source: Author's analysis. See appendix 1 for details on data sources.



Map: David Suzuki Foundation

AREAS OF IDENTIFIED CEDAR HIGH GRADING

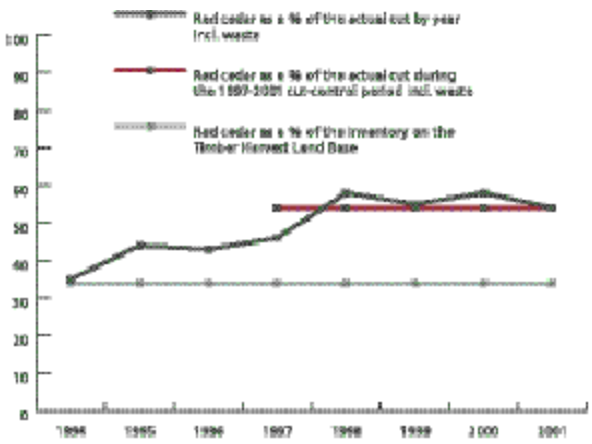
- Arrowsmith TSA
- Fraser TSA
- Kingcome TSA
- Mid-Coast TSA
- Soo TSA
- Strathcona TSA
- Sunshine TSA
- TFL 10 - (Interfor)
- TFL 25 - South Island Forest District (Western Forest Products)
- TFL 25 - Queen Charlotte Islands Forest District (Western Forest Products)
- TFL 38 - (Interfor)
- TFL 39 - Campbell River Forest District (Weyerhaeuser)
- TFL 39 - Port McNeill Forest District (Weyerhaeuser)
- TFL 39 - Queen Charlotte Islands Forest District (Weyerhaeuser)
- TFL 44 - (Weyerhaeuser)
- TFL 45 - Campbell River Forest District (Interfor)
- TFL 45 - Port McNeill Forest District (Interfor)
- TFL 46 - (TimberWest)
- TFL 47 - Port McNeill Forest District (TimberWest)
- TFL 47 - Queen Charlotte Islands Forest District. (TimberWest/Teal Cedar Products/JS Jones)

METHODOLOGY

The analysis on the opposite page used the Harvest Billing Reports purchased from the BC Ministry of Forests, which indicate the annual volume of wood, by species, billed in each Timber Supply Area (TSA) or Tree Farm License (TFL). The billing and waste data for each species was added together for each year, and this allowed us to determine the percentage of red cedar in the actual cut for the most recently completed five-year cut-control period. This information was then compared to inventories for each TSA and TFL.

The proportion of red cedar for the five-year cut-control periods have been averaged, demonstrating an important trend of whether or not cedar is being targeted in a specific area. High grading was defined where the proportion of red cedar was higher in the actual cut than in the natural forest inventory. Our research determined that out of 34 management units on the coast, 20 areas have a serious high grading problem, which for the purpose of this paper was defined as an area having an actual cut for red cedar at a rate of 50 percent or more than the inventory. The definition of a serious problem excluded those management areas where the actual cut was at a very low volume, such as TFL 43.

Red cedar as a % of the actual cut in the Kingcome TSA



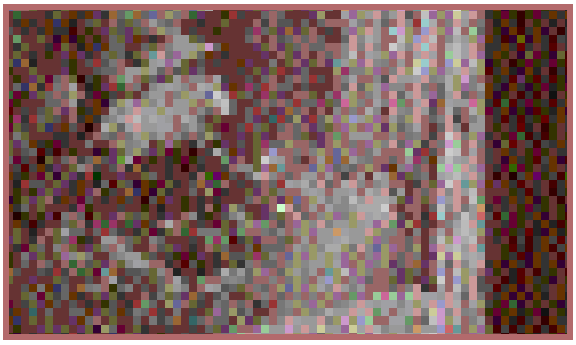
Red cedar as a % of the actual cut in TFL 47 on the Queen Charlotte Islands (Haida Gwaii)

Red cedar as a % of the actual cut in the Mid-Coast TSA

Graphs for Selected TSAs and TFLs

The graphs to the left demonstrate the difference between the proportion of red cedar in the actual cut for the cut-control period (higher of the two straight lines) and the proportion of red cedar in the inventory (lower of the two straight lines). The gap between the two lines demonstrates that the relevant forest company is not harvesting the species profile of the management unit.

Kingcome TSA: An Interfor clearcut next to a non-fish stream in the Klaskish Valley on northern Vancouver Island. Much of Interfor's logging in the last 5 years in the Klaskish has focused on red cedar stands. John Nelson photo.



TFL 47, Queen Charlotte Islands: JS Jones left this CMT standing, while cutting the tree growing out of the CMT base. Unfortunately, logging around CMTs destroys the ecological context of the site and places the standing CMT at the risk of being blown down. David Suzuki Foundation photo.

Mid-Coast TSA: Logging in the Parker Creek watershed by the BC Timber Sale Program. David Suzuki Foundation photo.

HIGH GRADING - A DECADES'-OLD PROBLEM

Timber companies have been targeting huge, ancient cedars in BC's rainforests for decades. A 1964 report from the BC Council of Forest Industries (COFI), which lobbies for timber companies, reveals that overcutting red cedar was happening in Rivers Inlet on the central coast and the northern Kitimat supply area 40 years ago.[23] The COFI report also stated that the supply of high-quality coastal cedar was already in decline.

> The grade mix of cedar logs has deteriorated markedly since the early 1920s. The historical grade decline does not seem to be the result of changes in grade specifications. The upcoast migration of logging, away from fir types and into hemlock-cedar stands and the movement back from tidewater, lakeshore, and valley floor to higher elevation timber is providing cedar of lower quality than historically available.[24]

Industry's drive to target red cedar has not only affected that tree species. In order to cut more cedar, timber companies clearcut large areas of forest to get the red cedar scattered throughout. The following excerpt from the COFI document demonstrates that increasing the Allowable Annual Cut (AAC)[25] was an objective driven by industry's desire to increase market demand for cedar:

> It is apparent that the expansion of cedar log supply, apart from full development of North Coast forests, must rely on an upward revision of the allowable annual cut on the coast. . . Changes in rotation age or other methodology of calculating allowable cut [can increase the cut]. . . It follows that if producers of cedar products anticipate increased sales demand, then industry effort to enlarge allowable cut is a matter to be put high on the agenda. . . If future promotion is aimed at expanding the market for the species, then the question of log supply to fill the demand created is a consideration. Thus, it would seem that trade promotion to increase volume of cedar sales should be accompanied by, if not preceded by, activity to gain increased allowable cut.[26]

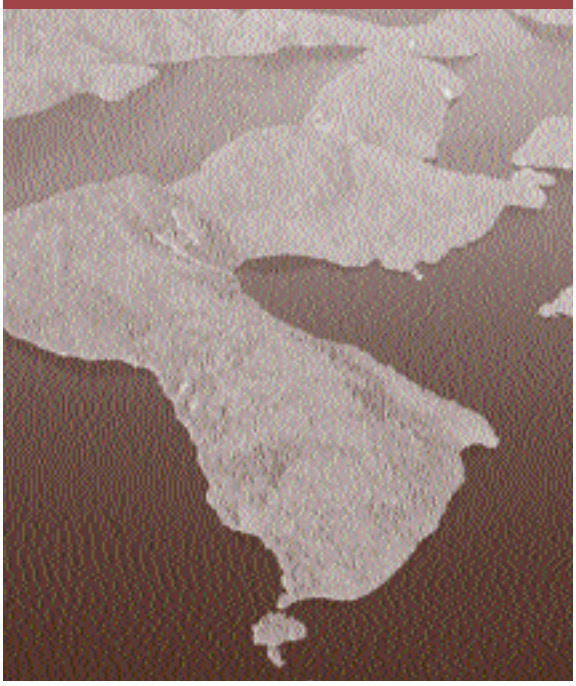
This industry approach of determining how much forest to log based on economic and not ecological criteria remains a driving force of AAC calculations to this day. During the 1995 Timber Supply Review for the Kingcome TSA on the central coast, the Ministry of Forests suggested a 35 percent reduction in the AAC was necessary to protect the long-term harvest level. International Forests Products Ltd. (Interfor), the company that had the logging rights

The cedar stumps in this photo demonstrate how logging companies often target the largest, most-profitable trees. This is an example of high grading where the best trees are removed and the smaller, less-economically valuable ones are left behind. Weyerheauser, Haida Gwaii.
David Suzuki Foundation photo.

for this area, lobbied strongly and convinced officials to reduce the cut by only 15 percent, saying this represented a "…transitional phase to deal with the impacts of reduced timber and job supply…"[27]. The result of this decision is that the AAC for the Kingcome TSA has remained at an unsustainable 49 percent above the Long Term Harvest Level, which is the amount of wood the ministry has estimated can be logged on a perpetual basis.

Some companies argue that current cedar logging practices are not problematic since the proportion of red cedar in their inventories has not changed over the last three to four decades. For example, Weyerhaeuser's timber inventories show that for Tree Farm Licence 39, which consists of seven blocks over a huge area from north of Vancouver to Haida Gwaii, the proportion of red cedar in the inventory remains unchanged from 1974 to present at 20 percent.[28] However, this does not tell the whole story. It is important to note that the total volume of the inventory for TFL 39 has increased over time. This is because the area of land designated for timber harvesting is redefined every five years to include timber that was excluded from earlier inventories. And, this occurs because of market forces: timber companies will only log a particular tree species when it is economically viable to do so, i.e. when a market exists for that species. So at any given time, certain tree species are excluded from timber inventories because there is no market for them. Therefore, an increase of red cedar in a timber inventory can be the result of several factors, including: the inclusion of uneconomic or marginal timber in the harvesting land base, changing utilization standards, new technology, and improved market conditions.

Smaller diameter cedar trees in remote, difficult-to-access areas of the BC coast are now considered economical to log because of current market conditions that place high value on cedar. The inclusion of these smaller trees in the inventory, however, does not mean that today's inventory is really comparable to those of years past. While the volume and diversity of species may be equal, large old-growth red cedars are becoming increasingly rare. Therefore, while the proportion of cedar in TFL 39 today is perhaps the same as 25 years ago, this does not mean the quality of the remaining standing trees is the same as it was in the 1970s. You cannot compare the value and timber quality of large quantities of smaller, spindly trees to centuries-old behemoths.



In the heart of Heiltsuk traditional territory, the forests along Spiller Channel contain important reserves of red cedar. With forest companies targeting red cedar, computer modeling reveals that "most of the operable old-growth cedar in Heiltsuk traditional territory will be gone by the year 2026". David Suzuki Foundation photo.

If timber companies continue to target ancient red cedar, it won't be long until the largest and oldest red cedar trees are found only in protected areas. Most red cedar will only be found in second-growth plantation forests that are cut on rotations of less than 100 years, which is not enough time to restore the attributes of an old-growth cedar forest. A recent report based on a detailed computer model commissioned by the Heiltsuk Nation shows that if timber companies continue to log cedar at current rates "most of the operable old-growth cedar in Heiltsuk traditional territory will be gone by the year 2026".[29] Heiltsuk traditional territory is found in the Bella Bella-Bella Coola region of BC's central coast.

TRADE AND TARIFFS

For months prior to the U.S. imposing tariffs on Canadian softwood lumber in May 2002, BC forest companies and industry analysts complained[30] that tariffs would make cedar products unaffordable in U.S. markets and would kill the BC cedar industry.

This never happened. When the tariffs were imposed, BC companies actually raised cedar prices to absorb the tariff costs.

> "American consumers want BC cedar products badly enough to pay the U.S. softwood duty themselves, pushing up the price of cedar – and along with it shares in local cedar producer International Forest Products – since the duty was imposed May 22."[31]

The U.S. continues to be the main export market for BC cedar lumber.

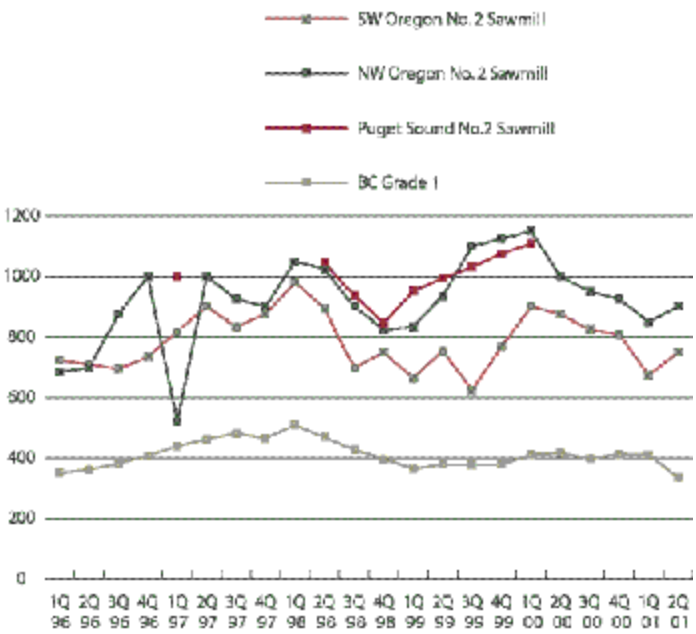
PRICES AND MARKETS

The price of cedar logs in British Columbia is substantially less than prices in Washington state and Oregon even though cedar products like deck furniture, siding, and roof shingles command high prices in Canada and the U.S.. Red cedar has been the top money-maker for the BC coastal forest industry in recent years, yet these companies do not pay market value for these valuable logs.[32] A 2001 study examined the Vancouver Log Market and concluded that the price for cedar logs from coastal BC is substantially lower than prices in U.S. jurisdictions. This is especially true for I-grade logs from BC, which are comparable to the U.S. Sawmill #2 grade. The graph[33] below demonstrates that the price for BC I-grade domestic[34] cedar logs (dotted line) over the past 5 ½ years was consistently much lower than the price paid in Washington and Oregon for similar U.S.-grade logs (solid lines).

By shipping dimensional cedar lumber to Washington and Oregon, BC actually helps create two jobs in cedar remanufacturing plants there for every job in the BC cedar industry.[35] BC companies are forced to ship cedar cut on public land as lumber to the U.S. rather than as logs because the BC government "does not favourably consider applications"[36] for the export of red cedar and yellow cedar (cypress) raw logs from public land resulting in a de facto ban.

Exporting mass quantities of red cedar lumber from BC benefits the U.S. economy because of the number of remanufacturing jobs created and the profits made by multinational timber companies that log BC's forests. Cost is a major factor in sustaining the U.S. appetite for this lumber, and because BC forest policy keeps the price of cedar below true market value, timber companies lobby the provincial government to maintain the status quo. In order to ensure that prized BC cedar sells for fair market value, an open log market should be created so that large timber companies and smaller businesses, which often create more jobs per board foot because they make more highly manufactured goods, can compete equally for the best wood. (See appendix 3)

Quarterly prices for Grade 1 cedar logs (BC) and No. 2 Sawmill cedar logs (U.S.)



Source: Log price comparisons in the Vancouver log market, December 2001.

Effects of Cedar High Grading

CULTURAL IMPACTS

Cedar is an essential element of First Nations culture on the British Columbia coast. Throughout the coast and on Haida Gwaii, remnants of totem poles, canoes and traditional longhouses carved from cedar more than a century ago can be found in ancient forests. Massive, towering cedars were needed to create these icons, and that need continues as First Nations strive to sustain their culture into the future. Today in villages along the coast, traditional carvers transform cedar into totem and house poles, canoes and masks. Conserving ancient cedar is essential for the survival of these traditional cultures, and therefore, the continued high grading of red cedar is a real threat to BC's coastal First Nations culture.

Culturally modified trees are a testament to the importance of cedar to First Nations culture. When these trees are logged, irreplaceable archeological information is lost forever. Not only does the historical significance of an individual tree disappear when it is logged, but logging in the forest surrounding CMTs also erases all knowledge of aboriginal forest management. If previous generations of aboriginal people purposefully left groves of trees for future canoe or pole production, that knowledge is lost when those trees are logged. CMTs and remnant stumps illustrate the historical techniques First Nations used for tree selection, falling methods, and to extract logs and planks.[37] A member of the Haida First Nation explains: ". . . . culturally modified trees [are] important evidence of the long-standing use and possession of the cedar forests by the Haida People."[38]

Some of the best-preserved examples of CMTs

CMTs and the Courts

Located just south of Prince Rupert on BC's north coast, the Kumealon Inlet and adjacent watershed is an ecological oasis. This watershed is renowned for its ancient red and yellow cedar trees that grow upon a foundation of limestone karsts, resulting in trees much larger than usual for the area, which is limited by poor soils and tough growing conditions. In 1994, International Forest Products (Interfor) sought to log Culturally Modified Trees (CMTs) that are claimed by several area First Nations, including the Kitkatla Band. While CMTs have limited protection under the Heritage Conservation Act, the Act does allow CMTs and other cultural artifacts to be altered with Ministerial approval. Interfor required and received the necessary Site Alteration Permit from the Provincial government to log 178 CMTs. The Kitkatla Band went to court arguing that, constitutionally, only the Federal government, not the province, could authorize destruction of First Nations' cultural artifacts. Interfor and COFI wrote amicus briefs supporting their position of logging CMTs.

On March 28, 2002, the Supreme Court of Canada affirmed the province's right to issue such permits. Timber companies continue to legally log CMTs and Interfor only altered their logging plans in the Kumealon case after the Kitkatla Band went to court. While ultimately not successful, this case raised awareness of CMTs with both the public and the courts.

In May 1990, Guujaaw, president of the Council of the Haida Nation, walked through a logging site and found that trees were being cut within 45 metres of this unfinished canoe. The Haida Nation would later secure BC's longest-standing court injunction for a cultural site in order to protect this and other archaeological artifacts. David Suzuki Foundation photo.

in British Columbia are found on Haida Gwaii, particularly at the World Heritage Site Gwaii Haanas Reserve. Haida carvers are internationally acclaimed, and Guujaaw, current president of the Council of the Haida Nation and a master carver, has learned the technical and artistic secrets of his ancestors by studying partially carved canoes they left in the forest.[39] He explains that knowledge like the specific steps for carving a canoe are only "found within the culturally modified tree sites in unlogged virgin forests."[40]

On northern Graham Island, along the shores of Masset Sound, lies a site in the forest with five partially completed canoes, as well as test holes, bark-stripped trees, stumps, and other types of CMTs. A visit to the site in May 1990 was extremely distressing says Guujaaw.

> [I found] … desecration and destruction of the site beyond anything I would have expected. Many of the features within the site have been disturbed and destroyed. Because they are remarkable and obvious features, I believe that the destruction has been conscious and wilful. There is no way to undo the damage that has been done. I could see no evidence of any attempt to avoid damage to the culturally modified trees. The CMTs were not avoided but were simply cut down or cut over. The method being used is regular clear cutting, which, if allowed to continue, will totally and completely destroy the cultural values of the site.[41]

Fortunately, a court order obtained by the Council of the Haida Nation prevented further damage to this unique archaeological site. However, clearcut logging continues in Canada's rainforests, putting similar sites at risk. While CMTs have limited protection under BC's *Heritage Conservation Act*, timber companies may obtain a special permit to cut them, and First Nations have reported incidences of timber companies logging CMTs and delivering them to the local village, destroying a living legacy. In one case, Interfor allowed members of the Squamish First Nation to strip bark from logged cedar trees sitting in their log sort yard.[42] However, this cannot be compared to the traditional method of bark stripping where the tree remained standing and could be used by future generations. Even if CMTs are left standing in an area that has been logged, they can blow down because there is little forest protection around them and the result is the same as if they had been logged. Under the *Heritage Conservation Act*, British Columbia actually allows cultural artifacts to be destroyed if a permit is obtained. Only a court challenge by a First Nation under Section 35 of Canada's *Constitution Act* would override the *Heritage Conservation Act* and provide protection for these living pieces of history. To date, no coastal First Nation has embarked upon this legal test.

Haida artist Christian White, speaking at a 1996 cedar symposium, described how such actions and the continued high grading of red cedar contribute

Log barges ship cedar down the coast to centralized sawmills, which results in few jobs or benefits for communities near the logging sites. As old-growth trees continue to be targeted by timber companies, First Nations have difficulty finding sufficient large trees from which to carve poles and canoes. David Suzuki Foundation photo.

to the destruction of First Nations culture.

> There's not many of these [ancient cedar] trees left on the Islands [Haida Gwaii]. They're getting harder and harder to get at. They're in smaller and smaller pockets. But our people have a hard time getting material to work on. In my village of Massett over the past 10 years or so we've gotten maybe a dozen logs to work on. There are millions of dollars of logs going by our village and there's probably less than a handful of people working in the logging industry. So, you can see, that it's really starting to bother us quite a bit. And we know that even if there were a few pockets of trees left, and the mature stands were saved right now, that within a 100 years there might not be anything the right size and shape that is needed [for poles and canoes].[43]

ECOLOGICAL IMPACTS

When timber companies high grade cedar, they don't just remove cedar trees but log large tracts of forest, removing all the trees from a specific area called a cutblock. For animal and plant species that require old-growth forests to survive, their habitat is lost forever. These forests provide critical habitat for a variety of wildlife, including black bears that den in hollow old-growth cedar. Removal of massive amounts of old-growth red cedar from Canada's rainforests will result in many species vital to the ecological integrity of coastal forest ecosystems becoming threatened and even endangered.

Examples of the effects of high grading and clearcut logging on black bears in two northern Vancouver Island watersheds are particularly disturbing. Government studies of environmental trend factors determined that 48 percent of the forested area likely to contain bear denning trees in the Artlish watershed has already been logged. A government report written in 2000[44] showed that another 10 percent of this forest, also containing denning trees, was in an area proposed for logging. In the Nahwitti watershed, also on Vancouver Island, approximately 83 percent of the forested area capable of containing denning trees has been logged, and at the time the government report was written in 2000,[45] of the remaining 570 hectares of forest suitable for black bear dens, 250 hectares were scheduled to be logged. This loss of denning habitat poses serious threat to specific bear sub-populations.[46]

SPECIES AT RISK

Marbled murrelets are a rare species of seabird that nests in old-growth forests. The murrelet is on the British Columbia red list of endangered or threatened species.[47] Government biologists have concluded that "Logging of breeding habitat has been identified as the greatest threat to the marbled murrelet in North America."[48]

Bear Den Case Study

As an example of how forest companies disregard the ecological importance of red cedar, nothing quite captures the industry's high grading practices than Interfor's callous disregard for a bear denning tree in the Stoltmann Wilderness north of Squamish.

In 1997, Interfor applied for and received a new cutblock in the Sims Creek watershed. The cutblock included Magic Grove, a spectacular stand of ancient red cedar trees that was a much-loved hiking destination. Within Magic Grove grew a massive red cedar with a small opening at the base leading into a large hollow centre. The cavity was big enough to hold ten people and had bear signs indicating it was an active denning tree.

A concerned hiker phoned the BC Forest Service office in Squamish to tell them about the tree. The Forest Service informed the company they would send a biologist to verify the finding.

The response from Interfor was incredible. The company immediately sent fallers into the centre of the cutblock to find and cut down the tree!

Informed the redcedar had been felled, the Forest Service told the distraught hiker that they were powerless to prosecute Interfor because the Forest Service had previously approved the Cutting Permit authorising Interfor to cut down the trees in *Magic Grove*.

Hollow cedar trees make great winter dens for black bears. Ian McAllister/Raincoast photo.

Marbled murrelets require wide, mossy branches on old-growth trees to make their nests. Red and yellow cedar are two tree species favoured as nest sites by this threatened species. Mark Hobson photo.

Murrelets don't actually build nests, but rather sit in depressions on wide mossy conifer branches. While inventories of nest sites are not comprehensive, the research to date shows that this seabird prefers old-growth "yellow cedar, western hemlock, Sitka Spruce, Douglas-fir, and western red cedar"[49] as nesting platforms. Recent research has determined that there is ". . . strong evidence that the watershed populations of marbled murrelets are directly proportional to the areas of old-growth forest available. There was no evidence that murrelets pack into remnant old-growth patches in higher densities as areas of old growth are reduced by logging. Breeding populations of murrelets are predicted to decline as areas of old growth decrease."[50] A decrease in old-growth red and yellow cedar will directly impact the nesting sites of this unique seabird.

Several species of bats utilize the hollow cavities that are characteristic of old large live and dead cedar trees. Research in Clayoquot Sound, on the west coast of Vancouver Island, showed that bats exclusively roosted in old-growth cedar trees or rock crevices. They did not roost in other species such as Yellow Cedar, Western Hemlock, Sitka Spruce or Amabilis fir that were common in these forests.[51] While the Keen's Long-eared Myotis has not yet been documented roosting in red cedar trees (mostly due to the difficulty of radio-tracking this rare and tiny species), it is believed that cedar trees are the most likely used as roosts. Old forests containing red cedar are definitely used as important foraging habitat.[52] This small, rare bat is a red-listed species found in the old-growth forests of British Columbia. Ongoing logging in BC's forests will affect this species as it is believed to be "dependent on tree cavities associated with old-growth or mature forests for roosts, and therefore vulnerable to large-scale logging practices."[53]

BC's beleaguered northern spotted owl population is also affected by high grading of red cedar. This red-listed species is found in red cedar, hemlock, and Douglas-fir forests and habitat loss is considered to be the "single greatest threat to the survival of the species throughout its entire range in North America."[54]

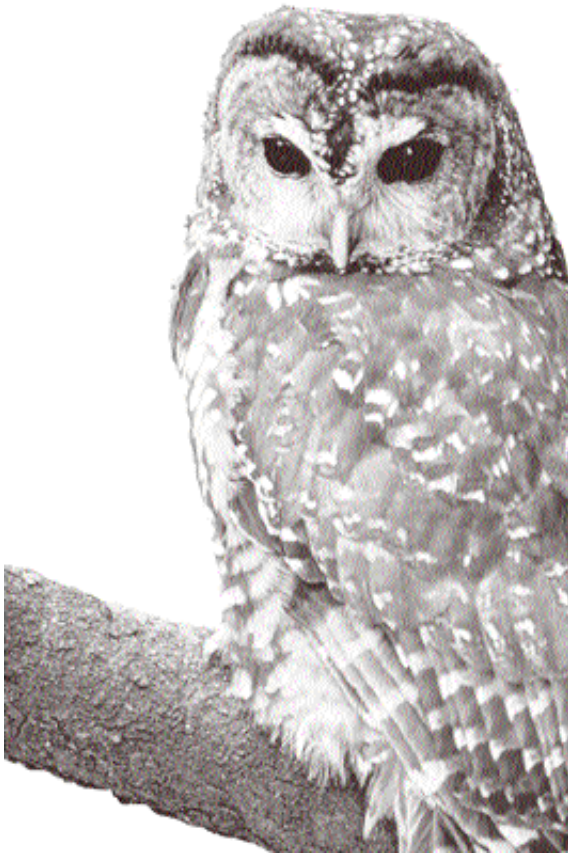
Even when a spotted owl was observed only 20 metres from a new logging road in the Siwash Valley east of Vancouver, Ministry of Forests personnel refused to act to halt any logging plans claiming: "This is not a nest site, just a female owl on a branch. Owls fly around. There's no special need to do anything at this point."[55] Old-growth red cedar was one of the leading tree species found in the Siwash Creek cutblocks[56] that overlapped with the spotted owl habitat. The Western Canada Wilderness Committee subsequently took the province to court, arguing that a small provision of the former *Forest Act* (which was replaced with the *Forest and Range Practices Act* in 2003) required the

Ministry of Forests to set aside logging plans where it could be proved that species were not adequately managed and conserved. After the Wilderness Committee successfully obtained the first injunction in Canada to stop logging in endangered species habitat while the case was heard, the government withdrew from the case and the Ministry of Forests rescinded approval for three of the four cutblocks the Wilderness Committee had tried to protect. In a separate spotted owl court case, the judge ruled that BC's Forest Practices Code does not have the necessary authority to stop logging from causing local extinction (extirpation) of endangered species.

Much remains to be done, however, if the spotted owl is to be saved in BC. In 2003, government biologists estimated that only 25 spotted owls remain in BC.[57] These birds are located at ten active sites, of which three are currently scheduled to be logged.[58] Alarmingly, there are only three breeding pairs remaining among the 25 owls.[59] Because logging continues in areas surrounding nest sites where the owls feed, environmentalists and government biologists agree that the spotted owl will be extirpated from British Columbia by 2007.[60] The province's Spotted Owl Recovery Strategy appears to have failed, having been hampered by both a lack of funding and a focus on accommodation of logging interests: "If there was a balancing act between the spotted owl and the industry and jobs, it turns out now that the balancing act didn't favour the owl," said Brian Clark of the B.C. Ministry of Water, Land and Air Protection.[61]

Current forest practices do not protect wildlife because provisions were not included to restrict where and if timber companies can log in critical wildlife habitat. This lack of implementation has created a crisis:

> "On the ground, forest practices continue to improve in BC's public forests, but the government still needs to provide direction to forest companies to ensure the protection of threatened wildlife habit," the board stated. In an interview, acting chair Liz Osborn said the board can only monitor what it sees going on. The standards forests companies are using on the land are improving, but even improved practices will not prevent harm to species at risk if they are not provided with protected habitat.
>
> "This problem has come up repeatedly in the board's work," she said. "The process [by government] has been very slow and very few wildlife habitat areas have made it through the process, even though it's recognized that many more are required.
>
> "When we do audits, we audit compliance with the code. But if there isn't something to comply with in respect to a marbled murrelet, for example, logging companies can still be in compliance



Northern spotted owl. It is believed that as few as 25 breeding pairs remain in British Columbia. C.Swift/First Light photo.

Most of BC's cedar lumber is exported to the U.S. where two jobs are created in Washington state remanufacturing this cedar into value-added products for every job created in logging and milling the logs in BC. Wilderness Committee photo.

and still be harming marbled murrelet habitat. That's where the full implementation of the legislation is necessary so that there are wildlife habitat areas that are taken into account and need to be complied with."[62]

With the provincial government now implementing a 'results-based' code that virtually allows companies to regulate themselves, it is likely that logging of old-growth red cedar will increase and adversely affect wildlife.

ECONOMIC IMPACTS

When profits drop in the logging industry, timber companies that operate in British Columbia have been able to offset their losses by cutting more cedar. There is a finite amount of accessible, large, high-quality ancient red cedar in coastal forests, and by targeting it all today there will be less opportunity for future generations. The economic and ecological value of one old-growth red cedar is incomparable to even several second-growth cedars because a replanted forest will never replicate ancient, original forests.

While the province does not allow export of raw cedar logs taken from public land, timber companies routinely sell minimally processed cedar cants and commodity lumber to sawmills in Washington and Oregon. There, this prized wood is remanufactured into products of greater value, creating two jobs for every job involved in logging in BC.[63] So instead of supporting the growth of remanufacturing operations in BC, which are called value-added industries, provincial and federal politicians actually support exempting cedar lumber from U.S. tariffs. Sending huge volumes of cedar lumber to the U.S. benefits large timber companies in BC, some of which are U.S.-owned, but limits the economic opportunities for BC value-added remanufacturers.

Manufacturers in British Columbia need access to red cedar in order to create high-end, value-added products. Supporting such efforts would create employment and use less cedar, maximizing the value of this prized wood. It is not just wood, however, that is exported to the U.S. In the case of an Interfor cedar remanufacturing facility in Fort Langley, south of Vancouver, the entire plant was moved to nearby Sumas, Washington, putting 56 British Columbians out of work.[64] When Interfor president Duncan Davies announced the move in September 2002, he said the reason was to avoid paying duties on the cedar products they exported from the BC facility.[65] By opening a plant in Washington State, Interfor can make the same products and get away with paying less duties than if the company was operating in Canada.

The table on the following page shows how Interfor is high grading cedar around Squamish, northwest of Vancouver. This community is espe-

In the last five years, timber company Interfor closed two sawmills and a remanufacturing plant. With red cedar being high graded in both the Soo TSA and TFL 38, many wonder if the company's Squamish cedar mill (above) has a future. Wilderness Committee photo.

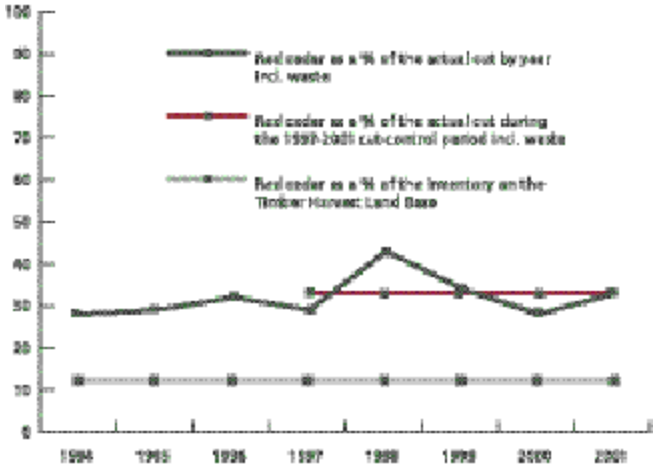
The table below shows the level of high grading in forests around Squamish, northwest of Vancouver.

	Most recently completed cut-control period	Cedar as a % of the most recently completed cut-control period	Red cedar as a % of the inventory on the Timber Harvesting Land Base	The difference between the % of red cedar in the actual cut versus the percentage of red cedar in the inventory
Soo TSA (various licensees)	**1997-2001**	**15%**	**5%**	**200%**
TFL 38 (Interfor)	**1997-2001**	**33%**	**12%**	**175%**

*While this time period is not an official cut-control period, it represents an estimate for the cut-control period of different licences within the TSA.

cially concerned that a troubled sawmill, retooled in 2001 to process red cedar, might share a similar fate to other Interfor cedar mills that have permanently closed. BC's forests cannot sustain high grading and over-cutting indefinitely. As well, BC communities pay the price for the industry's desire to be a low-cost, high-volume producer of commodity lumber. While volatility in international commodity markets has contributed to industry instability, timber companies that operate on BC's coast have been reluctant to embrace tenure reform, recapitalization and sustainable forest practices, which has exasperated their problems.

TFL 38 - red cedar as a % of the actual cut



Conclusion

British Columbia's western red cedar forests are a globally unique natural heritage. Specific plant and animal species, rich First Nations cultures, and a valuable economic niche in BC's forest industry are sustained by the old-growth cedar forests of Canada's Pacific coast. Today, however, old-growth cedar is increasingly rare as timber companies target these older, extremely valuable trees in order to maintain revenue in an otherwise challenging forest economy.

The targeting or high grading of western red cedar is just one of many unsustainable forest practices in British Columbia, and the problem cannot be resolved in isolation. Either we can acknowledge the environmental and cultural benefits of the remaining old-growth cedar and conserve it, or we can continue to diminish the cultural, environmental and economic options that these forests provide. We can look to the future or concentrate on the short-term and maintain profits for the logging industry.

This study found that old-growth cedar, especially the largest, most-valuable trees, will disappear from the BC coast if the current methods of targeting these forests continue. And, the likelihood of this increases as the provincial government deregulates the forest industry and places more management control in the hands of timber companies. The incentive to log as much cedar as possible is tremendous as it is not anticipated that the market for high-quality cedar products will diminish. Unless the logging of cedar is more strictly regulated, we could soon see the disappearance of old-growth, leaving only the less-valuable second growth forests.

If future generations are to benefit from old-growth western red cedar forests then we must urgently reform how these forests are managed. Such policy reform must include adequate conservation of old-growth cedar forests, protection of culturally modified trees and surrounding forest, and implementation of ecosystem-based forest management that eliminates large-scale clearcutting of cedar forests and maintains a diverse range of age and size classes of cedar forests.

When determining the allowable annual cut (AAC), the government must exclude both uneconomic timber as well as western red cedar forests with high cultural and ecological values. Also, areas that connect across the entire forest landscape must be permanently conserved.

The unique benefits provided by old-growth western red cedar forests are irreplaceable. We encourage the government of British Columbia, coastal First Nations, and others with rights to log to negotiate and honour land-use plans and forestry agreements that will ensure these forests are managed to provide cultural, ecological and economic benefits for centuries to come.

Recommendations:

- Through the assessment of land-use planning recommendations and formal government-to-government negotiations with First Nations, conserve the ecological integrity of western red cedar forests, especially vital stands of old-growth in BC's coastal rainforests, by designating a system of permanent protected areas and forest ecosystem reserve networks.

- Ensure that sufficient old-growth red cedar is conserved to meet the cultural and economic needs of coastal First Nations, and increase funding to them in order to identify and protect culturally modified western red cedar trees.

- Legislate restrictive regulations in the BC government's new Forest and Range Practices Act to limit the forest industry's opportunity to high grade old-growth western red cedar.

- Amend BC's Forest Act to ensure that licensees are required to log the species profile within their operating areas so that red cedar and other species are not logged at an unsustainable rate.

- Change BC forest policy to ensure that raw logs and minimally processed wood are not exported so that value-added industries can expand. This should include reforming the forest harvest licensing system (tenure) so that manufacturing companies in BC have an opportunity to buy logs and lumber, including red cedar, instead of allowing the bulk of this wood and Canadian jobs to be exported to the U.S. and other jurisdictions.

- Amend government policies to ensure that information regarding Tree Farm Licenses (TFLs) is available to the public from government and forest licensees.

- The current provincial policy of not accepting raw log export applications for red and yellow cedar from public land must be upheld. This will allow BC manufacturers to make wood products with greater value than what is paid for logs and cants. The federal policy of allowing export of red and yellow cedar logs from private land must end in order to provide BC manufacturers more access to wood, which will create more jobs here rather than abroad.

- Cancel the forest management arrangement for Timber Supply Areas (TSA) known as Defined Forest Area Management (DFAM), under which TSA licensees manage all aspects of the TSA, including conducting the Timber Supply Review.

- Reform the Timber Supply Review process to ensure that each Timber Supply Report is written by government officials, and contains clear and accurate information about the volume of each species on the Timber Harvesting Land Base (THLB) and that the AAC for each TSA and TFL are set at an ecologically sustainable level.

APPENDIX 1: METHODOLOGY AND SOURCES

Methodology and Data Sources

Source of Billing Data

The analysis in this report is based upon data from Harvest Billing Reports purchased from the British Columbia Ministry of Forests to determine the annual volume of wood, by species, logged in each Timber Supply Area or Tree Farm Licence. The data purchased was for a time period starting at the beginning of the most recent cut-control period and ending on December 31, 2001. The start date for each cut-control period varied by licence. The Harvest Billing Reports were for public land, except for TFLs 39 and 44, which included data for Schedule A private land. This data was included in the analysis because the licensee's Timber Harvesting Land Base inventory did not distinguish between public and private land in these two TFLs.

To show a complete picture of the volume of all wood actually cut in each area, waste data were also purchased in the customized report from the Ministry of Forests. The billing data and waste data for each species were added together for each year, and this was used to determine the percentage of red cedar logged during the most-recently completed five-year, cut-control period.

Some of the Tree Farm Licences are broken into smaller sections, known as *blocks*. These blocks, not to be confused with cutblocks, are identified by the forest district in which they are located. The billing data were purchased for each of the TFL blocks.

Point of Comparison

The billing data were used to determine the composition of red cedar as a percentage of the actual cut for the most-recent, cut-control period, which was then compared to the percentage of red cedar in the inventory for the TSA or TFL. The term cut-control period was defined by *Forest Act* regulations prior to 2002, which have subsequently changed. A cut-control period is typically for a 5-year period, the term of which varies with each licence.

Each Timber Supply Area may contain forest licences with different control periods. However, most major forest licences on the BC coast have a common start date for their cut-control period. Therefore, a common start date was used for the purposes of analysis, even though the actual date for each cut-control period may not have started at the same time.

Inventory Sources

Inventory data were obtained for each management area from a number of sources. Where possible, the data were obtained directly from the TFL holder, while the Ministry of Sustainable Resource Management supplied the data for the remaining TFLs and for the TSAs. Unless otherwise stated, the inventory data were organized by volume (m^3), by tree species on the net Timber Harvesting Land Base (THLB), which was used to determine the proportion of red cedar in the standing volume on the THLB. It is believed that the inventory is for all age classes. All inventory data sets are for public land only, unless otherwise noted. All attempts were taken to obtain the best-available inventory information, however, the quality of the information could not be independently verified..

Inventories for standing volume within the Arrowsmith, Fraser, Kingcome, Mid-Coast, North Coast, Queen Charlotte Islands, Soo, Strathcona, and Sunshine Timber Supply Areas were supplied by the Ministry of Sustainable Resource Management. The data for the Timber Harvesting Landbase were defined as land available for long-term, integrated resource management. The net volume in cubic metres is gross volume less decay, waste, and breakage based on a 17.5 cm+ stump diameter inside bark utilization level. The data of inventory varied by TSA, but represented the most-recently available data set.

TFL 6: Western Forest Products supplied the inventory information for the Timber Harvesting Land Base. The data source was the Management Plan #9 Timber Supply Information Package, less the estimated volume harvested by species from 1998 to January 2001.

TFL 19: Western Forest Products supplied the inventory information for the Timber Harvesting Land Base with inventory current to January 2000. The data source was the Management Plan #9 Timber Supply Information Package.

TFL 25: Western Forest Products supplied the inventory information for the Timber Harvesting Land Base from Management Plan 10 with inventory current as of Jan.1, 2001.

TFL 37: Canfor supplied the current estimated volume by species for the Timber Harvesting Land Base based on TFL 37 Management Plan 8, less the estimated volumes harvested by species from 1997 to September 2001.

TFL 43: Scott Paper supplied the inventory for the Timber Harvesting Land Base, current as of December 31, 1998. The inventory did not differentiate between conifer species.

TFLs 39 and 44: Weyerhaeuser supplied the inventory data for the gross THLB in these two TFLs. The data is believed to be the most-recent available to the company. The inventory data set is for both public (schedule B land) and private land (schedule A land). The TFL 39 data is from 1999 and the TFL 44 data is from 2000.

TFL 46 and TFL 47: (Campbell River & Port McNeill Forest Districts): TimberWest supplied the species breakdown, by percentage, for the Timber Harvesting Land Base. TimberWest did not provide the actual volumes of timber within the THLB. No date of inventory was provided, but is believed to be the most-recent information.

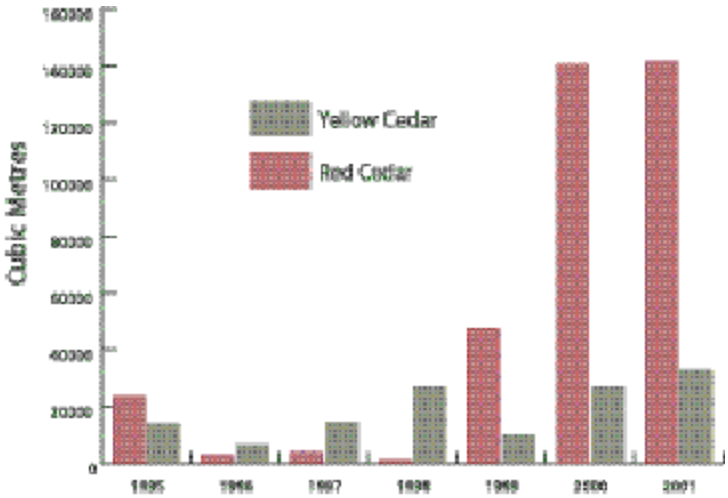
TFL 47: (Queen Charlotte Islands Forest District): While TimberWest is the tenure holder for TFL 47, all management of this portion of the TFL was sub-contracted to JS Jones Logging. Dick Jones of JS Jones Logging was contacted in an attempt to obtain data, but he would not release this information pertaining to public land. The Ministry of Sustainable Resource Management supplied the inventory information for this section of the TFL with volumes projected to January 1, 1999. The year of the aerial photography was 1990.

TFL 10, TFL 38, TFL 45, and TFL 54: Interfor was unable to provide the inventory by species by volume for the Timber Harvesting Land Base. Because it is not a legal requirement to do so, the company does not organize the inventory data by species. Interfor stated that for a fee they could provide the inventory by volume, but that it would be organized by species mix (hembal, cedar-hemlock, etc.), which would be incompatible with the report methodology. The necessary information does exist in a raw form, but Interfor said the expense of collating the data would be prohibitive and they were unwilling to pay this expense. The inventory was obtained from the Ministry of Sustainable Resource Management, and TFL 10, TFL 45, and TFL 54 data were acquired by the government in 1995 from the companies that hold the logging rights with volumes projected to January 1, 1999. TFL 38 data were acquired by the government in 1995 and 1996 with volumes projected to Jan. 1, 1999.

APPENDIX 2: CEDAR RAW LOG EXPORTS

Canadian federal government regulations allow the export of raw cedar logs from private lands, and recent data show a significant increase in red cedar log exports as documented in the adjacent graph.[67]

Raw log export of red and yellow cedar trees under federal export permit from coastal BC



APPENDIX 3: OPEN MARKETS

British Columbia's logging industry is structured to benefit large, mostly multinational timber companies, often at the expense of local communities, First Nations and the environment. Approximately 20 companies control two-thirds[68] of the Allowable Annual Cut on public land, which limits the amount of wood available to small and medium-sized companies. These smaller companies, both logging and manufacturing, generally create value-added products, which require fewer trees to be cut than with the large-scale industry where trees of great value are often shipped abroad with minimal manufacturing performed in BC or are converted to pulp. Instead of large companies automatically having access to the best wood, one way to provide opportunities to smaller companies would be the establishment of an open log market.

Currently on the Vancouver Log Market, five large companies dominate sales and trading whereas a truly competitive log market would ensure that all timber companies send a fixed percentage of the logs they cut to the market and then when a company needed a specific log it could buy it from that open market. This is especially important for small- and medium-sized companies that need cedar to create value-added products because such companies generally have difficulty accessing this highly desirable wood.

Growth of the value-added sector – sawmills and remanufacturing plants – would lead to increased investment and employment and less demand on our forests because fewer trees could be cut if bidding on an open log market increased the price so that companies did more with less timber.

Instead, timber companies with logging rights on the BC coast today keep the logs they cut and often actually subtract value from this wood instead of creating a more valuable product. Large timber companies can't or won't invest in new equipment that would maximize the value of a log, and they often refuse to sell it to another BC company that could.

Paul McElligott, president of TimberWest, which is one of the large companies operating in BC, recently observed:

> He [McElligott] warned a further 15- to 20-per-cent reduction in employment is on the horizon, noting the coast does not have any sawmills equivalent to the efficient Interior sawmills competing in the U.S. market despite softwood tariffs. "We don't have one mill that is capable of efficiently processing a five- to seven-inch-diameter log. I go out on operational tours and I look at logs that are beautiful wood, dead straight. Logs that guys in the Interior would cry over. They go into the chipper because nobody is geared up. They go as pulpwood, not a sawlog."[69]

ENDNOTES

1. The use of the term western red cedar in this report refers to western redcedar (Thuja plicata), which is the proper taxonomic name for this tree species.

2. A cant is a large diameter timber that is essentially a log that has been squared.

3. http://srmwww.gov.bc.ca/cdc/register.htm

4. Richard Hebda, History of Cedars in Western North America, page 8 in Proceedings of the Cedar Symposium, May 28-30, 1996, Haida Gwaii. (Victoria: Ministry of Forests, Province of BC, 1999) pgs 5 - 13.

5. Hilary Stewart, Cedar (Vancouver: Douglas & McIntyre, 1984) Page 26.

6. Around Stryd and Vicki Feddema, Sacred Cedar: The Cultural and Archaeological Significant of Culturally Modified Trees (Vancouver: David Suzuki Foundation, 1998) page 6.

7. Stewart, page 26.

8. Hal Reveley, Setting the Stage, page 3 in Proceedings of the Cedar Symposium, May 28-30, 1996, Haida Gwaii. (Victoria: Ministry of Forests, Province of BC, 1999) pages 2 - 4.

9. Karel Klinka, Update on Silvics of Western Redcedar and Yellow-cedar, pages 24 & 25 in Proceedings of the Cedar Symposium, May 28-30, 1996, Haida Gwaii. (Victoria: Ministry of Forests, Province of BC, 1999) pages 14 - 28.

10. Wade Davis, The Clouded Leopard (Vancouver: Douglas & McIntyre, 1998) page 214.

11. Stewart, page 8.

12. Stryd, page 5.

13. David Garrick, Shaped Cedars and Cedar Shaping. (Vancouver: Western Canada Wilderness Committee, 1998), page 381 and Pers Comm David Garrick, May 2002.

14. Joanna Piros, Truck Logger, Cedar Unlimited Part I, Spring 2003, pages 13-17 (17).

15. Piros, page 17.

16. Piros, page 17.

17. John Nelson, Log Price Comparisons in the Vancouver Log Market. (Bellingham: Northwest Ecosystem Alliance, December 2001) page 11.

18. Gordon Hamilton, Vancouver Sun, Coast loggers turn to cedar to stay alive: Harvesting more of the high-value wood only alternative as hemlock price plunges, Page C1, January 17, 2001.

19. Joanna Piros, Truck Logger, The Real Deal - Cedar Unlimited Part II, Summer 2003, Vol. 26 Number 2, p. 14.

20. Gordon Hamilton, Vancouver Sun, Forest-plan deadline shot, executive says, Page C1, Dec. 5, 2001.

21. Gordon Hamilton, Vancouver Sun, More mills to close because of land deal: Doman Industries plans a closure announcement and a lumber executive warns more will come :Page F10, April 20, 2001.

22. Gordon Hamilton, Vancouver Sun, More mills to close because of land deal: Doman Industries plans a closure announcement and a lumber executive warns more will come :Page F10, April 20, 2001.

23. Council of Forest Industries, Trends in Western Red Cedar Log Harvest and Utilization BC Coast, (Vancouver: COFI, March 16, 1964), page 13.

24. Ibid, page 3 & 4.

25. The Allowable Annual Cut (AAC) is the amount of timber that a company can cut for a specific tenure; the actual cut may be higher or lower than the AAC in any given year, as long as the average actual cut is no more than 10% above the AAC for a 5 year period.

26. COFI, pages 14, 15, & 17.

27. Interfacts, April 1996, Vol. 2, No. 2, Interfor Publication.

28. Selected inventories from TFL 39 Management Plans 4, 7, and 8, Weyerhaeuser.

29. Heiltsuk First Nation, How Long Will it Last? Cedar Logging in the Heiltsuk Traditional Territory, Bella Bella: 2001.

30. Petti Fong and David Hogben, Vancouver Sun, Half of coastal mills to shut down: Up to 14,000 B.C. workers idle by next week because of U.S. tariff, industry official says. August 17, 2001, page A1. and Gordon Hamilton and Derrick Penner. Vancouver Sun Mills scramble to beat deadlines: B.C. forest firms take advantage of a brief window of opportunity before the costly softwood duty is applied. May 21, 2002. Page D1.

31. Gordon Hamilton, Vancouver Sun, Cedar: One of B.C.'s bright spots: Technology can create amazing substitutes but only nature can create cedar, and we've got forests full of it, Gordon Hamilton reports Page E3, June 15, 2002.

32. John Nelson, Log Price Comparisons in the Vancouver Log Market. (Bellingham: Northwest Ecosystem Alliance, December 2001).

33. Nelson, page 35.

34. Domestic sales is defined as sold within BC as reported to the Ministry of Forests.

35. http://www.standup

forcedar.com/media.html

36. Ministry of Forests. Procedure of British Columbia Procedures for Export of Timber 1999: Vancouver and Prince Rupert Forest Regions. (Victoria: Government of BC, July 1999), page 4.

37. Ibid, page 7.

38. Guujaaw affidavit. Massett Band, Michael Nicoll, and the Haida Nation vs. Stejack Logging Ltd., et al., Supreme Court of BC, May 28, 1990. Page 11.

39. Ibid, page 6.

40. Ibid, page 5.

41. Ibid, page 12.

42. Joanna Piros, Truck Logger, Cedar Unlimited, Spring 2003, pages 13-17 (15).

43. Christian White, Speaking About Cedar, page 50 in Proceedings of the Cedar Symposium, May 28-30, 1996, Haida Gwaii. (Victoria: Ministry of Forests, Province of BC, 1999) pages 49 - 50.

44. Ministry of Water, Land, Air, Protection, Environmental Report: Artlish River Nanaimo: MoWLAP, October 18, 2000, page 10.

45. Ministry of Water, Land, Air, Protection, Environmental Report: Nahwitti River Nanaimo: MoWLAP, October 18, 2000, pages 9-10.

46. Ministry of Water, Land, Air, Protection, Environmental Report: Macktush River Nanaimo: MoWLAP, October 18, 2000, page 8.

47. The Red List "includes any indigenous species or subspecies (taxa) considered to be Extirpated, Endangered, or Threatened in British Columbia. Extirpated taxa no longer exist in the wild in BC, but occur elsewhere. Endangered taxa are facing imminent extirpation or extinction. Threatened taxa are likely to become endangered if limiting factors are not reversed. Red-listed taxa include those that have been, or are being evaluated for these designations. CDC website: http://srmwww.gov.bc.ca/cdc/list.htm

48. Syd Cannings, David Fraser, and William Harper. 1999. Rare Birds of BC, Ministry of Environment, Lands, and Parks, Page 95.

49. Alan Burger, Conservation Assessment of Marbled Murrelets in British Columbia, A Review of the Biology, Populations, Habitat Associations, and Conservation. Government of Canada, Canadian Wildlife Service. 2002. Pages 39 & 40.

50. Ibid, page IX.

51. Ruth van den Driessche, Monica Mather and Trudy Chatwin. 1999. Habitat Use by Bats in Temperate Old-Growth Forests, Clayoquot Sound, British Columbia. Unpublished report to Ministry of Environment, Lands and Parks. 36pp.

52. Ibid.

53. Syd Cannings et al. 1999. Rare Amphibians, Reptiles, and Mammals of BC, Ministry of Environment, Lands, and Parks, p.67.

54. Dave Dunbar, et al. Spotted Owl Management Options Report, Ministry of Environment, Lands, and Parks, 1994, page xi.

55. Larry Pynn, Vancouver Sun, The Battle Over Logging, December 8, 2001.

56. Aran O'Carroll, et al. An Initial Scoping Assessment of Logging Threats to Spotted Owl Habitat in the Chilliwack Forest District Forest Watch of BC & Sierra Legal Defence Fund. November 2001. page 7 of Tab 5.

57. Pers. Comm. Andy Miller, MSc, September 2, 2003.

58. Ibid.

59. Ibid.

60. Ibid.

61. CBC website, BC's Spotted owl face extinction, scientists warn, Oct 7, 2003, http://www.cbc.ca/stories/2002/10/07/spotted_owls021007

62. Gordon Hamilton, Vancouver Sun, Board urges protection for wildlife habitats, May 30, 2003. Page H4.

63.http://www.standupforcedar.com/media.html

64. Gordon Hamilton, Vancouver Sun, Interfor to move BC mill to US: Transfer of jobs to American workers marks a first in softwood dispute. September 28, 2002.

65. Ibid.

66. While this time period is not an official cut-control period, it represents a reasonable estimate for cut-control periods for major forest licences within the TSA.

67. Graph from Ministry of Forest data: Exported Volume Summary for Federal export permits from the coast by Destination, for the years 1995 to 2000.

68.http://www.for.gov.bc.ca/ftp/hth/external/!publish/apportionment/aptr043.pdf

69. Gordon Hamilton, Vancouver Sun, Forest firm brass join in urging premier to action, July 9, 2003.

Mitkof Island Timber Sale EIS

Petersburg Ranger District Conference Room

October 10, 2017
9:30 am

Attendees

PRD	Phone	Team Member	Specialty	PRD	Phone	Team Member	Specialty
X		Earl Stewart	Tongass Forest Supervisor	X		Jorge Enriquez	TMA
X		David Zimmerman	PRD Ranger	X		Ben Case	Silviculture, Forestry
X		Tom Parker	Planning Staff Officer			Eric Castro	Fisheries
		Robert Dickamore	Forester		X	Becki Reynolds	Soils, Wetlands
X		Carey Case	Team Leader			Heath Whitacre	Hydrology
X		Toby Bakos	Wildlife, Subsistence	X		Fernando Becerra Ochoa	Transportation
X		Joni Johnson	Rare, Sensitive, Invasive Plants, Climate Change, Air Quality			Gene Primaky	GIS Specialist
X		Carin Christensen	Recreation	X		Marina Whitacre	Writer-Editor
X		Carol Jensen	Scenery	X		Gina Esposito	Archeologist

Purpose

The meeting was planned so the Forest Supervisor could meet with the Mitkof IDT and share his expectations for project as the team develops the proposed action.

Discussion

Earl provided an overview of the direction the Tongass has been moving in planning, namely with POW LLA and gave support for why he believes large landscape projects are how the Tongass can meet its timber targets (we've only met our target once in the last 10 years and future timber funding is on the line if this does not change). He talked about the aspects of the POW LLA – more public participation, a collaborative group, use of the Good Neighbor Authority, the Challenge Cost Share, our MOU with AFA, the incorporation of other resource projects into the island-wide project, and more.

Earl would like the Mitkof IDT to change directions and do something similar to the POW LLA – looking at Kuiu Island, Zarembo Island, Thomas Bay young growth, Kupreanof Island, Mitkof Island, Wrangell Island and North Etolin Island – with a team made up of both districts that is led by Dave Zimmerman.

The product (an FEIS and final ROD) is to provide 10-15 years of NEPA-cleared multi-resource projects within the project area.

Timeline

- PIL – signed in the next 45 days – establish a core and extended team (look at POW LLA)
- NOI – March/April 2018
- FEIS – Spring 2020

Expectations

- Weekly briefings with the Forest regarding the project
- POW team will provide PRD/WRD guidance
- Engage the public in new ways to provide a list of desired projects within the project area to include in the proposed action

Next Meeting

Nothing scheduled at this time.

PEER

PAPER

Number Nine, $5 U.S.

STEALING THE TONGASS

Playing by Alaska Rules in the U.S. Forest Service

November 1996

About PEER

Public Employees for Environmental Responsibility (PEER) is an association of resource managers, scientists, biologists, law enforcement officials and other government professionals committed to upholding the public trust through responsible management of the nation's environment and natural resources.

PEER advocates sustainable management of public resources, promotes enforcement of environmental protection laws, and seeks to be a catalyst for supporting professional integrity and promoting environmental ethics in government agencies.

PEER provides public employees committed to ecologically responsible management with a credible voice for expressing their concerns.

PEER's objectives are to:

1. **Organize** a strong base of support among employees with local, state and federal resource management agencies;
2. **Inform** the administration, Congress, state officials, the media and the public about substantive issues of concern to PEER members;
3. **Defend** and strengthen the legal rights of public employees who speak out about issues of environmental management; and
4. **Monitor** land management and environmental protection agencies.

PEER recognizes the invaluable role that government employees play as defenders of the environment and stewards of our natural resources. PEER supports resource professionals who advocate environmental protection in a responsible, professional manner.

For more information about PEER
and other White Papers that cover a variety of issues, contact:

Public Employees for Environmental Responsibility
East Coast: 2001 S Street, N.W., Suite 570
Washington, D.C. 20009-1125
Phone: (202) 265-PEER
Fax: (202) 265-4192

West Coast: PO Box 30
Hood River, OR 97031
Phone: (541) 387-4781
Fax: (541) 387-4783

E-Mail: info@peer.org

About This Report

This PEER white paper documents the institutional complicity of the U.S. Forest Service in commercial timber theft, massive scaling fraud and illegal trafficking for export of unfinished public logs from the Tongass National Forest in Alaska. The Tongass is the largest national forest and contains the largest remaining temperate rainforest on the planet. As other timber production has fallen, the Tongass has become the new "timber basket" of the national forest system.

This white paper is drawn directly from the work of U.S. Forest Service law enforcement personnel, some of whom are special agents and investigators who served on the Timber Theft Task Force. These professionals collectively represent more than a century of Forest Service law enforcement experience.

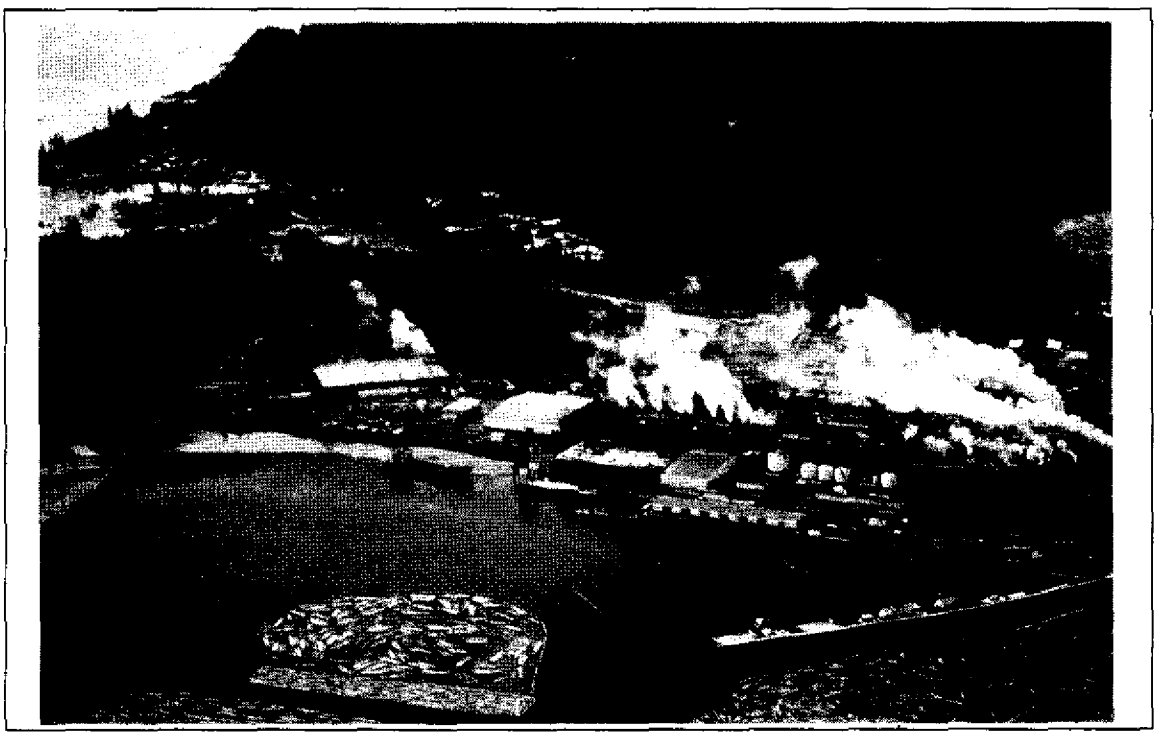
Much of this white paper reflects the fruits of a more than two-year investigation, called a case review, which the Forest Service terminated prior to its completion. The story of that investigation and how and why it prematurely ended comprise the core of this report.

This white paper follows an earlier PEER report entitled *Unindicted Co-Conspirator: Timber Theft and the U.S. Forest Service* (March 1996) that detailed how the Forest Service ceased initiating major commercial timber theft and fraud investigations and has disrupted ongoing investigations by the summary abolition of the only specialized timber theft investigative unit within the agency.

The authors of this white paper remain anonymous to avoid further retaliation by the Forest Service and to allow the documents summarized herein speak for themselves. The message should not be confused with the identity of the messenger. A number of Forest Service special agents and investigators have filed formal whistleblower complaints against the agency and the personnel aspects of their cases will be litigated this winter.

PEER is proud to serve conscientious public servants who have dedicated their careers to the faithful execution of the laws that protect our national forests for future generations to enjoy.

Jeff DeBonis
PEER Executive Director



Tongass Timber Goes to Market. Logs being transported to the Ketchikan Pulp Corporation pulp mill.

I. Executive Summary

According to its own investigating agents, the Forest Service has turned a blind eye to massive timber export violations, scaling fraud and timber theft on Alaska's Tongass National Forest. As its own agents were compiling damaging dossiers of evidence, Forest Service managers both in Alaska and in the Washington office repeatedly tried to block the burgeoning investigation, finally succeeding in 1995 through the complete abolition of the Timber Theft Investigations Branch (TTIB).

The contents of the official investigative file and the chronology of the Forest Service coverup are detailed in this white paper.

The two-year investigation was prompted by complaints from Forest Service line officers, timber planners, biologists and log scalers in Alaska. The allegations and subsequent investigation revolve around three major issues:

Log Export Violations. Export of unfinished or unmilled National Forest logs are generally prohibited as a means of protecting the jobs of domestic millworkers. The TTIB found that log rafts were regularly routed to a port under Native American jurisdiction with no functional Forest Service presence. At night logs were secretly shipped to foreign markets in Japan, Korea and Taiwan where timber commands a much higher price than in the U.S. In some cases, export violations were so open that unmilled logs were shipped out of the main export port, Thorne Bay, in broad daylight.

Scaling Fraud. Scaling is the process by which the quantity and value of timber are assessed. The TTIB file disclosed that the Tongass was the scene of unprecedented scaling fraud at a multimillion dollar cost to taxpayers. In a given month, TTIB found evidence that millions of board feet of top quality lumber were falsely graded as worthless cull; loads of high value tree species were disguised by placing lower value trees on top; dozens of log rafts, each worth a million dollars, were diverted before reaching the scaling yard; records were missing or incomplete, in some cases skipping counts for up to half the logs in a sale; and the system of "bingo cards" that are supposed to guarantee random selection of timber bundles for detailed inspection were often rigged.

Timber Theft and Environmental Violations. According to witnesses interviewed by Forest Service special agents, on some Tongass sales up to one third of the trees were harvested illegally. Investigators found an ingrained pattern where timber theft was the rule, not the exception, in an "anything goes" attitude of timber sale administration. At the same time, congressionally-mandated protections in the Tongass Timber reform Act, such as set-asides and buffer strips in riparian or steeply sloped areas, were routinely ignored.

As the TTIB investigation unfolded, Forest Service managers tried various ways to deflect or derail the inquiry. Despite evidence of complicity by high-ranking agency managers, the Forest Service repeatedly breached the security of the investigation by warning potential targets of the investigation. The agency also twice convened internal "vulnerability assessment" teams in Alaska which included some of the very Forest Service managers suspected of collusion in the cover up.

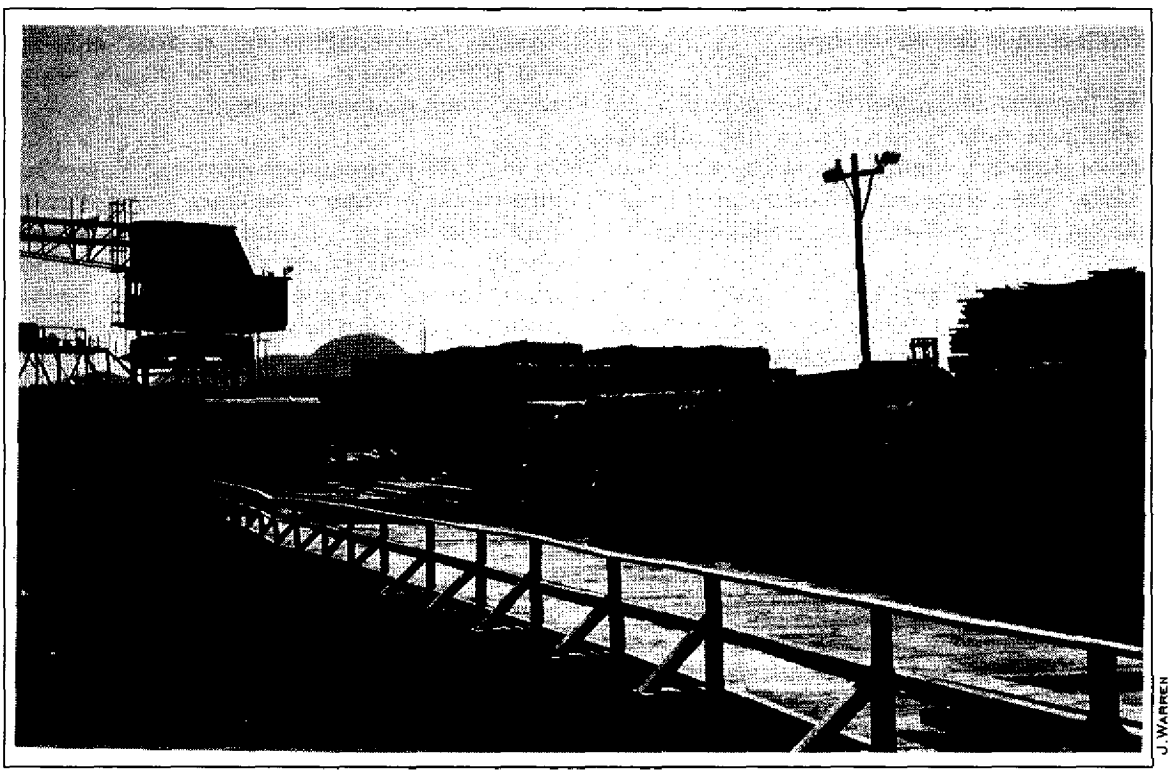
In October 1994, TTIB investigators personally briefed Forest Service Chief Jack Ward Thomas concerning the Alaska case. Thomas told the agents they could finish what they started and the Alaska investigation had a "personal interest" to him. In March of 1995 Thomas repeated his assurances that the TTIB could finish their work but less than one month later he ordered the immediate abolition of the TTIB and reassignment of all the personnel.

The case file sat in storage for more than a year. On July 12, 1996, PEER attorneys wrote to the Agriculture Secretary Dan Glickman requesting his personal review of the situation and offering to provide him with a copy of the case file. On August 2, Chief Thomas, responding for the Secretary, wrote that a new internal assessment team had been convened and that this team

would contact PEER if it needed any information. After confirming that this new assessment team did not intend to pursue any criminal prosecutions, PEER decided to place the entire matter in the public domain.

The primary motivation driving this latest internal review is the filing of a False Claims Act suit by some of the Tongass whistleblowers seeking to directly recoup funds lost through scaling fraud and timber theft. The Department of Justice (DOJ) is actively reviewing this False Claims Act suit, which is filed under a seal, secretly, to decide whether DOJ itself will take over the suit and pursue reparations. DOJ has asked both the Forest Service and the Department of Agriculture Inspector General to help it review the case.

In the meantime, the Forest Service has deliberately stripped itself of any capability to initiate new "white collar" timber theft and fraud cases, apparently hoping that if the agency decides to see no evil, the public will hear no evil.



Alaskan Logs for Export. Cants on the Ketchikan dock awaiting shipment overseas.

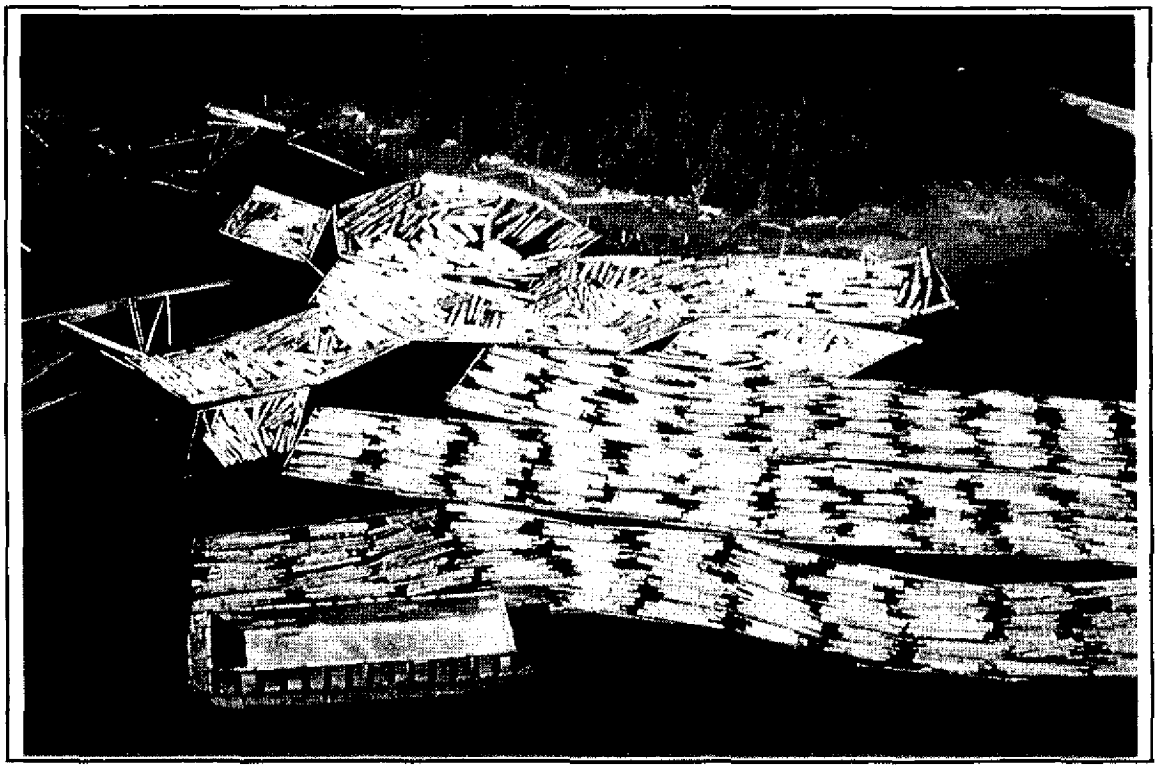
II. The Case File

In 1993, the Forest Service began an ambitious effort to learn the extent of criminal commercial timber theft and fraud vulnerability in Alaska's Tongass National Forest. This effort, after overcoming much internal agency opposition, was abruptly terminated in the Spring of 1995. The investigation, conducted by the agency's Timber Theft Investigations Branch (TTIB), was prompted by allegations from some of the Forest Service's own managers, timber scalers and technicians. Before the investigation was halted, more than 65 witnesses had been interviewed and hundreds of documents examined.

This probe was terminated well before its natural conclusion. The experienced law enforcement special agents who led this review recommended in 1995, and still recommend today, that the probe continue because it was documenting a disturbing pattern of abuse. Federal prosecutors who monitored the investigation were also encouraged that it was developing into what could be the largest criminal timber theft prosecution in history.

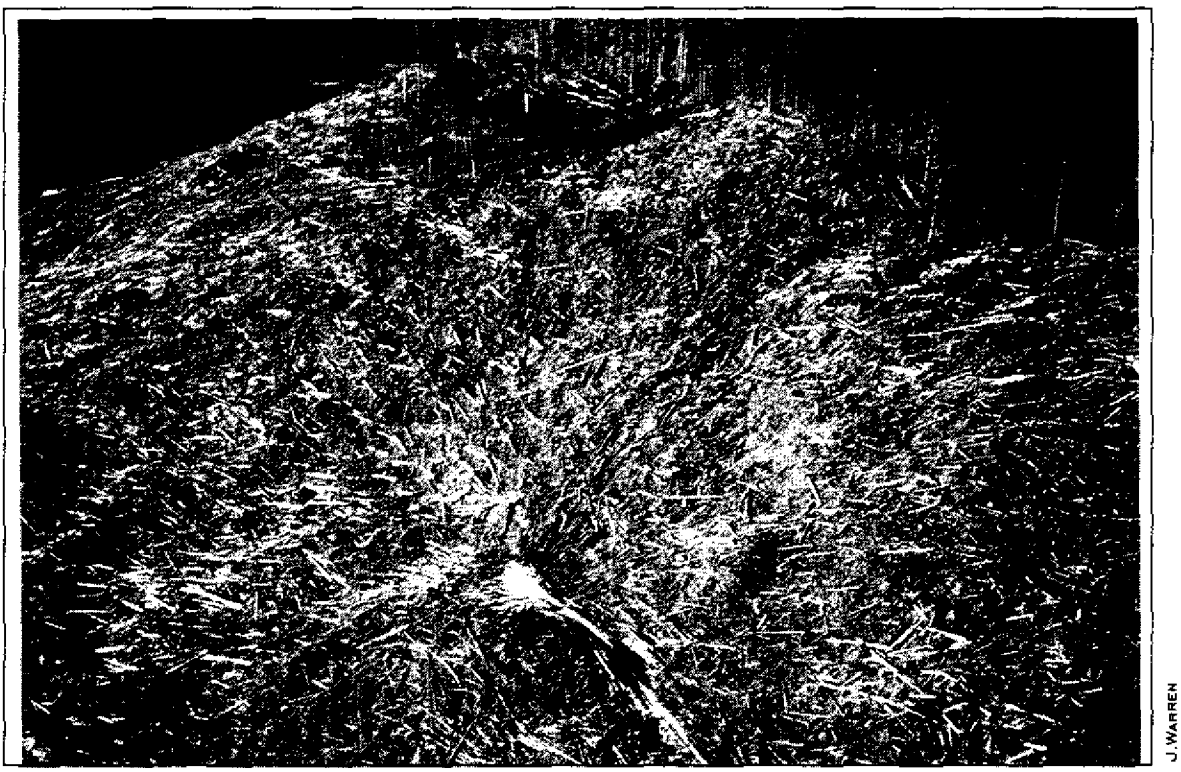
A review of the case file built by the special agents shows three major avenues of the investigation: export violations, scaling fraud and illegal harvesting practices.

Witnesses alleged that the fraud camouflaged a massive black market in illegal exports. Exports of National Forest timber are restricted to protect domestic jobs. The government compensates firms for lost income by rebates for domestically processing certain timber, such as cedar. The TTIB found evidence, however, that unmarked timber and lost rafts regularly were routed to Metlakatla, a port under Native American jurisdiction with no functional Forest Service presence. At night timber was secretly shipped to foreign markets such as Taiwan, Korea and Japan, where timber commands a higher price than in the United States. In some



J. WARREN

Log Rafts. Diversion of log rafts is a point of vulnerability to fraud on the Tongass.



J. WARREN

Clearcut in Southeast Alaska. The volume of timber being removed from the Tongass dwarfs the yield on most National Forests.

cases, export violations were so crude that smugglers shipped directly out of Thorne Bay.

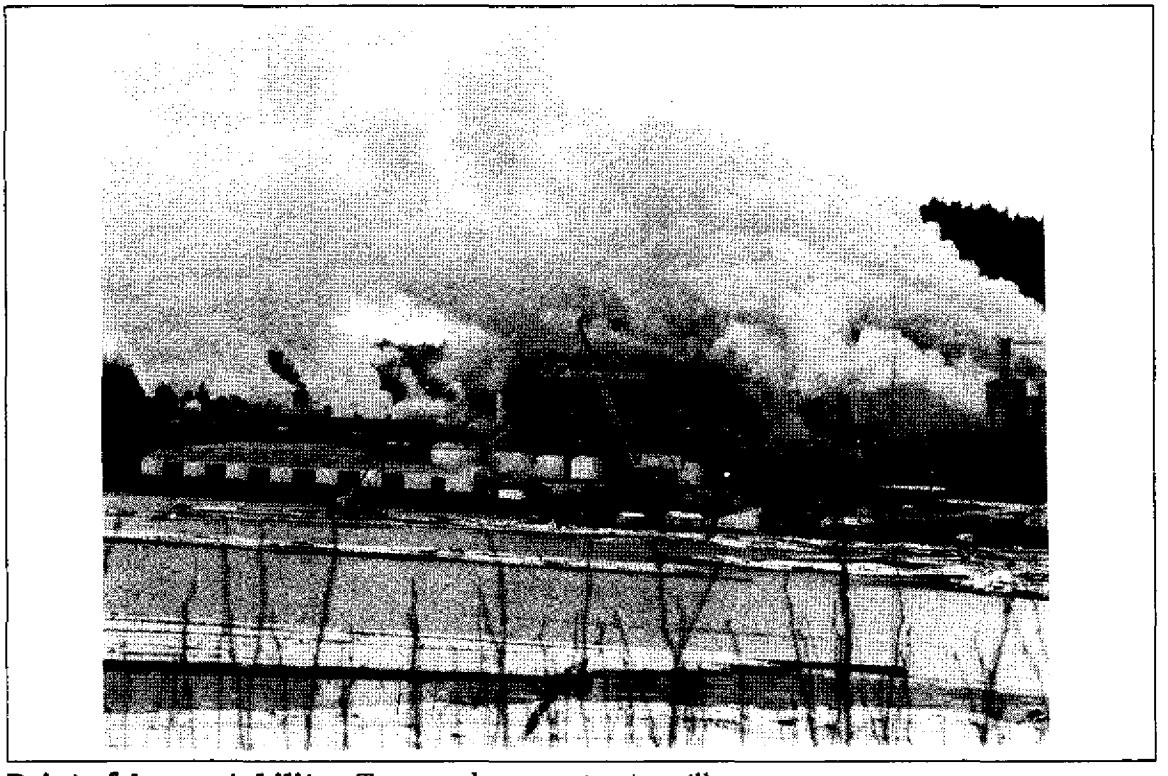
Second, witnesses disclosed, and the TTIB confirmed, that Alaska appeared to be the scene of unprecedented fraud in scaling. Scaling is the process where industry-supported bureaus assess the value of timber purchased from national forests. The timber industry pays up to $40 million per year for trees harvested from the Tongass National Forest, some 75% of whose value is measured or set by scaling. Quantities of alleged theft on the Tongass potentially were substantially higher than analogous cases of multi-million dollar scaling fraud successfully prosecuted in the Pacific Northwest.

Third, in 1990 Tongass National Forest Supervisor Michael Lunn reported to regional management evidence of illegality that had been frustrating him since 1988 when he assumed his post. Lunn later summarized what he believed to be "irrefutable evidence" of Tongass Timber Reform Act violations, including clearcutting and illegal harvest of trees in congressionally mandated set-aside areas designed to protect habitats in spectacular settings such as Salmon Bay. As an illustrative example, Mr. Lunn was concerned that the Forest Service may have interpreted the Act illegally when it measured mandatory 100 foot "buffer strips" of protected trees by slope distance, rather than the normal horizontal distance. This significantly reduced the number of trees protected through the buffer.

The TTIB subsequently obtained witness testimony that in some areas up to one third of harvested trees were cut illegally. Areas of USFS protected land resembled the "no man's land" between trenches in World War I. Witnesses stated that each clearcut covered an area so large that each one could represent the destruction of 30-40 eagle nests, a significant measure since each nesting pair of eagles requires scores of undisturbed acres. Forest Service veterans analogized the Alaska clearcutting and timber harvest practices to earlier eras in Oregon and Washington, exclaiming, "Haven't we learned anything in the last 30 years?"

The evidence consistently pointed to an ingrained pattern where timber theft and illegal exports were routine. The Alaska tradition, known as "Alaska Rules," meant little concern about timber accountability on the vast Tongass Forest. This laissez-faire attitude extended to Forest Service personnel charged with protecting the public's timber assets. TTIB investigators found evidence that contractor and scaling bureau personnel—

- undervalued millions of board feet of top price timber as worthless utility grade, or "cull," so the contractor did not have to pay for it at market value, or at all.
- used a second, government-paid scale assessment to charge the government a contractor's rebate fee for domestically-processing the same timber it had not paid for because it had been scaled as worthless.
- disguised loads of high grade species by placing lower value trees on top, reducing the price.
- avoided payment when dozens of bundles, rafts and barges, each worth up to a million dollars, vanished before reaching the scaling yard.
- failed to keep records required by contract for accountability, with gaps up to six years for activities such as truck hauls, causing multi-million dollar sales to be conducted completely "off the books."
- bypassed scaling altogether for whole trucks or shipments.
- rigged the system of "bingo cards" which randomly select representative scaling trees to set a bundle's value, so that the



Point of Accountability. Tongass logs moving to mill.

customer got to pick which trees would set the price by pulling the bingo cards in advance.

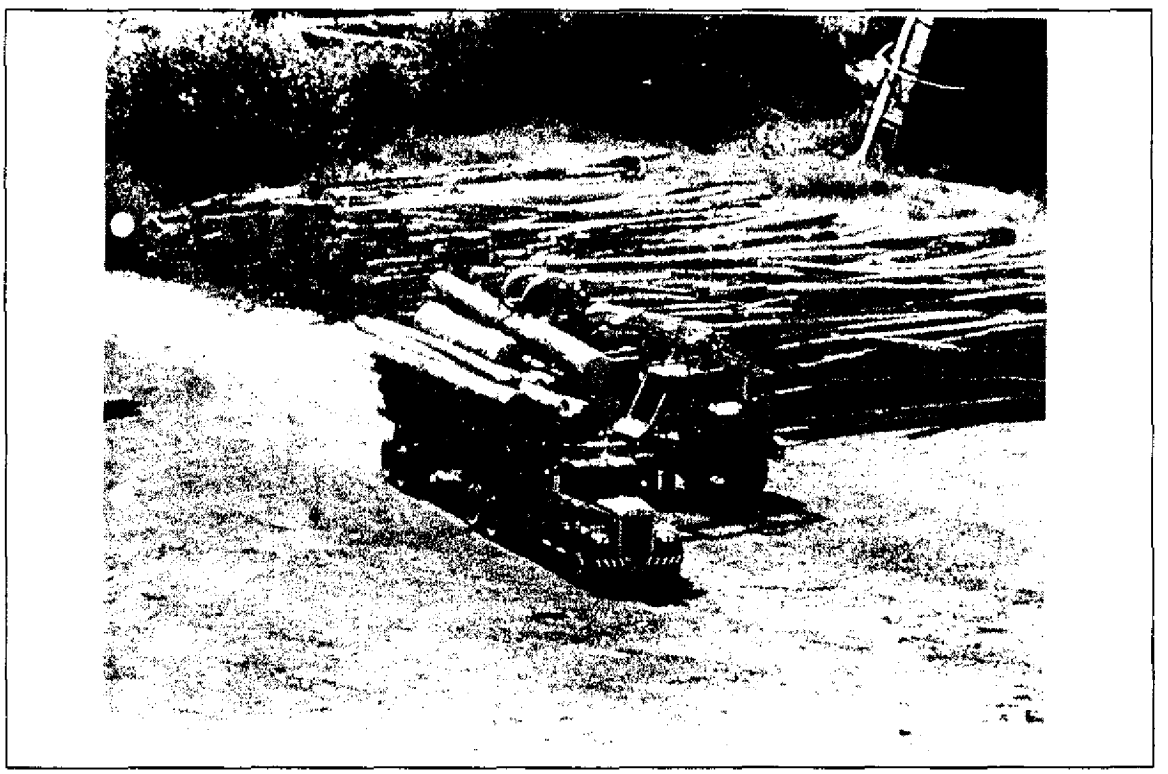
- created false records, such as registers that track timber bundles, after the fact in order to cover up theft.

- cut off brands on timber, thereby removing proof of export restrictions; and, in other cases, switched brands in order to bill the Forest Service for trees not taken from National Forests.

- commingled unscaled domestic public land (non-exportable)logs and private ready-for-export timber, within easy handling distance of the export yard.

On balance, evidence in the TTIB assessment file illustrates widespread and common practices that cause a triple cost to taxpayers: The Forest Service pays rebates to domestically process valuable trees fraudulently given away to timber companies as worthless.

The government pays again for duplicative scaling to create a paper trail supporting the conclusions that valuable timber is being sold as worthless cull. Then, the product is secretly exported to foreign markets, at the expense of American mill jobs.



Theft in Progress. Infrared photo shows logs being removed to escape payment to the government. This non-Alaskan investigation resulted in conviction.

III. Alaska Rules—Institutionalized Vulnerability to Theft

This state of affairs could not exist unless the Forest Service turned a blind eye. Whistleblowers alleged and the TTIB found further evidence that the government itself paved the way for theft. There was one set of accountability rules for Alaska, Alaska Rules, and another for the rest of the country.

Forest Service officials offer a curious defense for Tongass timber theft problems: on one hand, they pass the buck by explaining that it is the "purchaser's responsibility" to be honest, and, on the other hand, they refuse to hold industry officials accountable for lax standards on grounds that it would be unfair to penalize them for Forest Service mistakes.

The degree of official indifference discovered on the Tongass was staggering. Timber management dismissed quantities such as up to 21 million lost board feet of cedar as "incidental," although that amount is more than total cedar sales for some entire years in states like Oregon, Washington or California. To illustrate the Alaska Rules, whistleblowers alleged and the TTIB found supporting evidence that the Forest Service—

- permitted industry personnel to mark the sale boundaries in the National Forest delineating which timber could be lawfully cut under contract.
- literally ripped up and canceled dozens of law enforcement citations for "lost" rafts and similar misconduct.
- did not have a presence at the black market hub, Metlakatla, because the Forest Service check scaler assigned to

J. WARREN

Ready for Scaling. Log rafts queue up outside Ward's Cove mill.

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Boundaries Marked. A Forest Service clearcut on the slopes of Chichagof Island in the Kenakee Inlet.

that site lived elsewhere and was afraid of flying and therefore unable to reach this remote island.

- failed to bill contractors for lost loads.
- failed to conduct any check scales for over two years at Thorne Bay, the world's largest sorting yard with commerce in over 200 million board feet annually.
- made false statements to General Accounting Office personnel, misrepresenting region wide scaling frequency—witnesses testified that Forest Service management boasted about their guile after the GAO's departure.
- declined to act against scale samples rigged by the contractor pulled bingo cards in advance, while refusing to even check the scales for accuracy unless the bingo cards were pulled in advance.
- relied on uncertified personnel to conduct "cruises" (estimates of volume for a sale) and scaling.
- lacked a system of working checks and balances to verify data when contractors sought domestic cedar rebates to such an extent that failing marks had never been issued for any check scales at Thorne Bay within any witness's memory.
- did not attempt to monitor contractor, unloading, rafts, inventories, temporary storage or shipments.

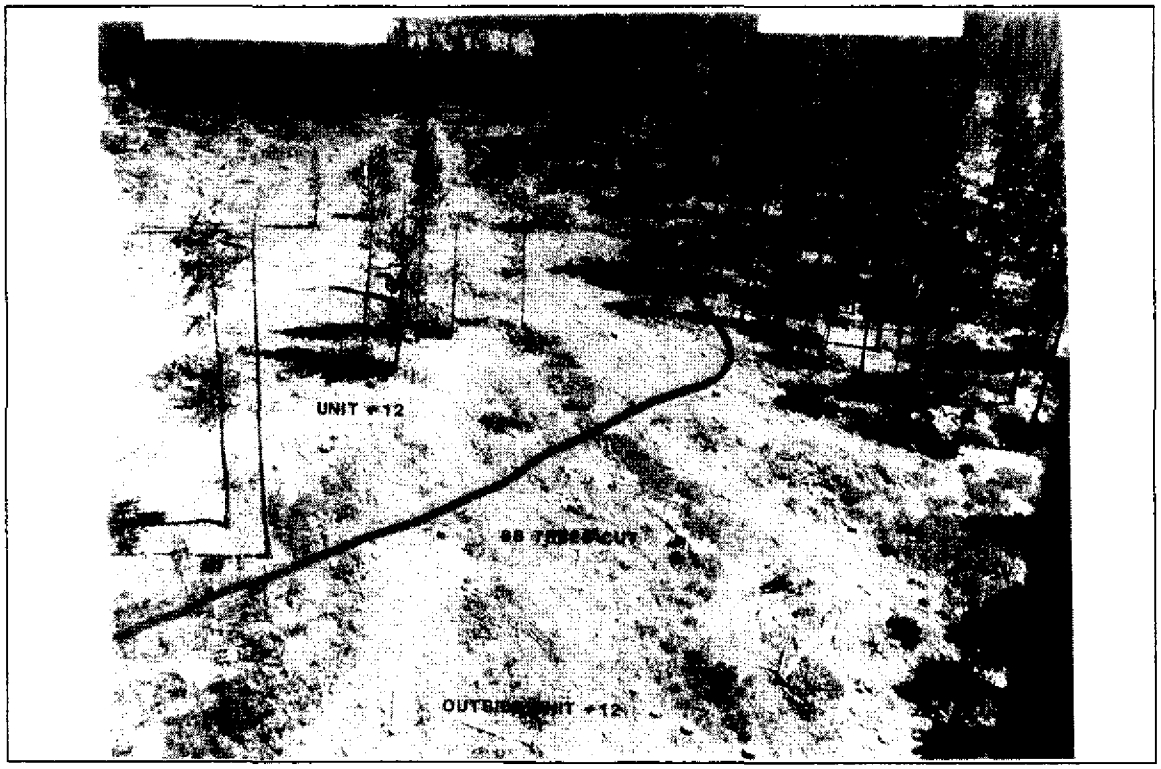
The agency's relaxed posture entailed dispensing with most rules governing prudent timber sale administration in all other Regions of the

Forest Service. In Alaska (Region 10), timber sale administrators routinely waived the normal requirements:

- for the contractor to separate timber intended for domestic commerce from exports.
- that scaling bureaus have a "lock out" control on hand-held computers, which prevents scaling results from being altered—contrary to standard practice in other regions in the nation.
- for maintenance of records on the volume of timber that was scaled.
- to check the logs reflected as entries in the bundle register.
- that companies must identify with marking paint trees that are beyond contract limits but cut down as hazardous to loggers.

It is not surprising that top agency officials in Region 10 also did not encourage enforcement against timber theft or fraud violators. The agency took a "see no evil" approach even when there was a record of prior violations. Officials turned down suggestions that they should engage in tracking and reporting violations. This meant that sales administrators were deliberately kept ignorant of even the most repetitive violations, such as shipping logs without minimally acceptable brands or towing rafts prior to Forest Service release, no matter how many times they occurred.

When systemic failures were noted in agency audits, Region 10 simply failed to honor commitments to implement audit recommendations, which is reflected by a broken record of broken promises for audit findings back to 1985, as documented in the TTIB investigative file. Region 10 refused to even consider implementing the central audit corrective action recommendations, such as tracking export logs to the shipping yard.



Overstepped Boundaries. Overview of illegal harvest. The boundary of this non-Alaskan sale is above the line but the boundaries were exceeded by the timber company.

This systematic passivity was supplemented by active attempts by top Region 10 administrators to frustrate accountability. In case after case, after informal timber industry telephone appeals, Region 10 consistently overruled enforcement actions for breach of contract, sometimes within an hour of the phone call, so that production would not be interrupted.

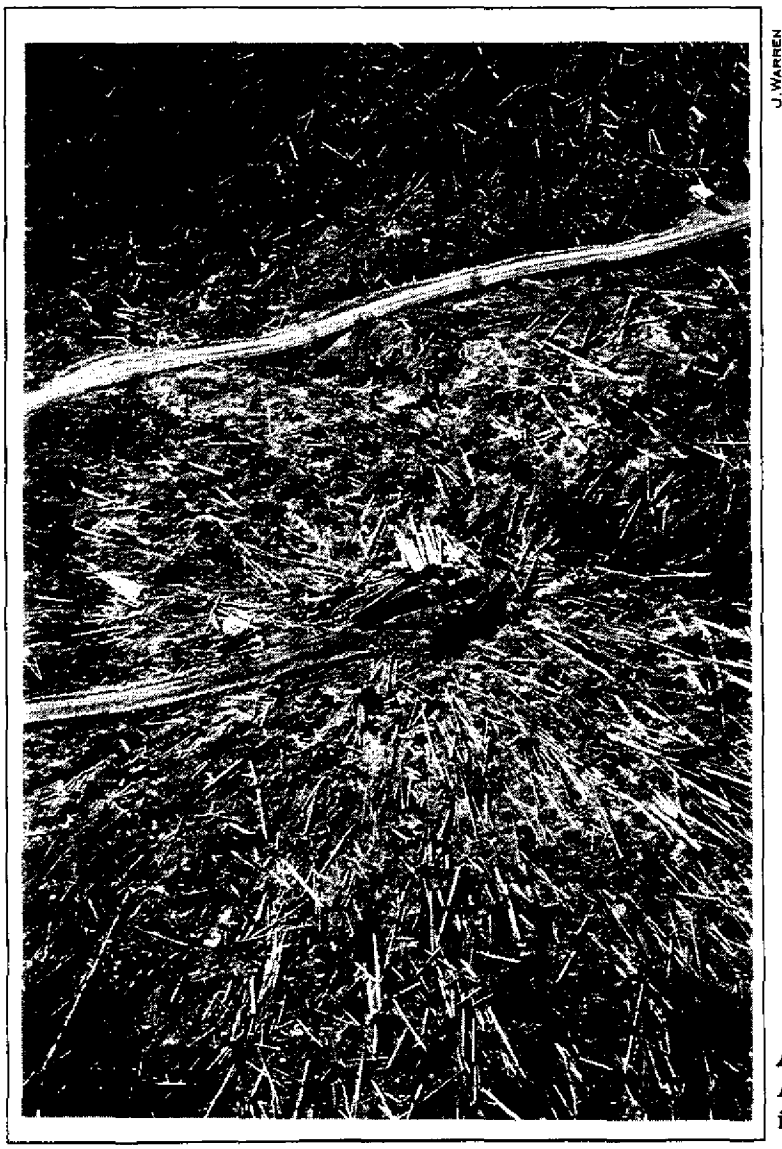
Upper regional management officials even started planning to set up their own "third party" scaling bureau while still employed at the Forest Service, in violation of federal ethics laws.

A 1990 Forest Service log and raft accountability report summarized the bottom line: "[L]og accountability under the long term contract with [the contractor] is virtually non-existent." Little has changed to alter that reality.

IV. Coverup Instead of Corrective Action: Internal Management Review

On September 17, 1990 Forest Service management responded to the disclosures from its own whistleblowers and to problems raised by the agency's own reports by convening an "independent" management review for the Tongass National Forest. If the system were working, this management review would have flushed out the facts and sparked credible corrective action for the whistleblowers' concerns. Unfortunately, it was conducted as a damage control operation that papered over the problems. The net result was to institutionalize timber theft vulnerability that has persisted throughout the decade.

The review was tainted from the start, when Regional Forester Mike Barton assigned Region 10 officials targeted by whistleblower allega-



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Aerial View. A typical SE Alaska clearcut. Roads make industrial forestry possible.

J. WARREN

J. WARREN

tions to the review team established to resolve them. In response to protests, an outside law enforcement Special Agent from Region 1, Lowell Mansfield, replaced the Alaska Regional Special Agent in Charge (RSAC) on the review team. That was a disingenuous move, because Mr. Mansfield was a close associate of the RSAC. Further, his experience was largely in arson investigation, rather than in white collar timber theft.

The review was a sham. Most basically, the review team did not interview the allegers to go over their evidence. The team restricted itself to an introductory courtesy briefing of Mr. Lunn, and skipped other key witnesses entirely. For example, the review team did not talk with the law enforcement agent frustrated at having his citations ripped up or dismissed without follow through.

According to witnesses whom Mr. Mansfield interviewed, he restricted the scope of his questions to direct evidence of criminal activity such as bribery, despite numerous requests by witnesses with relevant evidence of additional alleged crimes. He refused to take evidence or discuss fundamental issues such as the patterns of repetitive violations.

The ensuing report entirely skipped alleged:

- violations of the Tongass Timber Reform Act;
- black market operations for smuggling illegal exports;
- third party scaling that essentially gave timber to industry for free by undervaluing it as worthless utility grade;
- rebates for domestically processing the same timber that was secretly exported;
- multi-year absence of checkscaling at Thorne Bay and absence of Forest Service presence at Metlakatla;
- failure for even longer periods to flunk any checkscales at Thorne Bay, despite the questionable record of the third party scaling bureau; and
- the Forest Service's repeated failure to implement its own audit recommendations as the reason for the pattern of repetitive timber industry breaches of contract.

In short, the review skipped all the core issues that inspired its creation. Whistleblowers whose disclosures sparked the review team dismissed it as a disillusioning waste of time. Consistent with audits since the 1980's, all corrective action recommendations were superficial, dealing with effects such as the lack of records. As before, even the superficial reforms were not implemented.

The team reported it could not find evidence to support allegations that management failed to support enforcement actions against contract violations, or engaged in retaliation against agency employees for attempting enforcement efforts. Mr. Mansfield had declined to accept evidence and witnesses for either charge.

In fact, the review was a springboard for retaliation. The team breached its pledges of confidentiality for witnesses who testified. In the review team's aftermath, the whistleblowers were harassed and systematically purged from Alaska or the Forest Service. The net result was to reinforce the status quo and punish those who attempted to challenge abuses by working within the agency.

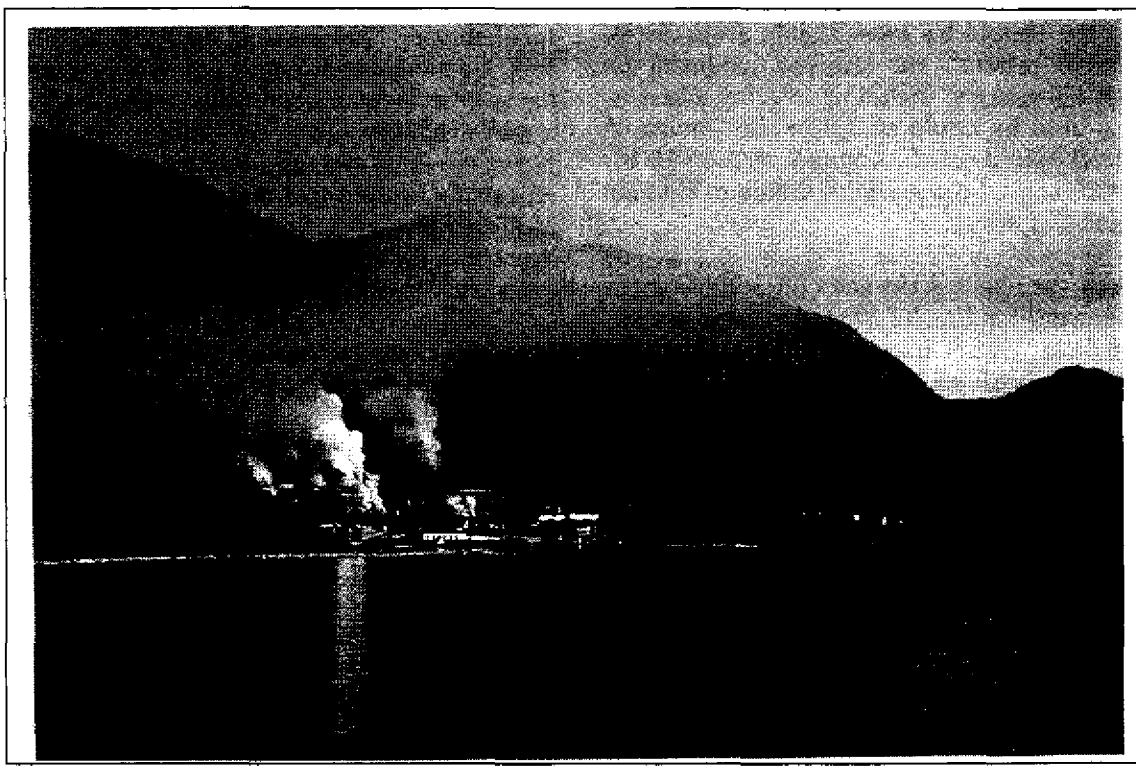
V. 1994-95 Coverup: Obstructing the TTIB Assessment

In 1991, Alaska's Region 10 was one of three regions responsible for administering and overseeing the newly-created Timber Theft Task Force. The Task Force proposed an in-depth assessment of Alaska but had to scale back its plans when Region 6 (Washington and Oregon) fiscal and budget officer Jim Turner, now the Forest Service's Director of Administration, refused to authorize vacancy announcements to staff the new unit.

In early 1993 the Task Force assigned a single special agent to— 1) assess whether there were viable major fraud cases to investigate for prosecution among the approximately 90 whistleblower charges that had surfaced in Region 10; 2) identify traditional Alaska practices leaving the Forest Service vulnerable to timber theft; and 3) make recommendations for internal reform. Because of concerns about regional collusion with theft, the agent's instructions were to operate covertly and stay independent of regional law enforcement staff except for a confidential liaison.

Unfortunately, soon after the agent started the assessment, Region 6 breached security by warning Alaska officials of his activities. The Forest Service Law Enforcement Officer (LEO) from Ketchikan tailed the agent, his confidential liaison was forced to turn over the TTIB investigative plan or face disciplinary action for insubordination, and the Alaska RSAC leaked information about internal affairs issues the agent was investigating. Harassment of witnesses intensified, forcing more out of Alaska or the agency.

Despite the interference, the agent initially identified two strong cases, which he recom-



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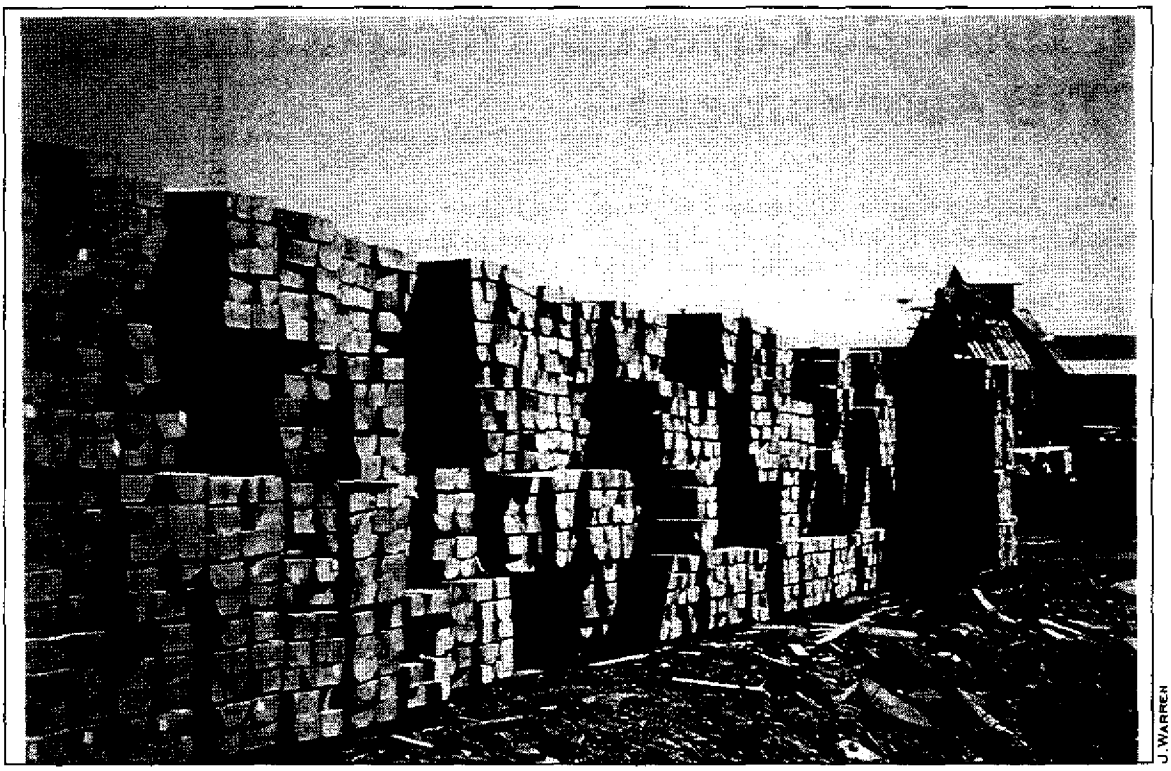
Approaching Pulp Mill. Status of the long-term contract for Tongass timber is now uncertain.



Stacked Like Cordwood. Milled wood awaiting shipment from Ketchikan.

mended should be immediately prepared for criminal referral. He reserved judgment on other allegations, including internal affairs issues, until he could complete fact finding. A Special Assistant U.S. Attorney agreed with his assessment, as did a USDA Office of General Counsel attorney.

Before the agent drew any conclusions about agency misconduct he wanted to interview Mr. Mansfield, whom frustrated witnesses repeatedly had identified. Before he could do this, Mr. Mansfield called first. He said that he would be the boss for the newly-created TTIB, successor to the temporary Task Force. When the agent noted that they needed to talk about the Alaska management review, Mansfield said he was familiar with it but became cold and changed the subject. Despite repeated attempts, the agent never was able to conduct the interview even though Mansfield was now the agent's second level supervisor.

Mansfield began a campaign of personal harassment against the agent, starting at an introductory February 1994 meeting for Portland TTIB staff. He immediately began publicly branding the agent as inept, ridiculing his Alaska work as a model of how not to investigate. He denigrated the agent as a "ground pounding grunt," repeatedly insisted that there were no serious problems in Alaska, yelled and cursed at the agent in a hysterical tone in front of subordinates and his first level supervisor.

Under the circumstances, Mr. Mansfield should have recused himself from participation in the case. Instead, he took complete control. Mansfield and his Portland branch chief Richard Grandalski succeeded in paralyzing further progress through the following tactics:

- ordering the agent to drop all internal affairs investigations involving the Alaska Regional Special Agent in Charge and upper management.

- giving the RSAC (a target from whom the probe previously was shielded) complete veto power over all aspects

of the investigation, specifically including any travel, meetings and witness interviews.

- replacing the agent with two other TTIB members with the admonition that the agent's work was incompetent and they should assess his assessment.

- drastically fluctuating the schedule and imposing bizarre conditions for this reassessment, varying the time frame from months to weeks and, at one point, ordering the two separately-married employees to share an apartment supposedly as a cost-saving effort, and "hang a sheet between" them.

- reassigning the two new investigators to another case, without giving them time to finish gathering evidence and prepare a written Report of Investigation, after they reported that the agent's earlier work was in fact very well done, his original findings held significant merit, the violations were probably ongoing and the TTIB should begin the hard work of opening investigations for at least one, and possibly two major prosecutions. They agreed with an Assistant U.S. Attorney that the cases would be complicated, but were significant and genuine. The scope of the prosecution had the potential to dwarf any timber fraud case the federal government ever had ever conducted.

VI. Here Comes the Chief

Despite the unprecedented scope of the findings and evidence, the Alaska cases as well as the entire TTIB docket was now at an impasse. Members of the TTIB wrote to the Chief of the Forest Service as well as the Secretary of Agriculture asking for their intervention into the paralysis of this investigative unit.

In October 1994 TTIB whistleblowers met with Forest Service Chief Jack Ward Thomas to brief him on reprisals and obstruction of major timber theft fraud investigations. They told him about the Alaska impasse. He offered support and reassurance that they could finish what they had started, and said that Alaska had a personal interest for him.

In late 1994, the Chief commissioned a review of the TTIB allegations by the USDA Office of Inspector General (OIG). TTIB staff met with OIG agents and submitted sworn statements detailing the roadblocks they faced in completing the Alaska investigation. The TTIB also summarized for the OIG other cases which they felt were being obstructed. In the resultant OIG investigation, the Alaska timber theft allegations by TTIB personnel were not separately investigated and OIG considered the Alaska case only as background for its report which, curiously, contained no findings of fact or written recommendations.

In February 1995 the OIG Deputy Director Craig Beauchamp, in a meeting with the Chief, recommended that the TTIB be replaced by a streamlined national timber theft cadre after the unit completed its pending investigations. The national cadre was supposed to serve as the hub for training, technical assistance and trend analysis for a national anti-timber theft effort. In March 1995 Chief Thomas met with TTIB supervisor Al Marion, pledging that the unit would have another 18 months to complete ongoing major investigations.

On April 6, without warning, new LE&I Director Manuel Martinez delivered a memorandum from the Chief abolishing the TTIB, effective immediately. The termination of the TTIB contained no arrangement for the disposition of the Alaska case files, nor was any personnel assigned to resolve the pending allegations.

On July 12, 1996 PEER communicated the substance of this white paper to Agriculture Secretary Dan Glickman and pointed out that the case file had sat untouched for one year. On August 2, Chief Thomas responded to the PEER letter by writing:

"We ... assure you that we have and will continue to thoroughly review the allegations in your letter. On May 21, 1996, we received a letter from the Region 10 Regional Forester requesting an internal investigative review of scaling practices in the Alaska Region. On June 6, 1996, we wrote to the Region 10 Regional Forester agreeing to his request and scheduling a vulnerability review of Region 10 Scaling Practices during the month of July 1996."

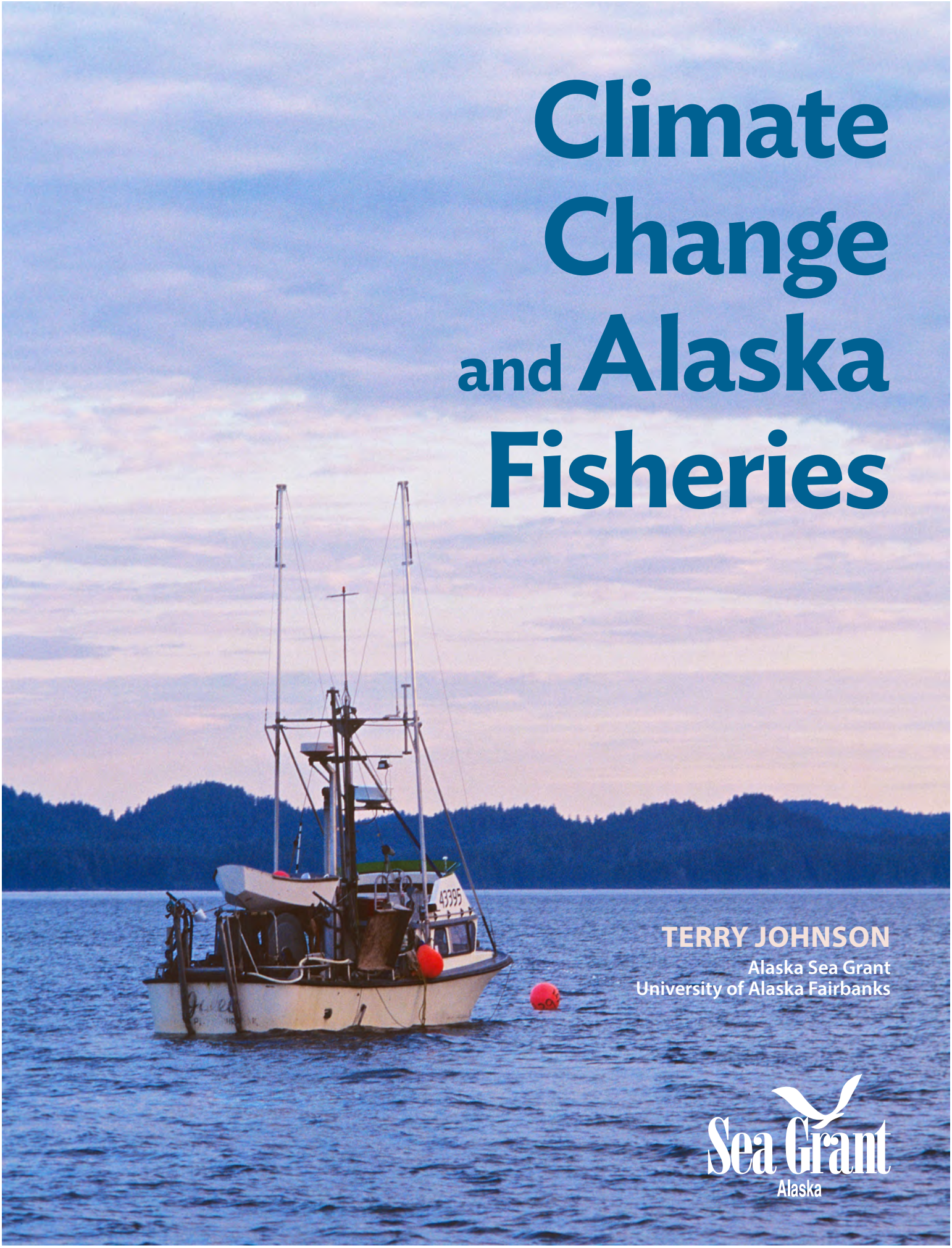
This new, third review of Alaska timber management has yet to bear fruit. Many observers contend that, historically, purely internal reform efforts within the Forest Service have been successful only when the problem as well as the proposed solution are exposed to public view. The Forest Service has still not asked for the case file or any of the evidence within it and has yet to even interview most of the TTIB members who worked actively on the Alaska review.

In late October, Chief Thomas announced his retirement effective November 15, 1996. On November 5, in a deposition with PEER attorneys held in the Chief's office, Jack Ward Thomas stated that while he was aware of the TTIB investigation into Alaska he did not know what had become of the case and, to his knowledge, he never asked about it.

Neither the Forest Service law enforcement personnel who developed this case nor PEER contend that any of the information summarized herein reflects firm conclusions of fact. They and we believe that the evidence represents serious allegations meriting a serious investigative response. To date that has not occurred.

"Alaska Rules" are still in effect.

Climate Change and Alaska Fisheries



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ABSTRACT

This report summarizes the current state of knowledge on North Pacific Ocean climate change and its anticipated effects on Alaska's fisheries through the middle of this century. It is based on results of scientific research, and observations recorded by the public and industry. The publication focuses on fisheries effects attributable to progressive long-term warming and also looks at effects of transitory climate variability phenomena like El Niño and Pacific Decadal Oscillation, as experienced in Alaska waters and in waters of US West Coast states and British Columbia. It also considers effects of changes in ocean chemistry, commonly referred to as ocean acidification.

The first sections describe categories of climate-related change and the final two sections address human adaptation responses in the public sector and by private industry and individuals.

Take-home messages

- The sea is changing—it's getting warmer (overriding decadal scale variations), sea level is rising, sea ice is decreasing, and water chemistry is changing.
- Invasive species, harmful algal blooms, and disease-causing pathogens already are becoming more common and are harming indigenous fish and shellfish and threatening human health.
- Commercially valuable fish stocks are undergoing changes in distribution, abundance, and behaviors. Any projections for stock abundances in the future are very tentative, and observed trends may be specific to regions or locations. Major abundance shifts, if they do occur, will develop over a period of decades.
- Hard times may be coming for Bering Sea pollock and some crab stocks and the fisheries that depend on them.
- Most Alaska salmon stocks probably will continue to prosper and some may increase or expand their range.
- Exploitable halibut biomass may increase from current levels.
- Other species, including Pacific cod and some flatfish, may experience range extension or stock level increases but changes will be highly variable from one stock to another.
- Research and regulatory agencies are preparing for "climate ready" fisheries management, though regulatory options for climate change adaptation are limited. Some fishermen and fishing communities have begun to apply adaptive measures but in the future they may have to make bigger changes in the way they do business.

Note: This report focuses on progressive long-term climate change, not anomalous weather, nor inter-annual or multi-decadal climate variability. For example, the 60-year gradual upward trend in air temperatures can be viewed as climate change, while El Niños raise temperatures dramatically but temporarily, and occur sporadically. Likewise, ocean climate regime shifts, which are characterized by warmer or cooler (plus or minus 2 degrees C) seawater temperatures, persist over periods of 7–10 months to as much as 30–40 years and may reflect warm ("positive") and cool ("negative") phases of the Pacific Decadal Oscillation. While there are indications that the frequency and intensity of these events are driven by long-term climate change, they are not manifestations of long-term climate change per se.

Scientists create statistical models intended to predict future effects of long-term change based on data derived from these more transitory climate phenomena. Similarly, observing biological effects of climate on the US West Coast states and British Columbia, which also are experiencing higher temperatures, may provide clues about what to expect in Alaska when long-term temperatures here reach levels now extant in the Northwest.

INTRODUCTION

"It is very difficult to judge at a global level who the main losers and winners will be from changes in fisheries as a result of climate change, aside from the obvious advantages of being well-informed, well-capitalized and able to shift to alternative areas or kinds of fishing activity (or other non-fishery activities) as circumstances change."

—Keith Brander, Technical University of Denmark (2010)

Alaska is home to the nation's largest commercial fisheries, with an average of $1.5 billion annually in ex-vessel value and $3.6 billion in processed value, and drives an estimated $5.8 billion in economic activity. A small but growing shellfish mariculture industry adds up to a million dollars annually. Alaska's oceans support vital subsistence and personal-use fisheries, and through sport fishing they contribute substantially to a more than $1 billion recreation and tourism industry.

At the same time Alaska is on the front line of climate change. Over the last 60 years Alaska has warmed more than twice as rapidly as most of the United States. The US Environmental Protection Agency reports that average annual temperatures in Alaska have risen 3.4 degrees F (winter temperatures have risen 6.2 degrees F) during that period and some projections call for another 2–4 degree increase by the middle of this century (Chapin et al. 2014, ch. 22). Most of that warming occurred around the 1976 "regime shift" when the North Pacific Ocean climate transitioned from a cool to a warm phase. The more recent return to a cool phase during the period 2006-2013 moderated the trend somewhat in the North Pacific but the warming resumed in 2014. The Arctic is warming more rapidly than the middle latitudes, and this warming manifests itself dramatically in a decrease in Bering Sea and arctic sea ice coverage and in the timing of sea ice advance and retreat.

Scientists say 90–95% of the accumulated increase in heat on this warming planet is contained in the oceans, most of it so far in the upper 2,300 feet of the water column, although scientists recently have documented heat penetration to lower layers. Because of the immense capacity of the ocean to absorb heat, the seas are not warming as quickly as the atmosphere but the heat is in the water and is being distributed around the globe, with unknown future consequences.

Ocean acidification—a phenomenon related to atmospheric carbon dioxide (CO_2)—is showing up in Alaska's coastal waters. Consequences for the fisheries could be severe if worst-case scenarios are realized.

Despite the increasing volume of climate- and CO_2-related data, however, **observable impacts of long-term climate change on Alaska's fisheries so far have been few and for the most part relatively mild.** In a few cases there have been more dramatic responses to short-term climate variation and those events indicate a capacity for resilience to short-term perturbation. Most commercially important stocks continue to prosper and most sport and subsistence resources remain within the normal range of variation. There are some notable exceptions, such as the widespread decline of Chinook salmon and the dramatic decrease in halibut recruitment and size-at-age, but so far neither has been attributed directly to climate change or ocean acidification.

However, stakeholders in fisheries-related industries and fisheries-dependent communities are looking for ways to understand, prepare for, and adapt to changes that they know are certain to come.

Conclusions in this report are preliminary since the science is constantly advancing. At the same time human ingenuity is rapidly developing technologies and behavioral responses to new challenges.

1 OCEAN TEMPERATURE AND CIRCULATION

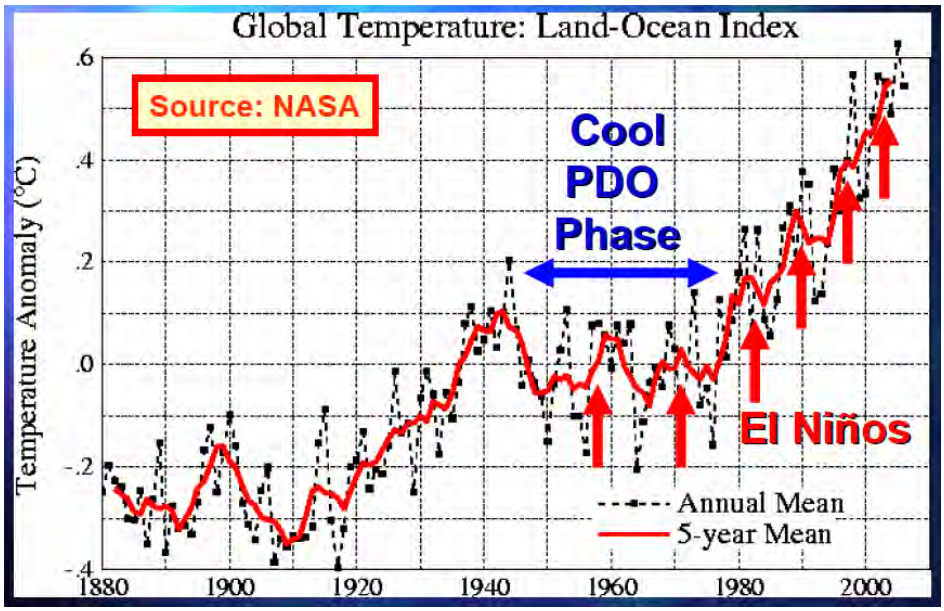
"There are three basic ways that a species can survive climate change. It can move, it can adapt, or it can hunker down—that is, hang out in whatever remnants of its former range are still suitable."

—Michelle McClure, NOAA fisheries biologist

The changing climate affects the ocean environment physically, chemically, and biologically. The **ocean is warming.** The global sea surface temperature (SST) has increased about 1.1 degree F since 1950 and the North Pacific winter temperature is on track to increase another 1.8–2.9 degrees F by 2050 (National Wildlife Federation 2011). Researchers studying the Gulf of Alaska in 2014 recorded surface temperatures 1–5 degrees F warmer than the long-term average (Card 2014). Most of the ocean warming since the dawn of the Industrial Revolution has occurred in the last 20 years. If atmospheric scenarios from the Intergovernmental Panel on Climate Change (IPCC) prove accurate, the long-term rate of ocean warming will continue to accelerate. (See the section below on effects of transitory temperature variations.)

Atmospheric warming at higher latitudes increases freshwater inputs and the potential for temperature and salinity stratification in the water column, which can disrupt primary productivity of the system, particularly phytoplankton (microscopic plants that are the base of the marine food web) production due to lack of nutrient replenishment. The number of oxygen-depleted "dead zones" worldwide is increasing (Holmyard 2014, p. 7). Since the warmer the water the lower its capacity for holding oxygen, **hypoxia** or oxygen starvation has depressed some fish stocks on the US Pacific Coast, and dead zones have rendered expanses of the ocean off the three Pacific coast US states devoid of commercially valuable fish resources.

Increased energy in the atmosphere from warmer temperatures causes changes in pressure cells and the accompanying wind currents that can increase the **frequency and intensity of storms** (Haufler et al. 2010, p. 12). Satellite altimeter radar data indicate that mean significant wave height in the Pacific-arctic region is increasing by about 1 inch per year (NOAA National Climate Assessment). On the Pacific Northwest coast storm wave heights have increased by as much as eight feet and deliver 65% more force when they batter the shore (Tillman and Siemann 2013). Coastal battering accompanies erosion, storm surges, and



Despite periodic cooling phases, long-term average temperatures over the last century have increased. Source: NASA.

flooding/inundation. Storms also bring extreme precipitation events and can drive surface ocean currents in atypical patterns, affecting migration routes and primary productivity, both of which influence the abundance of fisheries resources.

While precipitation is increasing, more of it comes in brief and intense episodes that cause **flooding and streambed scouring**. At the same time the soil is becoming drier, **stream flows are diminishing, and stream temperatures are rising.** In some regions lakes are drying up.

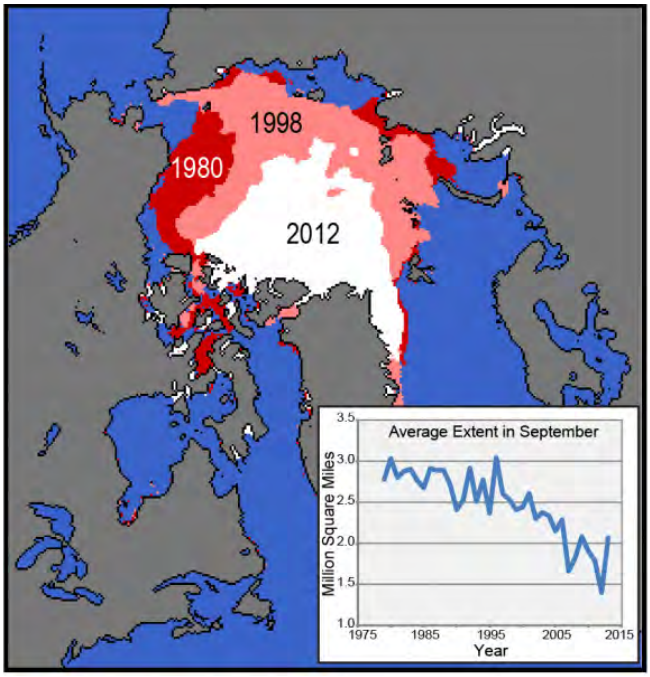
(Drier landscapes and increased precipitation are not mutually exclusive. In a drier world more precipitation falls as rain rather than snow, and more often in episodic severe storm events. Most of the water flushes rapidly out of streams and rivers; at the same time higher temperatures increase evapotranspiration and evaporation during a longer frost-free season, leaving soils drier most of the year. Severe storms and flooding are harmful to salmon spawning and rearing success and damage stream habitat.)

The warming climate also means shorter winters (or the number of days in which air temperatures are below 32 degrees F). This may cause winter precipitation to shift from being mainly snow to rain, particularly on the Gulf of Alaska coast. Most snow is stored in the mountains until spring and summer melt, when it can reach the ocean. If temperatures are above freezing for much of the winter the rain drains rapidly into the ocean because of the steep, short watersheds. This changes the timing of the river discharge cycle, which may have huge implications for the Gulf of Alaska shelf. Freshwater runoff is much lighter than saltwater so this runoff stratifies the coastal ocean. The spring phytoplankton bloom requires stratification, but this bloom may occur earlier if the ocean stratifies earlier, and it may not be available to the zooplankton that migrate onto the shelf in the spring. Thus the zooplankton may show up "anticipating" the spring bloom and find that it has already occurred. This would make the zooplankton population less productive and this decrease in production would be reflected in the fisheries that depend on zooplankton (Tom Weingartner, University of Alaska Fairbanks, personal communication).

Sea level is rising globally by about one-eighth inch per year, and the rate is increasing. For now, this rise is imperceptible in most of Alaska because most of the coastal land is still rebounding after the retreat of the glaciers. But some low-lying areas in western and northwestern Alaska are experiencing increased flooding during storm events. Sea level rise is caused both by thermal expansion of ocean water and by melting of glaciers and ice sheets over land. Scientists predict world sea levels eventually will be higher than they are now by three feet or more. Little is known about the net effect of sea level rise on fisheries resources; it can affect either negatively or positively the productivity of estuaries, which are important fish and shellfish rearing areas.

In the Arctic and Bering Sea the extent and thickness **of sea ice is diminishing,** with formation coming later and ice pack retreat coming earlier than only a few decades ago. The rate of decrease is expected to accelerate. Seasonal ice coverage has diminished by nearly 12% per decade since the 1970s (US EPA undated) and by 2050 seasonal ice coverage is expected to have diminished by 40% from current values. Floating ice reflects solar radiation back into space (the albedo effect) so decreased ice coverage means more solar energy is absorbed by the sea, increasing the rate of ice coverage loss and ocean temperatures.

Sea ice suppresses storm waves and when land-fast ice forms late in the fall storm season



Minimum annual sea ice extent has been decreasing. Source: NSIDC 2012.

the result can be increased beach erosion and flooding of low-lying coastal villages. Free-floating sea ice serves as a resting and foraging platform for various important marine mammal (e.g., walrus and polar bears) and seabird species. On the other hand, decreased sea ice allows more sunlight penetration and increases production of some kinds of plankton, and affords fishing vessels increased access to potentially productive waters.

Storms also can have the **beneficial effect of improving water column mixing,** which brings nutrient-rich water to the photic zone where sunlight penetrates, stimulating plankton growth.

How winds and temperature influence currents and biological productivity

Most species of fish and shellfish cannot tolerate significantly elevated temperatures. Sensitivity may relate to dissolved oxygen levels in the water, to diseases, or simply to temperature-related physiological stress. Temperature effects can begin at the base and work up the food chain.

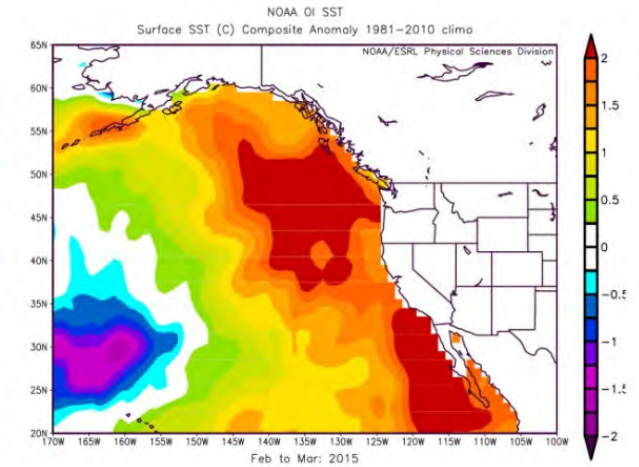
Phytoplankton—the microscopic "plants" that form the basis of the oceanic food web—need nutrients and light energy from the sun. Strong winds, which are most frequent in fall and winter, bring nutrients into the photic zone—the surface layer where solar energy is intense enough to support a phytoplankton bloom. This nutrient mixing fosters high primary productivity if matched with adequate spring and summer solar energy input. However, if summer temperatures are too warm thermal stratification occurs, which blocks nutrients from the ocean depth from reaching phytoplankton near the surface. Timing and intensity of mixing and subsequent phytoplankton blooms must match the abundance of zooplankton, and the eggs and larvae of fish and crustaceans, for optimal transfer of energy to higher levels of the food web and maximum fisheries productivity. Phytoplankton production in the Chukchi Sea has increased significantly in recent decades, apparently due in large part to the decline in seasonal ice coverage that allows more sunlight to get into the water (Pickart 2016).

Two recurrent climate patterns influence this timing and abundance. El Niño/La Niña, otherwise known as the El Niño/Southern Oscillation (ENSO), is a pattern of opposing climate variability that occurs on two- to seven-year cycles, driven by atmospheric forces in the central Pacific. El Niños tend to bring anomalously warm temperatures, above average precipitation on the Gulf of Alaska coast (lower precipitation on the Bering Sea), and temperature stratification that can be detrimental to fisheries productivity. An extreme El Niño can cause shifts in plankton production that causes, for example, massive seabird die-offs for a year or two. La Niñas bring cooler temperatures and more normal ocean climates. Effects of ENSO are more pronounced on the Gulf of Alaska coast than elsewhere in the state.

The other pattern, known as Pacific Decadal Oscillation (PDO), is characterized by longer term periods of cooler or warmer water along the Gulf of Alaska coast, each of which ends with a "regime shift." (A warm phase is warmer along the coast but cooler in the central Gulf.) These regimes, though separated by only a couple of degrees in water temperature, can have profound long-term effects on productivity and favor some species and disfavor others. The 1977 shift to a warmer climate regime in the North Pacific was well studied. It was accompanied by an increase in zooplankton and ushered in a new era of high salmon, cod, and pollock production, but also brought steep declines in forage fish, crab, and shrimp. Less pronounced regime shifts occurred in the late 1990s, 2007, and apparently a return to another warm regime in 2014.

While it is not proven that long-term climate change is causing El Niños or warm PDO phases, there is concern that eventually the long-term prevailing conditions will come to approximate those effects on fisheries productivity.

The **Blob** is an ocean water temperature anomaly. The term was coined by Nicholas Bond, of the NOAA Pacific Marine Environmental Laboratory, to describe an expanse of the North Pacific where upper layer sea temperatures are unusually high. The Blob developed in the summer of 2013, persisted through that winter, expanded and intensified during 2014, and expanded again in 2015 to reach parts of the Gulf of Alaska coast. It consisted of three separate but related areas of warm water spread over more than 2,000 miles between Baja California and Alaska. Along the central Gulf of Alaska coast water temperatures in 2015 were reported to be as much as 4.5 degrees F higher



The Blob, a sea surface anomaly in the northeastern Pacific Ocean, appears in red. In recent years it comprised several distinct areas of anomalous temperature zones. Source: NOAA 2016a.

than normal. By late fall 2015 the Blob was reported to be breaking up but had not yet vanished.

Scientists believe the Blob was caused by a static high pressure cell over the North Pacific that prevented cloud formation and rain, resulting in greater heat absorption and diminished loss of heat into the atmosphere. This blocked winter storms and diminished water circulation, forming a static surface layer of water down to 300 feet. This combination forces more warm water from southern latitudes into the North Pacific (Bond et al. 2015). Scientists are not yet certain whether the emergence of the Blob and other forms of climate variability such as El Niño and Pacific Decadal Oscillation are being driven by climate change in the Pacific Ocean.

The Blob is associated with the appearance of tropical fish and with seabird die-offs in British Columbia and Alaska waters, including a dramatic murre mortality event on the Gulf of Alaska coast and sea lion deaths in California (see harmful algal blooms below). A major concern is the effect the warm water was having on **development and availability of phytoplankton and zooplankton,** which form the foundation of the food chain supporting commercially important fisheries. The warm surface waters form a thermal barrier that inhibits nutrients from being mixed into the surface layer to fuel production of phytoplankton. Furthermore, warm-water currents off the Pacific Coast bring southern varieties of zooplankton, particularly copepods, which have low lipid (fat) content and are less nutritious to fish and birds than the normally available northern varieties of copepods and krill. So far, northern copepods and krill have not disappeared from Alaska waters but if they did it could be devastating for some Alaska fisheries because they provide high-energy nutrition to important commercial species like pollock and some salmon. University of Alaska professor Russ Hopcroft found a marked absence of pollock larvae surviving into late summer in the Gulf of Alaska, associated with the Blob.

The ice algae/plankton connection

A complex relationship exists between sea ice and the fortunes of many stocks of commercially important fish and shellfish in the Bering Sea. **Ice-associated algae growing on the underside of sea ice,** and phytoplankton (such as diatoms) growing in the water column under the ice, bloom in the spring as the ice melts. The blooms support communities of microzooplankton and zooplankton, such as dinoflagellates, ciliates, copepods, and euphausiids (krill), which are the prey of larger predators such as forage fish that in turn feed commercially important species. During cold periods the early primary productivity falls to the bottom where it provides nutrition to benthic organisms but is out of reach to most commercially valuable fish.

Some kinds of krill feed extensively on ice algae, so a decrease in ice coverage equates to a decrease in krill. Timing is important—if the ice melts too early in the spring much of that plankton productivity drops to the seafloor, where it is lost to most finfish.

The large zooplankton appear to **grow and survive more successfully in cold years.** A Bering Sea ecosystem study funded by the National Science Foundation and the North Pacific Research Board found that colder water favors production of large, lipid-rich copepods, an important prey of juvenile pollock. In warm-water years plankton growth and development are faster but overall food web success is lower, possibly because warm winter temperatures may cause them to exhaust energy reserves sooner. Pollock larvae grow quickly during those warm years but like the plankton they appear not to survive the winter due to lower energy reserves.

The silver lining

Concerns over negative impacts of climate change are at least partially balanced by positive outcomes. In cold water regions a modest temperature rise normally increases primary productivity. It tends to improve survival and spur growth up the food chain. Some models indicate an increase in fishery yields of 30–70% in the high latitudes, which would include Alaska (Holmyard 2014, p. 10). However, each specific species and stock responds differently, as mentioned in following sections of this publication. Warming is correlated with improved aquaculture production. Milder winter weather can be a boon to freshwater survival and growth of anadromous fishes such as salmon.

Warmer temperatures, and milder sea conditions that sometimes accompany them, may improve safety and reduce costs for harvesters and processors. Expanded or shifted ranges can bring new fishery resources into a region, or increase abundance of those already there.

Diminished arctic sea ice coverage already is allowing increased vessel access, including more shipping and hydrocarbon exploration, although this development also increases threats of pollution, spills, disruption of subsistence activities, and transport of invasive species.

2 OCEAN ACIDIFICATION

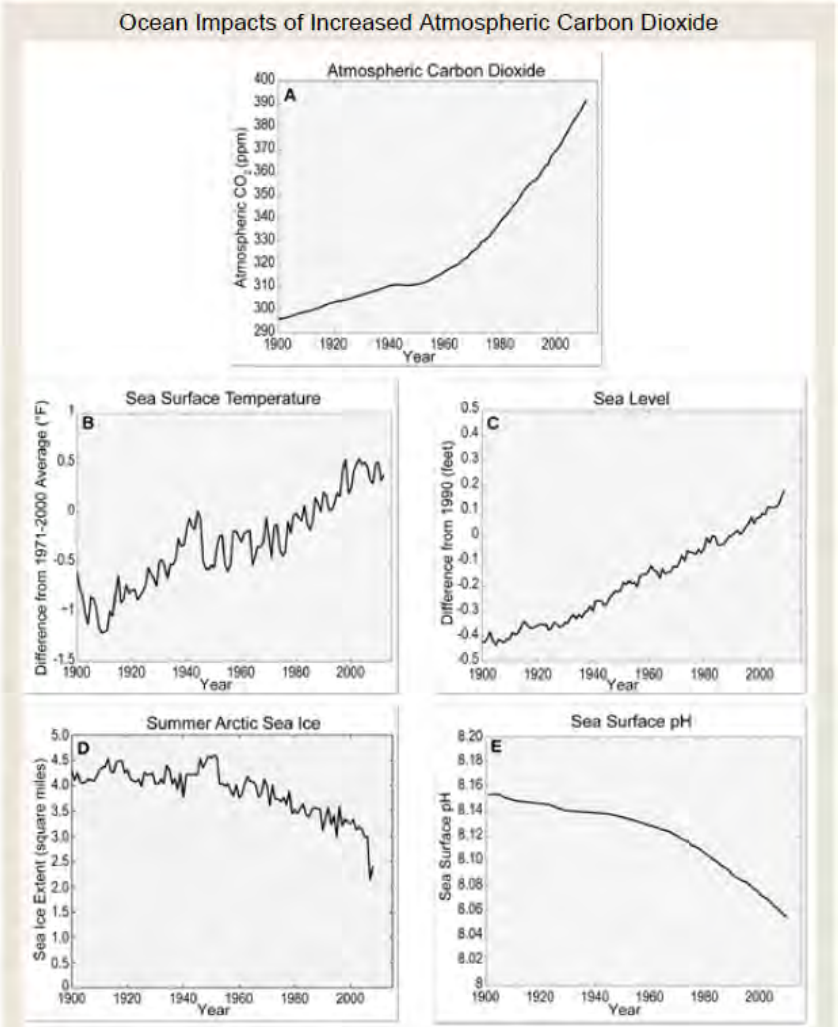
"The oceans always will be productive. The question is, what will they be productive with?"
—Jeremy Mathis, NOAA Arctic Research Office

Ocean acidification is an atmospheric carbon–related phenomenon that is starting to have profound effects on the oceans. It results from the absorption of atmospheric carbon dioxide (CO_2) by seawater. Atmospheric CO_2 has been increasing since the dawn of the Industrial Age and scientists positively correlate it with emissions from burning fossil fuels and other possible sources. Ocean acidification **may bring serious problems to the fisheries.**

The name ocean acidification is somewhat misleading—the ocean isn't acidic, not even close. To scientists "acidification" means that the ocean's pH—that is, the acid-base balance—has shifted slightly from mildly basic to a little closer to neutral. The pH scale goes from 0 (battery acid) to 14 (very strong base such as liquid drain cleaner) with pure water neutral at a pH of 7. Although the pH of freshwater can vary widely depending on the mineralization in the drainage it comes from, freshwater tends to be closer to neutral and rainwater usually has a pH of less than 7. The average ocean pH stands at about 8.1, down from 8.2 since the dawn of the Industrial Revolution, so it remains basic but less so than previously. In some places seawater is more acidic than in others—within the ocean waters of different pH values flow like rivers at different depths.

The pH scale is logarithmic and a 0.1 drop means a 30% increase in "acidity." Scientists predict that under projected levels of atmospheric carbon emissions, the oceans will experience an additional decrease to an average pH of about 7.8 by the end of this century (Ocean Acidification Research Center, undated). Increases in freshwater in the ocean due to glacial melt or increased runoff have the effect of increasing acidification. Freshwater in streams has less concentration of dissolved ions (alkalinity) that can neutralize added acidity of seawater.

Cold water absorbs more CO_2, and some of the highest concentrations of dissolved CO_2 have been measured on the Bering Sea shelf and in the Chukchi and Beaufort Seas. Cold water there, which is also very "old" and has accumulated a lot of CO_2 and nutrients due to bacterial respiration that converts organic material to CO_2 and nutrients, up-



Ocean impacts of increased atmospheric carbon dioxide. Source: Doney et al. 2014.

wells from the deep ocean. Scientists predict that within 15 to 30 years some of those waters will sustain pH levels low enough to be detrimental to survival of some important marine species. Still, Alaska's waters are unlikely ever to become acid.

From king crab to bivalve mollusks to tiny planktonic plants and animals that form the base of the food chain, many marine organisms need calcium carbonate to build and maintain their shells. Normally carbonate ion concentrations are saturated in seawater, and those organisms precipitate either calcite or aragonite they need from the calcium carbonate. But seawater with lower alkalinity can become under-saturated with those compounds. When there isn't enough available calcium carbonate the organisms can't build the platelets and shells they need to grow, and if the saturation level is low enough their shells can actually begin to dissolve, hence the expression "corrosive." Laboratory experiments have produced this result in several species. Jeremy Mathis, a leading ocean acidification scientist, says that by the end of the century "all of the waters around Alaska" will be corrosive at the levels demonstrated in the experiments (Mathis 2014).

"Acidic" or low-pH waters, flow up the continental slope from the deep ocean ("upwelling") and spread across Alaska's highly productive continental shelves. The Bering Sea is particularly vulnerable to acidification due to oceanographic characteristics, and NOAA scientists predict its waters will no longer be sufficiently saturated with calcium carbonate for key species to build and maintain their shells by the year 2044 (Mathis et al. 2015). The Arctic may reach that stage even sooner.

Press coverage has focused on Alaska's **king and tanner crabs** because of their commercial value and because laboratory studies show them to be vulnerable to the effects of ocean acidification. Snow crab and Dungeness appear to be less affected. So far no direct effects on any Alaska crab have been reported but NOAA scientists say that the future of red king crab does not look good due to the increasing acidity of Bering Sea waters.

Another object of concern is the tiny planktonic snail known as a **pteropod,** a key food source for salmon and herring, comprising nearly half the diet of juvenile **pink salmon.** Pteropods grow protective shells so they are vulnerable in low pH

***Clione limacina,* or sea angel, is a pteropod and a key link in the food chain. Though it doesn't build a shell of its own, it feeds exclusively on other species that do. Photo: R Hopcroft, University of Alaska Fairbanks.**

waters. In laboratory studies pteropods perish in water of the same carbonate chemistry as is currently being measured at some locations off Alaska. Authors of the report *Climate Change Impacts in the United States* say that a 10% decrease in pteropods could cause a 20% decrease in body weight of adult pink salmon, but they add that studies indicate pteropod consumption by juvenile pinks in the northern Gulf of Alaska varies by as much as 45%, which may reflect the salmon's ability to adapt to changes in prey availability (Chapin et al. 2014).

The industry most immediately threatened by ocean acidification is **shellfish mariculture.** Already, an oyster hatchery in Oregon has lost a crop and had to modify its operations, scallop farmers in British Columbia lost 10 million scallops in 2014, and Puget Sound oyster growers are moving nurseries to Hawaii. Alaska's small but growing oyster farming industry and its two oyster hatcheries are in jeopardy if waters unsaturated in calcium carbonate come to predominate (NOAA 2015d). One NOAA report predicts the Alaska shellfish hatchery industry will come to an end by the year 2040. This conclusion is preliminary and research continues.

On the other hand, some kinds of marine **plants** and **algae** are likely to benefit from predicted changes in pH. They use CO_2 as the carbon source for cell growth, so more CO_2 can mean greater productivity as long as sufficient sunlight and nutrients are present. Edible plants and algae, and ingredients in industrial products, could become new sources of income for fishermen and sea farmers in Alaska. Furthermore, wild kelps and seagrasses are important habitat for larvae and juveniles of commercially important species, although some of them—sea urchins, for example—have shells made of calcium carbonate.

Research in British Columbia shows that elevated CO_2 levels in **freshwater** also can be detrimental to pink salmon. Results indicate that pinks developing in high-CO_2 freshwater are smaller and have a diminished sense of smell and response to danger.

3 INVASIVE SPECIES, HARMFUL ALGAL BLOOMS, AND DISEASE-CAUSING PATHOGENS

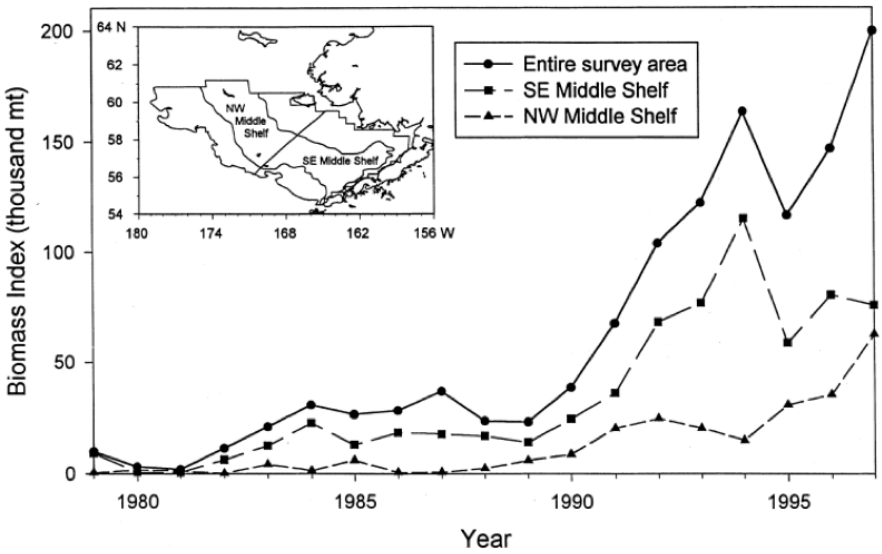
"Look down the coast and that's our future."
—Bruce Wright, marine ecologist, Aleutian Pribilof Islands Association

A warming sea attracts exotic creatures, and can drive an increase in abundance of others that previously were present but not abundant. These can range from the giant ocean sunfish (to 10 feet, 2,200 pounds) to the tiniest microbes. Invasive species and harmful algal blooms (HABs) already have made their mark on the Pacific Coast and are starting to raise concerns in Alaska.

So far Alaska waters seem to support few permanent populations of marine **invasive species** that can be attributed directly to long-term climate change. There is concern about a possible invasion by Chinese mitten crab, European green crab, the tunicate *Botrylloides violaceus,* and the pathogen *Myxobolus cerebralis* that causes whirling disease in salmonids. But of those four only *Botrylloides violaceus* has turned up in Alaska's marine waters, and it is not known to have caused any harm. Green crab is causing the greatest concern because it has the potential to decimate local species, particularly bivalves. It is advancing northward at a steady pace, and now is known to be in northern British Columbia waters (Gary Freitag, University of Alaska Fairbanks, personal communication). Atlantic salmon show up occasionally but their existence is attributed to escapes from mariculture pens in British Columbia and is unrelated to climate. The most vexing actual arrival to date is a colonial tunicate known as *Didemnum vexillum,* a species of sea squirt that suddenly appeared in a Sitka boat harbor a few years ago and has proven difficult to eradicate. Biologists consider *Didemnum vexillum* a threat because when it becomes established it smothers other marine life on the seafloor. But it is believed to have arrived on an aquaculture pen towed up from British Columbia, rather than migrating north in response to a warming sea (NOAA 2015c).

Various pelagic sharks, tuna, and other finfish appear from time to time in Alaska waters with temporary warm-water currents but they haven't become established. Mackerel have come as far north as British Columbia waters and are believed to be competing for prey with juvenile king salmon.

A report from the Arctic Research Centre at Aarhus University in Denmark suggests that the natural biological barrier posed by the harsh arctic climate and extremely cold oceans separating the Atlantic from the Pacific may be breaking down. **This could result in an exchange of fish species, bringing Atlantic stocks previously unknown in the Pacific to Alaska waters** (Wisz et al. 2015). But considering current flow through the Arctic, the reverse is more likely. People in Greenland have found pink salmon in their waters. Ecological and commercial consequences cannot be predicted. The last time the two ocean basins were biologically connected was three million years ago.



Biomass index of jellyfish caught in bottom trawl surveys on the eastern Bering Sea shelf, 1979-1997. Source: Brodeur et al. 1999.

Some indigenous species have experienced a dramatic increase in abundance, such as the gelatinous zooplankton (medusa or jellyfish) of the Bering Sea. From 1982 to 1997, a period of gradually increasing sea surface temperatures, the biomass of medusae increased tenfold. Scientists think changes in seawater circulation patterns related to diminished sea ice improved conditions for the jellies. The dominant species *Chrysaora melanaster* (northern sea nettle or brown jellyfish) preys on pollock larvae and zooplankton (Brodeur et al. 1999). Medusa biomass in the Gulf of Alaska quadrupled over the same time period. Jellyfish abundance has increased in the majority of the world's coastal and ocean ecosystems (Brotz et al. 2012).

Another example of change is the arrowtooth flounder, which has become more abundant in both the Gulf of Alaska and the Bering Sea. It is a predator on and competitor with juvenile halibut.

Harmful algal blooms are of immediate concern. Alaska always has suffered occasional outbreaks of paralytic shellfish poisoning **(PSP),** which is caused by various compounds collectively known as saxitoxins that are produced by the dinoflagellate alga *Alexandrium.* PSP illness usually results from eating infected clams or mussels, and also can come from eating crab viscera. PSP events, which sometimes kill people, apparently are becoming more frequent, though greater awareness and more reporting could partially account for the surge. The years 2014 and 2015 saw record high levels of PSP toxin in some locations. PSP was documented along the entire Gulf of Alaska coast and as far north as the central Bering Sea. There is some indication that decreased populations of marine mammals and of Yukon River Chinook salmon can be explained by PSP: all of the affected species feed on forage fish, such as sand lance, which are known to concentrate PSP toxins from eating zooplankton (Bruce Wright, Aleutian Pribilof Islands Association, personal communication).

A big problem on the US West Coast and a growing threat in Alaska is **domoic acid,** a sometimes fatal neurotoxin that can cause an ailment known as amnesiac shellfish poisoning (ASP). The agent of domoic acid is a group of microscopic diatoms in the genus *Pseudo-nitzschia,* which are ingested and concentrated in shellfish and finfish. Domoic acid is linked to deaths of seabirds and sea lions in California, and even implicated (though not proven) in an unusual mortality event of baleen whales in Alaska. On the Pacific Coast important bivalve and crab fisheries were closed in 2015 due to widespread outbreaks of domoic acid, and the public was warned against eating anchovy and sardines (NOAA 2015e). The toxin was reported as far north as Kachemak Bay, and the commonality in the domoic acid outbreaks was abnormally warm seawater.

According to a 2016 paper published in the journal *Harmful Algae,* domoic acid and saxitoxins are prevalent in 13 species of Alaska marine mammals, including various whales, porpoises, seals, sea lions, and sea otters, based on samples taken from harvested or stranded animals along virtually the entire Alaska coast from Dixon Entrance to the Beaufort Sea (Lefebvre et al. 2016). Another article in the same journal (Roncalli et al. 2016) reports that on the US East Coast a toxic dinoflagellate has been shown to suppress egg production and viability of a highly nutritious calanoid copepod. A dramatic die-off of murres and other seabirds on the Gulf of Alaska coast during 2015–2016 is attributed to starvation; one hypothesis is that there may prove to be a link between the die-off and effects of HABs on the seabirds' food supply (Bruce Wright, Aleutian Pribilof Islands Association, personal communication).

Disease-causing pathogens

Another threat is the bacterium *Vibrio parahaemolyticus,* which causes severe but usually not fatal gastrointestinal infection in people. It is in the same family as the cholera-causing bacterium and is found in raw oysters when sea temperatures rise. ***Vibrio*** outbreaks have occurred at Alaska shellfish farms in recent years. Alaska oyster farmers are conducting careful temperature monitoring to respond proactively.

Consumers of shellfish on the Pacific coast face the threat of another harmful algal malady, known as diarrhetic shellfish poisoning (DSP), produced by the alga *Dinophysis.* So far DSP has not been identified in Alaska.

Outbreaks of PSP, domoic acid, and possibly *Vibrio* in 2015 coincided with an unusual warm water phenomenon on the West Coast dubbed the Blob.

4 FISHERIES EFFECTS—GROUNDFISH AND CRAB

"There are always winners and there are always losers in a changing system, but who those winners and losers will be is hard to predict."

—Phyllis Stabeno, NOAA Pacific Marine Environmental Laboratory

Organisms generally respond to changes in their environment in one or more of the following ways: changing distribution (in space or time), changing productivity, and adaptation—behavioral or physiological (Hollowed et al. 2013).

Changes in oceanographic conditions can affect physiology, growth, reproduction, distribution, and mortality of individual species, or can impact ecosystem structure, food webs, and primary productivity (Brander 2010). This section outlines possible climate change effects on Alaska fisheries resources in general, and specifically on pollock, halibut, and crab. Section 5 addresses salmon.

Worldwide, warmer seawater temperatures are causing a **range displacement or extension** of many species, and in the Northern Hemisphere that is mainly to the north. The southern range limits of some species have not measurably shifted but the stocks are spread out over a greater latitude range (range extension), and the center of the biomass is shifting to the north. Range displacement can result either from migration or from differential productivity between more northerly and southerly components of the populations (Hollowed et al. 2013).

In the southeastern Bering Sea, species that had shifted northward during the warmer water period of the early 1980s to early 2000s include eulachon—20 miles, arrowtooth flounder—28 miles, halibut and flathead sole—33 miles, snow crab—54 miles, and Greenland turbot—60 miles (Sigler 2012, from Mueter and Litzow 2008). Snow crab have both shifted northward and have decreased in abundance. Atka mackerel, normally concentrated in the Aleutians, have turned up at Nome. Many of these shifts reversed during recent cold years associated with heavy ice (2007–2013), but are expected to resume as temperatures increase.

Displacement by latitude isn't the only option fish have for seeking cooler water; they can change depth. A NOAA study in the Gulf of Alaska using acoustic, longline, and bottom trawl survey data found different responses by species, with some, such as Pacific cod, shifting abundance to deeper water in warm years.

Some species will increase in abundance and individual growth will accelerate. Changes may be modest and highly variable by region; in most cases less than 10% with a mean of plus 3.4%, according to estimates by Barange et al. (2014). However, University of Cambridge scientists are predicting a 30–70% overall biomass increase at high latitudes globally, along with a 40–60% decrease in the tropics (Holmyard 2014). Some scientists speculate that regions like the eastern Bering Sea with seasonal ice coverage will experience increased productivity due to greater light penetration and a longer plankton growing season.

Adaptation generally is a slower process than changing abundance or productivity, and more difficult to document. Distribution changes can be viewed as a form of behavioral adaptation, as can changing prey, and there is evidence of those kinds of adaptation in some cases. Less clear is whether physiological adaptations are occurring in Alaska marine species so far. Certain Alaska stocks of salmon (see next section) may have adapted physiologically to warmer stream conditions, but these changes are not proven.

Predation, competition, and disease are likely to have a greater negative impact as northern seas warm. Three common species of sharks inhabit Alaska waters regardless of temperature—salmon shark, sleeper shark, and spiny dogfish. Other visitors (e.g., great white sharks, thresher sharks) come in particularly warm years and are very effective predators on salmon and herring. Great white sharks are not common now but may be more so as ocean temperatures rise (Bruce Wright, Aleutian Pribilof Islands Association, personal communication). Pomfret, and possibly mackerel, have appeared in Alaska waters; they prey on juvenile salmonids and are aggressive competitors for the same prey resources.

One possible explanation for the decreased halibut recruitment during the last decade is competition for prey from a dramatically increased biomass of **arrowtooth flounder,** which appear

Arrowtooth flounder preys on and competes with halibut. Arrowtooth abundance appears to be increasing.

to thrive during periods of above normal water temperatures. Researchers are investigating this possibility. Arrowtooth abundance in the Bering Sea has increased eight-fold in the last three decades (BEST-BSIERP, undated) and about quadrupled in the Gulf of Alaska (Spies et al. 2015).

Many waterborne disease pathogens thrive in warmer water, and fish disease outbreaks are documented around the world. Salmonids are especially susceptible to a range of diseases, particularly in their freshwater stages. Chinook salmon runs in the Yukon River have plummeted, and there has been a correlation noted between decreased Chinook abundance and infection caused by a parasite known as *Ichthyophonus,* which appears to be more prevalent with warming conditions. *Ichthyophonus* infection in the Bering Sea is not well studied and it is unclear whether it is more common or if fish succumb to the infection because they are experiencing other temperature-related stresses (Sullivan, undated).

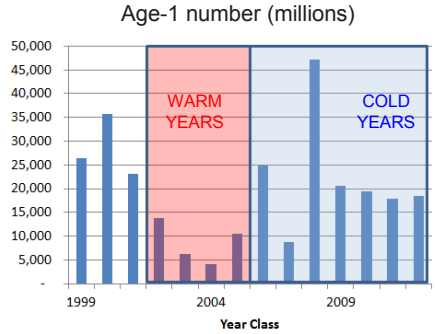
Bitter crab syndrome, a crustacean disease caused by the parasitic dinoflagellate *Hematodinium,* kills snow crab in the Bering and Chukchi Seas and Tanner crab in the Gulf of Alaska. Some evidence suggests the warmer water during the most recent ocean warm phase has caused or contributed to increasing *Hematodinium* disease in the North Pacific (Morado 2007).

Pollock

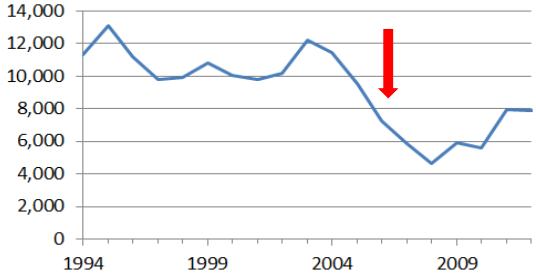
Walleye (Alaska) pollock in the Bering Sea supports the biggest single-species food fishery in the nation with annual catches averaging 1.5 million metric tons, worth more than $500 million ex-vessel to more than $1 billion first wholesale value.

The strength of individual pollock year classes is a function of several factors, including predation and the quantity and quality of prey, which determines the accumulation of sufficient energy reserves to provide for winter survival (Hollowed and Sundby 2014). Following a recent

EXPLANATION:
Due to bloom timing, large crustacean zooplankton benefit from icy winters, providing prey for age-0 pollock to enter their first winter fat (and happy?)



Age-3+ Biomass (thousands t)



Heintz, R.A., Siddon, E.C., Farley, E.V. and Napp, J.M., 2013. Correlation between recruitment and fall condition of age-0 pollock (Theragra chalcogramma) from the eastern Bering Sea under varying climate conditions. *Deep Sea Research Part II: Topical Studies in Oceanography*, *94*, pp.150-156.

Walleye pollock abundance dramatically fell in the early 2000s, leading to a 40% drop in quota for the largest single fishery in the US, and then rebounded. This was believed to be due to bloom timing. 0-age pollock feed on crustacean zooplankton to gain fat reserves to carry them through their first winter. Source: NOAA 2016b.

period (2002–2005) of above-average Bering Sea temperatures, the abundance of adult pollock declined. In response NOAA Fisheries lowered the pollock quotas from 1.5 to 0.8 million metric tons in 2006–2010. In subsequent years temperatures decreased and when stock surveys indicated an increase, the pollock quota was increased.

Research results suggest that while pollock larvae and juveniles respond to warmer water with faster growth and lower mortality, a decreased availability of high-quality prey and increased predation lead to lower recruitment into the fishery (Mueter et al. 2011). Scientists found that the large crustacean zooplankton that age-0 pollock depend on are less available in warm years.

Scientists have correlated the pollock decline with the decrease in sea ice cover and resulting shift in plankton species makeup available to juvenile pollock. Years of more extensive and later melting ice cover appear to favor production of **lipid-rich plankton,** especially euphausiids and *Calanus marshallae* copepods, which provide the young fish the energy they need to survive the long winter. The leaner small copepods that predominate during low ice (warmer) years have less than half as much lipid content (Hunt and Stabeno 2002).

Ron Heinz at the Ted Stevens Marine Research Institute has found that both pollock and their prey tend to be leaner during relatively warmer water years, while during cooler water years more of the fatter juveniles survived to recruit into the fishery. Krill (euphasiids) are also important prey for pollock and other fish, and research shows that krill are more abundant in cold water years. Furthermore, since fish metabolism increases in warm water, it takes more krill to support fish growth. In colder water, when krill are more abundant, fish need less to support metabolism so there is more energy to support growth. Warm conditions that accelerate fish metabolism also increase the overwintering energy demands. When waters returned to a cooler phase and prey conditions improved after 2005 the pollock stock quickly rebounded (Hunt et al. 2011).

During the same warm water period, **juvenile pollock were heavily preyed upon** by adult pollock, arrowtooth flounder, and salmon. In the absence of the large, lipid-rich copepods and krill, the higher level predators turned to juvenile pollock to meet their nutritional needs. This predation decreased when the water cooled and the richer zooplankton again became available (Coyle et al. 2011).

***Calanus* is a group of abundant, lipid-rich copepods that are an important food source for juvenile pollock. Photo: R Hopcroft, University of Alaska Fairbanks.**

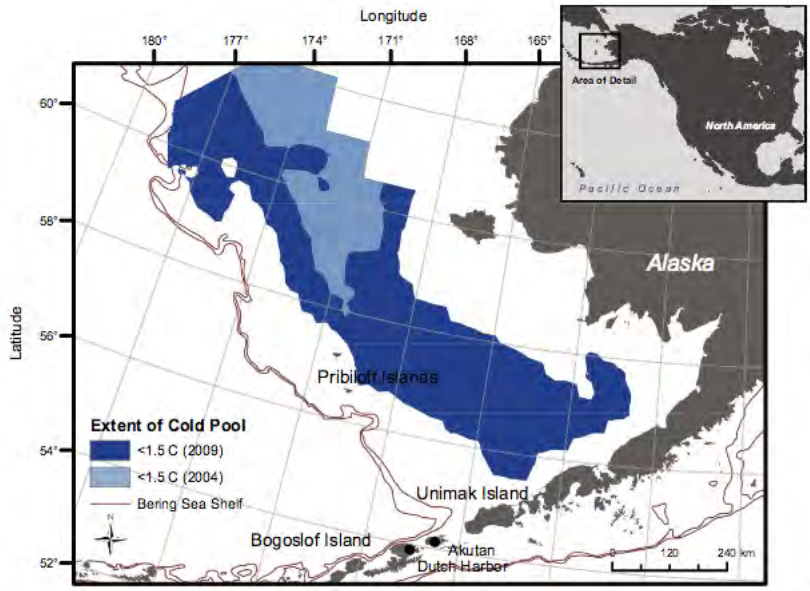
Bering Sea walleye pollock respond to changes in the size and location of the "cold pool," which is an ever shifting mass of super-chilled water that remains on the shallow Bering Sea continental shelf. The Bering Sea is divided by a transition zone at about 60 N latitude; bottom waters north of that line are colder, serving as a sort of thermal barrier for pollock and some flatfish, preventing them from extending their range into the Arctic. While adult pollock typically avoid colder waters, the more cold-tolerant juveniles advance into the cold pool. Scientists speculate that the cold pool provides them a temporary refuge from those predators. Warmer water may deprive them of some of that refuge effect, contributing to lower survival during warmer years (Van Pelt 2015). Pacific cod also seem to be limited in their northward expansion, but in warm years they concentrate in the northern Bering Sea near the cold pool.

NOAA scientists say that by 2040 water temperatures recorded during the abnormal warm period of 2002–2005 could be normal for the Bering Sea if the climate continues on its current trajectory. At the same time, oceanographers pre-

dict that the Bering Sea cold pool will persist, preventing pollock from expanding their range into the Bering Strait and Chukchi Sea where they could escape the warming water.

Based on these factors, fishery scientists expect the biomass of harvestable **pollock in the Bering Sea to diminish** significantly over the next quarter century. Franz Mueter and his co-authors (2011) predict that by the middle of this century pollock recruitment will decline by 32% to 58%.

An additional concern is that as the population shifts northward over the shelf and slope of the northern Bering Sea it spreads across the maritime boundary into Russian waters, making more fish available to the Russian fleet and less to Americans (Strong and Criddle 2013). The Russian fisheries management agency has estimated that 35% of the pollock biomass on the US side eventually will be available to the Russian fleet.



The extent of the cold pool in 2004 (a warm year) and 2009 (a cold year), as measured by the annual summer bottom trawl survey in the eastern Bering Sea. Source: Haynie and Pfeiffer 2013.

So far there is little indication of water chemistry effects on pollock. Lab research with pollock larvae using elevated levels of dissolved CO_2 indicated no significant harm and researchers say the results suggest that the growth potential of early life stages is resilient to the effects of ocean acidification (Hurst et al. 2013).

Pacific cod appear to respond to water temperature changes similarly to pollock but also they have been found to migrate to deeper water during warm-water years. Work by NOAA scientists suggests that the Bering Sea longline cod fleet experiences decreased CPUEs (catch per unit of effort) related to the size of the Cold Pool and the amount of travel required to find harvestable concentrations of cod.

Halibut

Halibut recruitment and growth have fluctuated widely in the last century and scientists say that environmental variability is largely responsible. Indications are that, at least in Alaska, the halibut biomass responds to some of the same cues as juvenile salmon, which are influenced by the abundance of plankton, meaning that it has responded positively to warmer water. During positive (warmer) Pacific Decadal Oscillation (PDO) regimes halibut productivity tends to be high in the Alaska Gyre (Clark and Hare 2002). In concert with salmon, halibut landings gradually diminished during the cool phase of the 1960s and 1970s, bottomed out at around 15 million pounds, and then surged up to as high as 60 million pounds in the warmer phase years immediately following the 1977 regime shift.

Ocean climate, especially during the year of spawning, influences halibut recruitment. Year class strength depends on either the transport of eggs and larvae by currents to nursery grounds on the continental shelf, or on plankton production that varies with climate and weather. On the other hand, growth appears to vary with changes in halibut stock size with little influence of climate (Clark and Hare 2002). Ongoing research is focusing on factors that influence size-at-age, and some results indicate that size-selective fishing is a significant factor in reductions in size-at-age since the 1980s (Jane Sullivan, University of Alaska Fairbanks, personal communication).

Halibut typically spawn in January, and by July the larvae are settling on the bottom nearshore and growing into juveniles. When atmospheric

conditions produce winds that drive currents that transport halibut larvae more rapidly onto the continental shelf where they encounter more agreeable rearing conditions, increased productivity as expressed by increased recruitment occurs (Cathleen Vestfals, Oregon State University, personal communication). PDO positive regimes tend to produce those currents. A positive PDO phase brings conditions believed to be similar to what would prevail during a long-term warming of the North Pacific.

Currently the halibut biomass is fairly large with many fish, but the abundance of legal size fish is relatively small. (Abundance is the number of individual fish, biomass the total weight of the stock.) If growth is slow, fewer halibut reach the minimum legal size and recruit into the fishery. Recruitment in recent years has been smaller than observed during the 1980s and 1990s.

The few available analyses seem to point to a possible **improvement in halibut biomass and recruitment** in a future of moderate increases in atmosphere and water temperature. But the average size of individual fish is likely to remain smaller than in the past, with high densities of predatory arrowtooth flounder and competition for prey within an increased halibut biomass.

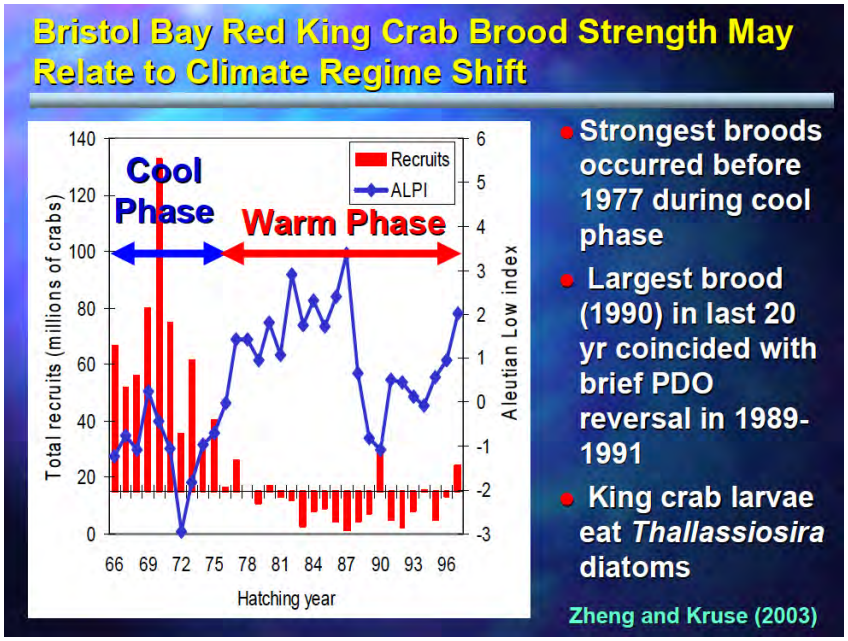
Crab

In general, Alaska stocks of red **king crab, Tanner, and snow crab currently are in a prolonged period of decline.** Scientists believe that crab stocks respond to surface and subsurface seawater temperature, vertical mixing, currents, atmospheric pressure, and subtle variations in sea level. Studies link these forcing agents to the location and intensity of the Aleutian Low atmospheric pressure center, which appears to correlate with Pacific Decadal Oscillation. A warm PDO phase tends to support a more northerly Aleutian Low, bringing warmer temperatures to the Bering Sea.

Crab stocks tend to be supported by a few very strong year-classes separated by several years of low productivity. Factors seem to include distribution of larvae by the currents, availability of suitable plankton prey for larvae, particularly a group of diatoms in the genus *Thalassiosira,* and the biomass of predators, especially cod. King crab productivity appears to be controlled by availability of suitable prey and by whether currents carry larvae to prime or unsuitable habitats. Conditions that support a large population in the northern Bering Sea, for example, may bring failure to another in the southern Bering Sea or the Gulf of Alaska (Zheng and Kruse 2000).

Past warm phases of the PDO provide a preview of the future. During the first four years following the last strong cool phase the snow crab population in the Bering Sea decreased substantially, while the center of the biomass contracted and shifted to the north (Sigler 2012). Juvenile king crab productivity has plummeted by about 70% (Kruse 2007). One study has found that the biggest factor in snow crab abundance is winter sea ice extent as determined by climate warming (Mueter and Litzow 2008).

Tanner and snow crab in Alaska are susceptible to bitter crab syndrome, caused by the parasitic dinoflagellate *Hematodinium.* The disease is so-named because live and apparently healthy crabs are inedible due to a bitter aftertaste in their meat.



Bristol Bay red king crab brood strength has been shown to correlate with climate regimes. Source: Zheng and Kruse 2003.

Bitter crab syndrome in Alaska was first reported in 1987 in Tanners from Southeast Alaska but is now found as far north as Norton Sound and the Chukchi Sea (Morado 2007). While no definitive link to climate change has been proven, the disease first appeared during a general warming period following the 1977 regime shift.

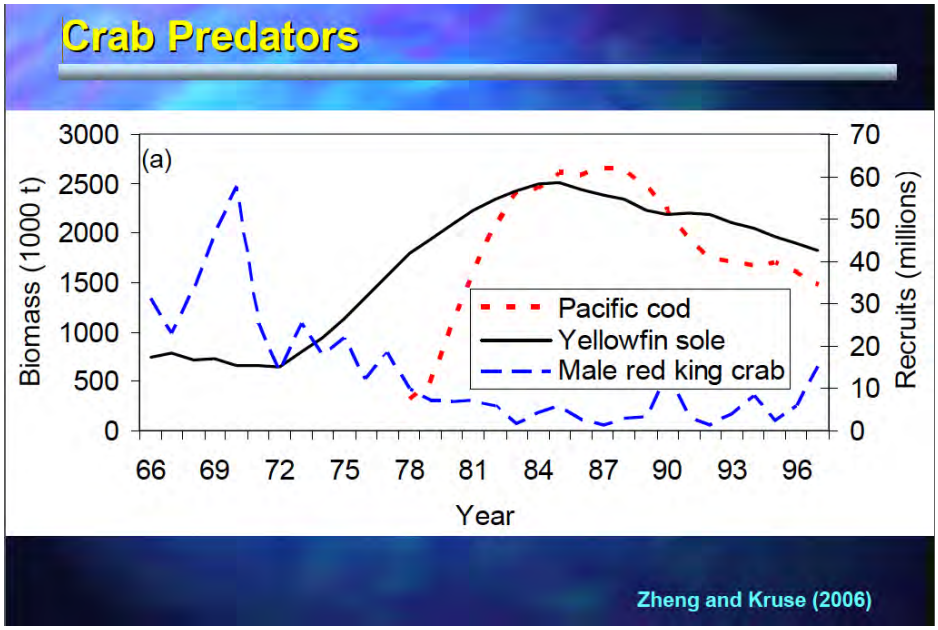
Crab also are threatened by ocean acidification. While "very low" pH water eventually could cause corrosion of adult crab shells, it is more likely that larvae would be unable to form shells due to lack of available calcium ions in the water and would not survive to maturity. In research by NOAA scientists, juvenile king crabs exhibited slower growth and higher mortality when held in water at a pH level equivalent to what will predominate in crab rearing habitat within a century.

Some recent research suggests that Dungeness crab are threatened by the effects of ocean acidification, at least at levels projected for the latter part of this century. However, Dungeness as a species is adapted to lower pH waters since they typically live in estuaries with a greater freshwater component, so projections for Dungeness responses to ocean acidification are preliminary and speculative.

NOAA scientists have projected an accelerating decline in king crab biomass culminating in **total cessation of commercial fishing by the year 2100.** Less is known about snow crab population dynamics, but there is little reason to think the scenario will be better.

If there are any silver linings they are: (1) **Crab may be able to migrate** into the Arctic and new habitat. Recent surveys indicated increases in snow crab in the Arctic. (2) Crab can be **hatchery-raised.** A massive hatchery program could allow "stocking" the ocean with young crabs that already have passed the point of greatest vulnerability to acidification. This concept is controversial because of the problems related to separating hatchery from wild stocks. (3) NOAA scientists say they have documented evidence that both Tanner and blue king crab have some **capacity to adapt** to low pH waters. They found that the longer juveniles were exposed to acidic water the less likely they were to die.

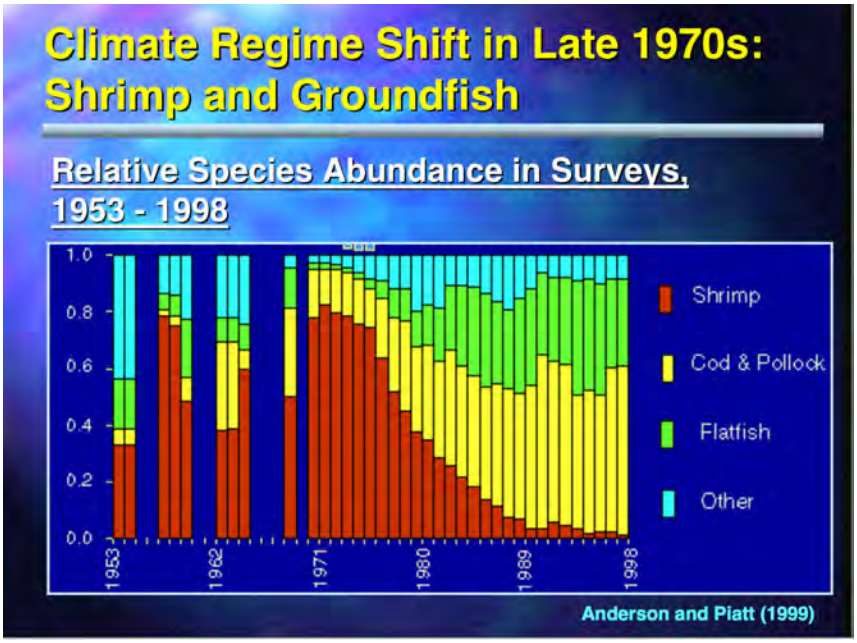
So far there is little information about the effects of temperature or acidification on **Dungeness crab.** Dungeness production on the US West Coast has always fluctuated from year to year, but in general has continued strong during recent years. Since Dungeness commonly occur in estuary areas with high freshwater content, which naturally has a lower pH than ocean water, they may be more resistant to acidification. Lab studies



In the mid 1970s the king crab crash coincided with an increase in abundance of Pacific cod and yellowfin sole. Source: Zheng and Kruse 2006.

have shown some decrease in developmental parameters such as spine length in Dungeness larvae, but no difference in mortality (Descoteaux et al. 2012).

Shrimp abundance also is closely linked to ocean climate, particularly northern pink shrimp *(Pandalus borealis)* (Gordon Kruse, University of Alaska Fairbanks, personal communication). Gulf of Alaska pink shrimp production peaked at 58,000 tons in 1976; it then went into precipitous decline and landings have been negligible for years. At the same time, king and tanner crab stocks collapsed in the same waters. Those events coincided with a big increase in cod and pollock—the timing of both major changes corresponded to the 1977 regime shift. Since it takes several years for a living resource to progress from egg and larvae stage to recruiting into the fishery, those changes actually manifested a few years later.



Climate regime shift in the late 1970s: shrimp and groundfish. This graph illustrates the shrimp decrease and groundfish increase in abundance in response to the 1976-1977 regime shift. Source: Anderson and Piatt 1999.

5 FISHERIES EFFECTS—SALMON

Alaska has many distinct salmon populations and each responds in its own way to environmental change. With two freshwater phases and extensive ocean migrations, salmon are subject to many environmental influences.

So far Alaska salmon have exhibited few changes in abundance, distribution, or behavior directly attributable to long-term climate change. NOAA researchers have concluded that increased salmon abundance in recent decades can be attributed to variations in the ocean physical characteristics accompanying the PDO, which is brought about by shifts of the Aleutian Low pressure system. Stock productivity has been significantly higher since the 1976 shift to warmer ocean climate conditions in the North Pacific. They speculate that storm events and upwelling may have increased biological productivity that benefited salmon survival. The more subtle cooling shift after 1996 is believed to have contributed to sharp declines in some salmon stocks, particularly Chinook.

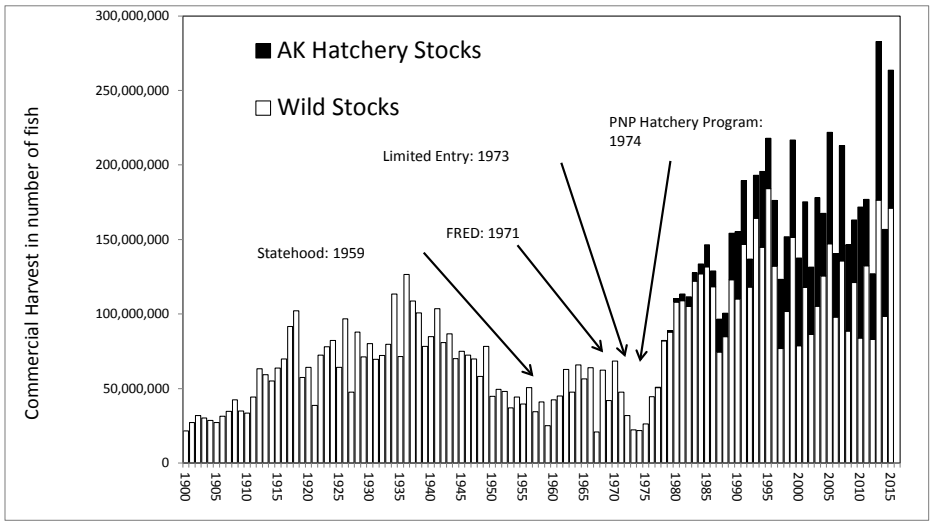
Documenting changes to salmon runs in the Pacific Northwest and studying the effects of temporary climate shifts on Alaska salmon may be useful but sometimes produce conflicting hypotheses, as seen below.

How Pacific Northwest salmon respond to elevated temperatures and drought

Warm PDO phases and El Niño tend to produce low snowpack, lower summer stream flows, high stream temperatures, more fall and winter streambed scouring, and warmer ocean temperatures. All these factors tend to negatively affect salmon productivity.

Copepods are important food for juvenile salmon. A warmer ocean supports "southern" species that are less nutritious than northern species that predominate during cooler ocean periods. Adult Chinook and coho returns from brood years that enter the Pacific during warm years tend to be poor. Plankton trawls on the Gulf of Alaska out of Seward during the warm summer of 2015 recorded a larger than normal occurrence of southern zooplankton.

An extreme interpretation of models based on climate change scenarios is expressed in a 2011 paper, which predicts that by 2100 the ocean winter habitat of Pacific Northwest sockeye salmon would decrease by 38% and summer habitat for Chinook by 86%, sockeye by 45%, 30% for coho, 30% for pinks, and 29% for chums. Projected losses would be greatest in the Gulf of Alaska and



Commercial salmon harvest in Alaska, 1900-2015. Alaska salmon stocks rebounded dramatically after the 1976-1977 regime shift. Source: Stopha 2015.

western and central subarctic North Pacific, and may include nearly complete loss of habitat for sockeye (Abdul-Aziz et al. 2011).

Another states, "Simulations predict that rising water temperatures will thermally stress salmon throughout Washington's watersheds, becoming increasingly severe later in the 21st century" (Rosenberg et al. 2010).

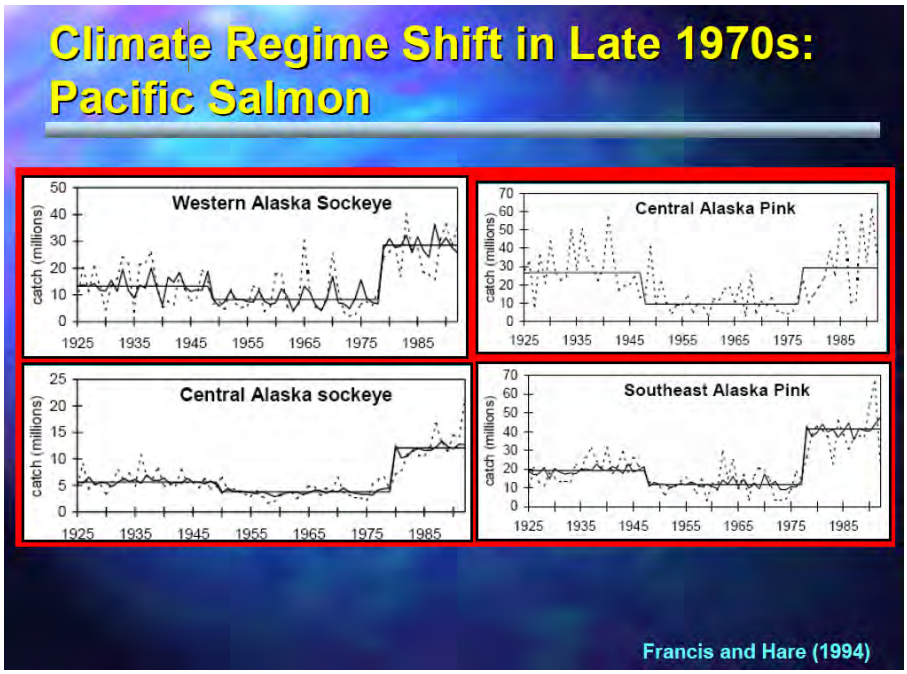
The year 2015 produced unusually warm stream temperatures and reduced flows as well as above normal ocean temperatures. Here are some observations recorded during that summer:

- More than a quarter million adult sockeye salmon died in the Columbia River and its tributaries because of warm river waters. NOAA says the loss could come to 80% of the run.
- Sockeye also died in the Deschutes River, most from columnaris, a bacterial infection associated with low oxygen and warm water (ODFW 2015b).
- Spring Chinook died in the Middle Fork of the John Day River in water temperatures that hit the mid-70s F. Fish become stressed at 68 and stop migrating at 74 (Associated Press 2015).
- The 2015 coho return to Washington's Skagit River was the lowest on record—only 12% of the recent decade average—and returning coho were only half the normal size. Biologists attributed these effects to the Blob (Seattle Times 2016).
- Spring Chinook died in the Willamette earlier in 2015. They start getting stressed at 60F and at 70F there were significant mortalities. Willamette River temperatures in June were 74F (ODFW 2015a).
- On the other hand, the Columbia experienced a very strong fall Chinook run in 2015, with 200,000 spawning at Hanford Reach, the most since construction of the big dams.

Current knowledge about climate and Alaska salmon

The paleo record shows that salmon abundance has fluctuated significantly over the past 2000 years in response to climate regimes (Finney et al. 2002).

Alaska Chinook and coho abundance generally are out of phase with British Columbia and the US West Coast. Periods of warm temperatures tend to be associated with improved returns in Alaska

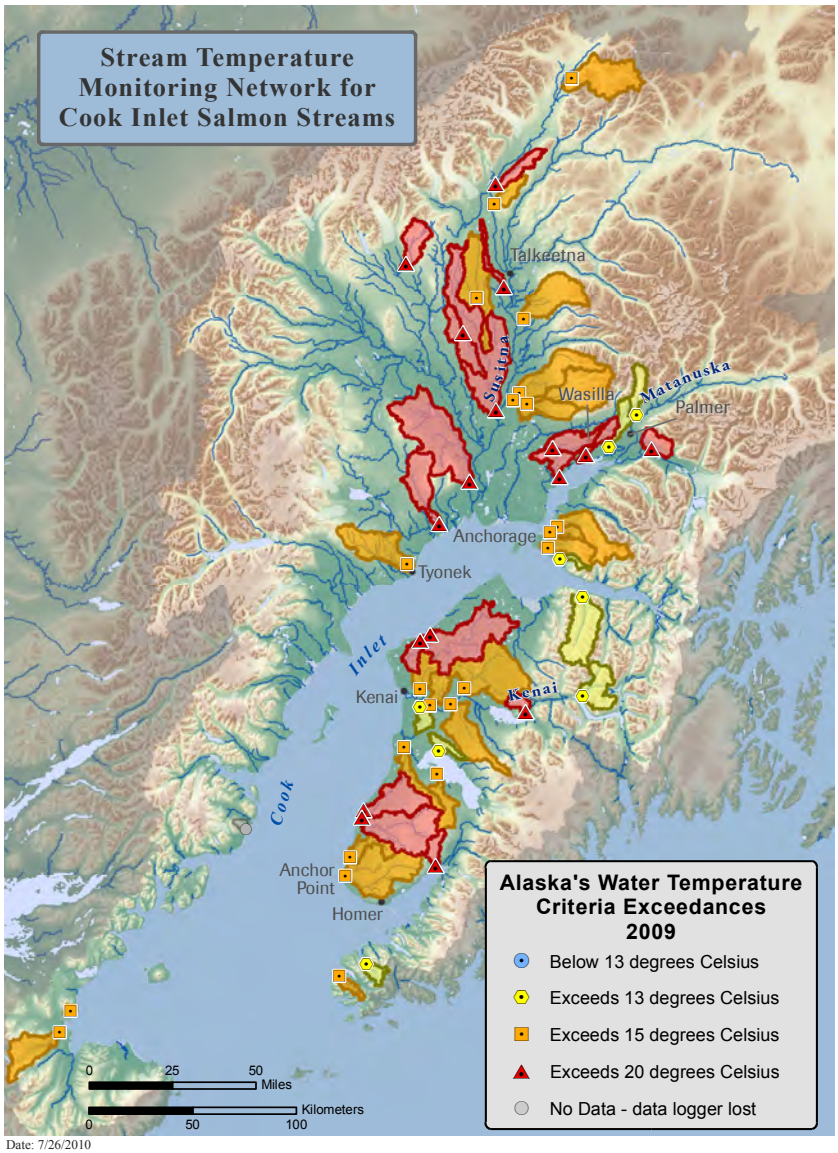


Salmon abundance has correlated with North Pacific oceanic regimes. Source: Francis and Hare 1994.

and poor runs in Washington (Mueter et al. 2002), probably related to the zooplankton available to juvenile salmon.

Pink, chum, and sockeye salmon tend to have similar long-term abundance trends (Beamish and Bouillon 1993). Pink and chum have brief freshwater phases and juveniles don't spend a summer in streams; most sockeye rear in lakes and also have a relatively short stream residence. All may benefit from increased primary productivity associated with warmer ocean temperatures. Coho and Chinook, on the other hand, rear a full year or more in streams or rivers so they are more susceptible to elevated stream temperatures and low flows. Since the 1977 regime shift to a warmer phase, pink, chum, and sockeye have been more productive, while coho and Chinook did not respond so positively. Scientists who looked at sockeye, chum, and pink salmon found that survival (rather than run size) was positively associated with temperature conditions during their early marine phase in Alaska. The increase in those three species is attributed to warm marine conditions, although warm freshwater is beneficial as well.

Alaska salmon tend to prosper during years of intensified and more easterly positioning of the wintertime Aleutian Low over the northern Gulf of Alaska (Finney et al. 2002, Adkison and Finney 2003), which drives wind currents that affect ocean currents, water column mixing, distribution



Stream temperatures monitored in the Cook Inlet basin, Alaska. Nearly all exceeded maximum tolerance levels for salmon at least part of the summer. Source: Mauger 2013.

of larvae and juveniles, air temperature, and thus primary productivity and salmon production.

Predictions differ for the future of Alaska salmon. For example, in northern latitudes cool water tends to produce higher quality prey than warmer, which leads some scientists to say that continued warming may result in reduced fitness of sockeye and reduced marine survival (Yasumiishi et al. 2015). On the other hand, in years with warm water juveniles of some sockeye stocks feed mainly on juvenile pollock, in cold water years mainly on euphausiids, copepods, and juvenile sand lance, and other scientists say that juvenile sockeye growth rate is better and they have higher survival in years with warm water on the eastern Bering Sea shelf. Since the Bering Sea likely will continue to warm, the implication is that Bristol Bay sockeye probably will continue to do well. However, if summer sea temperatures increase to 9 degrees F higher than the 2002–2005 average there could be a decrease in juvenile pollock, reducing juvenile Bristol Bay sockeye fitness, and causing increased overwintering mortality (Farley et al. 2011).

The critical period for marine survival is the early ocean stage (first few months in saltwater). Smolt migration timing evolved to coincide with normal peaks in plankton availability. A change in plankton blooms or migration timing could deprive juvenile salmon of nutrition essential for growth. Large body size is important for escaping predators and for surviving the first winter at sea when food is scarce.

Salmon are particularly vulnerable to temperature while in freshwater. They may suffer reduced survival of eggs and fry, reduced growth rates due to increased respiration and metabolism, premature smolting causing decreased ocean survival due to small size or lack of synchronicity with plankton blooms, greater vulnerability to pollution, and greater risk of predation and disease (Mauger 2016).

Alaska has temperature criteria for each freshwater life stage, including spawning and incubation of eggs, smoltification (seaward migration), and anticipated adult mortality due to heat stress or oxygen depletion. However, records indicated that most streams in the Cook Inlet Basin exceed those levels for extended periods each summer (Mauger 2013).

Salmon in the Arctic

According to KM Dunmall and co-authors (2013), "The future of Pacific salmon in the Arctic looks promising; geographic distribution is increasing and trends suggest higher abundances."

Pink and chum salmon spawning populations currently exist in the Arctic and the numbers, though small, appear to be slowly increasing. Currently the range of pink salmon extends east beyond Canada's Mackenzie River and presumably "vagrant" (stray, nonlocally spawning) pinks have been caught as far away as the east coast of Greenland. Note that pinks have been introduced into many systems in Scandinavia, Russia's Kola Peninsula, New England, and the Great Lakes but scientist don't believe any of those stocks to be the source of eastern Canadian arctic pinks. Natal (local spawning) pinks also occur as far west as the Lena River of north-central Siberia. Chums are well established in several streams on the arctic coast of both Alaska and Canada and also appear to be increasing, though it's not known whether they are colonizing additional spawning streams. Factors limiting pink and chum in the Arctic include sea ice coverage, freshening due to runoff, acidification, and river freezing (Nielsen et al. 2013). Chinook, coho, and sockeye are not established in the Arctic, although recent reports place Chinook in the Mackenzie delta and increasing numbers have been caught along the Beaufort Sea coast of Alaska. A few sockeye also have been documented in the Arctic. These fish are believed to be non-spawning strays that NOAA attributes to the effects of climate change.

Trends in Alaska salmon stocks

- Juvenile pink salmon are migrating earlier from Auke Creek near Juneau. Adults are returning two weeks earlier than 40 years ago.
- Coho returns to Berners River near Juneau decreased 61% during a cooling period in 2005–2013. Several factors contributed to this decline including competition by pink salmon for armhook squid, an important food for coho (Shaul and Geiger 2015).
- Over last 30 years Chinooks have gotten smaller in all 10 rivers around the state studied by the Alaska Department of Fish and Game Chinook assessment.

- The State of Alaska's maximum water temperature criterion for protection of fish is 13 degrees C (54F). During 2008–2012 more than half of the significant salmon-producing streams in the Cook Inlet region exceeded that level more than 30 days per year (Mauger 2013).
- The average size of sockeye returning to Bristol Bay in 2015, a year of warm ocean temperatures and the Blob in the North Pacific, was unusually small.
- Aleknagik Lake (northern Bristol Bay) spring breakup has averaged four days earlier over last 40 years. Earlier breakup supports increased summer densities of *Daphnia* and other crustacean zooplankton, which improves rearing conditions for Aleknagik sockeye (Schindler et al. 2005).
- Pink salmon abundance statewide began to increase in 1976, the time of a large scale regime shift to warmer sea temperatures in the North Pacific (Azumaya et al. 1998, Ishida and Azumaya 1999.)
- Salmon bycatch in the pollock trawl fishery appears to increase during years of warmer temperatures (Stram and Ianelli 2009).
- The historical and paleontological records indicate that warm sea surface temperatures and intensification of the Aleutian Low correlate with increased salmon production in Alaska (Finney et al. 2000).

What these observations suggest for Alaska salmon

- Different species and stocks respond differently to climate and other environmental changes.
- Salmon stocks always have fluctuated in response to natural climate variability.
- Most stocks in Alaska may benefit from increased primary productivity in the ocean, related to higher temperatures and changes in sea currents and water column mixing, even though results of some research suggest that higher quality prey, like the more lipid-rich copepods that predominate during cooler water phases, tend to produce higher salmon survival. Different species and stocks are likely to respond differently. Some scientists predict that primary productivity will decrease, in part due to lower nutrient runoff.
- Sockeye could benefit from increased plankton productivity in lakes.
- Pinks and chums could benefit from increased ocean productivity if shifts in migration timing and plankton bloom timing do not get out of phase.
- Trends indicate a gradual decline of Alaska Chinook and coho, at least those that spawn and rear in small streams. They have had good years during warming periods in the past but are more affected by elevated stream temperatures and decreased flows. Chinook, with longer ocean rearing time, are more susceptible to changes in food supply, harmful algal blooms, predation, and bycatch that could result from a changing ocean climate.
- Salmon may be threatened by ocean acidification, but so far the threat hasn't been realized.
- Some stocks may spread into or become more firmly established in arctic waters with warming temperatures.

6 ADAPTATION—RESEARCH AND MANAGEMENT

"In practice, the response of fishery management to climate change so far is extremely diverse, i.e., some managers assume that natural variability already encompasses climate change, others deny that climate change is occurring in ways that could affect fisheries, while still others are stymied in developing a response because of lack of information, capacity and high level uncertainty."

—David Fluharty, University of Washington (2011)

Human responses to environmental change fall into three categories—**research and monitoring, mitigation, and adaptation.** (Some observers suggest there is a fourth category—denial.) Research and monitoring are ways to collect information that can inform adaptation planning. Climate change mitigation involves actions to reduce release of greenhouse gases into the atmosphere. Adaptation means taking steps to preserve individual or community resilience in the face of change.

Adaptation is not the same as coping. Coping is a short-term response to a temporary phenomenon such as a storm or a poor fish run. Adaptation is a long-term or permanent change in behavior in response to long-term environmental change.

Adaptation can be "bottom-up" or "autonomous" by individuals and communities, or "top-down" policies or regulations applied by governments and agencies. Adaptation can be **planned** or **proactive,** but usually is **reactive** to changes that already have occurred.

With evidence that climate change and ocean acidification are starting to affect Alaska's fisheries and will do so more dramatically in the future, there is opportunity for planned adaptation by research and resource management agencies. This is sometimes called **"climate-ready"** fisheries management.

The academic and agency literature abounds with suggestions for top-down adaptation, including:

- Promote fuel efficient and otherwise environmentally friendly fishing practices.
- Increase climate change education and promote greater public awareness.
- Conduct vulnerability and risk assessments.
- Increase adaptive capacity of stakeholders.
- Promote shift to aquaculture, particularly herbivore (plant eater) aquaculture.
- Foster adaptation planning processes.
- Divert fishing effort from traditional stocks to new or underutilized target species.
- Invest in landing sites, vessels, and alternative gear to improve access to other resources.
- "Decouple" individuals and communities from dependence on the local fisheries.

In the United States there are problems with these prescriptions: No group or agency is tasked or authorized to carry them out. There is no funding or implementation mechanism. Stakeholders (commercial fishermen, seafood companies, fisheries-dependent communities) in many cases are unlikely to accept and support them.

What exists instead is a fishery management process that is constrained by law and practice to a very narrow range of measures centered mainly on regulation of fishing effort or harvest levels. **"Reducing fishing mortality"** often is the first if not only recommendation for adaptation to climate change mentioned. Fisheries managers may address changes in ecosystem productivity and fish abundance, changes in fish distribution, interactions with nontarget species, and habitat (Morrison et al. 2015), and they should consider the cumulative effect of multiple stressors including fishing and pollution. Generally they recognize that fish stock resilience is enhanced if other stressors such as fishing pressure and pollution are minimized. But the range of potential actions remains based on restricting either harvest effort or landings. The structure of both state and federal management is such that industry players have to be convinced that measures are justified and likely to be successful before any can be taken.

Two recommended principles for getting best results are these (Knapp et al. 1998):

- Conduct long-term forecasting and planning. The better managers anticipate changes the better they can plan for and adjust to changes. The key is "long-term" as opposed to season by season.

- Incorporate mechanisms for adjusting to harvest changes in management and political institutions. Management organizations and political agreements should be flexible enough to accommodate changes to stock and harvest levels.

Two management agency responses

In the federal waters off Alaska fisheries management planning is done by the North Pacific Fishery Management Council, based on data and analysis by the National Marine Fisheries Service, otherwise known as NOAA Fisheries. In state waters policies and allocation are determined by the Alaska Board of Fisheries, with scientific input and implementation by the Alaska Department of Fish and Game.

Both the Alaska Department of Fish and Game and NOAA Fisheries have written climate change plans. **ADFG's Climate Change Strategy** is broad in scope. It includes identifying effects, assessing vulnerabilities, conducting research and monitoring, incorporating climate change in management plans, and addressing statutory changes, budget issues, and partnerships, as well as developing communication and outreach programs (ADFG 2010).

ADFG has been introducing adaptive management practices that accommodate changes in fish behavior related to climate. For example:

- ADFG has allowed changes to crab season start and end dates to take into account changes in timing of the molt because molting crab experience high mortality and are less valuable in the market.
- In some salmon fisheries ADFG has transitioned from relying entirely on run timing as an indicator of run strength to emphasizing genetics and pre-season forecasts due to increasing unreliability of in-season run timing as an indicator of run strength (Jeff Regnart, Commercial Fisheries Division, Alaska Department of Fish and Game, personal communication).

NOAA Fisheries provides a number of science-based services including data support and advice to the regional fishery management councils. NOAA focuses on research and monitoring to predict the status of fishery stocks and harvest rates and to analyze the effects of proposed catch levels on the stocks and their habitat (Link et al. 2015). In February 2016 NOAA released its five-year regional action plan, called **Climate Science Strategy for the Southeastern Bering Sea** (Sigler et al. 2016). Objectives include "Identify appropriate, climate informed reference points" for managing fisheries, "Identify robust strategies…," "Design adaptive decision processes" for responding to climate change, "Identify future states of coastal, marine and freshwater ecosystems" in a changing climate.

One feature of the plan is a "climate vulnerability assessment" that analyzes the dependence of Alaska communities on their fisheries and characterizes their economic vulnerabilities to fishery disruptions. It also highlights "a comprehensive, multi-disciplinary modelling approach to project abundance estimates for key fish stocks under varying climate conditions." The Alaska Fisheries Science Center is funded at about $9 million a year to conduct ecosystem monitoring, process studies to understand ecological relationships, and modelling and retrospective studies to promote understanding of the results of the ecosystem monitoring and process studies.

Using NOAA Fisheries stock assessment data, the North Pacific Fishery Management Council is adding environmental variables to stock assessments, and as part of the harvest specifications process for each assessment there is consideration of the appropriate time period representing current environmental conditions for recruitment (Diana Evans, North Pacific Fishery Management Council, personal communication).

Two actions by the NPFMC serve as examples of federal regulatory responses to climate change effects on Alaska fisheries. As noted earlier, using NOAA monitoring data that showed decreased zooplankton, more predators, and lower pollock productivity, the council reduced the fishing quotas in the Bering Sea by nearly half. The following year when data on those environmental conditions improved the quotas were increased (Pinsky and Mantua 2014). In another example, the council closed all arctic waters under its jurisdiction to commercial fishing and halted expansion of trawl fisheries, an expression of the precautionary principle in the face of northward shift in fishing effort.

7. ADAPTATION BY INDUSTRY, INDIVIDUALS, AND COMMUNITIES

"Anthropogenic climate change is nearly certain to change fishing opportunities available to communities. Progressive ecosystem changes will require adaptive responses which may include increased travel to new fishing grounds, fishing new species, or transitioning out of fishing altogether."

—ML Pinsky and NJ Mantua (2014)

The vulnerability of an individual or community to environmental change is based on three factors: the extent of their exposure to the consequences of change, the severity of the potential impacts, and their capacity for adaptation to change. Fishermen and fishing communities vary greatly in their vulnerability. As long as they remain dependent on the fisheries they have limited options for reducing exposure and severity, but they have a wide range of choices for increasing adaptive capacity.

Flexibility is the key to individual and community resilience in the face of climate change effects on fisheries. Although scientists and academics make this assertion, they offer little in the way of specific recommendations.

Experts with the United Nations Food and Agriculture Organization (FAO) provide some general examples of climate impacts and suggested adaptive responses (FAO 2008):

- Reduced productivity and yields—>Increase fishing power, access higher value markets.
- Increased variability of catches—>Diversify livelihoods, develop insurance programs.
- Decreased profitability—>Reduce operating costs, diversify livelihoods, leave fishing for other livelihoods.
- Changes in distribution of stocks—>Migration of fishing effort and processing facilities.
- Increased risks, danger—>Get insurance, improve weather warning systems, buy better vessels.

Other potential adaptive measures based on experience and general knowledge:

- Employ selective fishing gear in order to keep fishing for abundant target species while avoiding depleted stocks.
- Move to new fishing grounds.
- Get into aquaculture as an alternative to commercial fishing.
- Press for changes in fishery management that accommodate changing realities in the fisheries. For example, halibut fishermen could request a return of the minimum size limit to 26 inches from the current 32 inches. This would allow harvest of smaller fish not yet recruited into the fishery under the current regulations and prevent their loss to predation, bycatch, and release handling mortality.

Four strategies may be applied to adaptation planning by fishermen and processors:

1. Diversify fisheries with multiple permits/quotas, and combination vessels that have greater range and multi-fishery capacity. However, existing regulatory structure sometimes is a barrier to fishery diversification due to constraints such as limited entry and exclusive area registration. Diversify income by taking training and developing skills that lead to good paying jobs during the off-season.
2. Get higher value for the catch through alternative or direct marketing, or by improving product quality through advanced handling or better refrigeration and storage technology.
3. Mitigate risk through measures such as cooperative fisheries, cooperative processing, and expanded and alternative insurance coverages.
4. Reduce uncertainty by systematically gathering and analyzing all available information as it becomes available and incorporating results into planning.

Some fishermen are exhibiting **adaptive behaviors,** whether they realize it or not. For example, the center of vessel fishing effort during the

summer "B" pollock season shifted steadily north during the period 2002–2008, from about 56.8 to 59.4 N latitude in response to the shift in pollock biomass (Haynie and Pfeiffer 2013).

Since **shellfish farmers** are particularly vulnerable to effects of temperature and acidification, they have incentive to take adaptive measures. Some already have found they can effectively avoid the threat of toxic algal blooms by configuring their sets so that they can be lowered to put the oysters they are raising into cooler water where toxic blooms are less threatening. A newly developed device called the Burkolator helps shellfish hatcheries monitor seawater pH, and the Alutiiq Pride Shellfish Hatchery in Seward is experimenting with controlling CO_2 levels in hatchery rearing tanks.

Non-commercial users of fisheries and marine resources have their own adaptation issues. For example, since subsistence shellfish harvesters face the threat of disease caused by harmful algal blooms, they can minimize risk by demanding programs to monitor and test shellfish for HABs.

Other adaptive measures are not specific to climate effects but improve overall resilience. Alaska's private nonprofit salmon hatchery program is a proactive adaptation to a range of environmental stressors. Recent developments in marine industry–related vocational training through the University of Alaska system and other institutions have opened new opportunities for supplemental incomes or alternative careers for fishermen. Alternative product development and byproduct utilization are methods processors use to get greater value out of limited volumes of product. All forms of energy efficiency and capital efficiency improvements help increase profitability. Fishermen, particularly in the federal waters trawl fisheries, are working on ways to reduce bycatch, including improving communication between individuals to help avoid high bycatch areas, as well as gear development and changes in fishing practices. These measures may help the industry weather coming changes, whether directly from climate or from other environmental or economic forces.

IN SUMMARY

"The future ain't what it used to be."
—Yogi Berra

During the working lifetime of younger fishermen currently in the industry, effects of long-term climate change on the fisheries probably will turn out to be profound but not cataclysmic. In 30 years most existing fisheries will continue to be productive. Some will be smaller than they are now and others will flourish. The late 1970s saw the Bering Sea king crab boom, which subsequently crashed, probably as a result of climate-related factors; the volume and value of the harvest has not returned to what it was, but a profitable crab industry remains. After a nadir in the late 1970s Alaska's salmon fisheries came roaring back from near oblivion to become a productive industry today, a turnaround that resulted at least in part from climate trends that continue and likely will into the future.

To survive and prosper industry participants will need to keep up to date on climate science and observable changes in the environment as well as on advances in technology, finance, and the politics of resource management. Fishermen and communities will need to develop adaptive strategies that may include, among other approaches, looking for new opportunities that arise out of climate related changes.

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REFERENCES AND SOURCES

Abdul-Aziz, O, NJ Mantua, and K Myers. 2011. Potential climate change impacts on thermal habitats of Pacific salmon in the North Pacific Ocean and adjacent seas. Canadian Journal of Fisheries and Aquatic Sciences 68(9):1660-1680. http://dx.doi.org/10.1139/f2011-079

ADFG. 2010. Climate change strategy. Alaska Department of Fish and Game.

Adkison, MD, and BP Finney. 2003. The long-term outlook for salmon returns to Alaska. Alaska Fishery Research Bulletin 10(2):83-94.

AMCC. 2007. Impacts of warming temperatures on Alaska's marine ecosystems. Alaska Marine Conservation Council, July 2007.

Anderson, PJ, and JF Piatt. 1999. Community reorganization in the Gulf of Alaska following ocean climate regime shift. Marine Ecology Progress Series 189:117-123. http://dx.doi.org/10.3354/meps189117

Anon. 2007. The threat to fisheries and aquaculture from climate change. WorldFish Center Policy Brief.

Anon. 2009. Union of Concerned Scientists backgrounder.

Anon. 2009. Climate change and fisheries: Policy, trade and sustainable development issues. International Centre for Trade and Sustainable Development Information Note Number 15.

Anon. 2015. New study shows Arctic Ocean rapidly becoming more corrosive to marine species. Science Newsline, June 15, 2015.

Anon. 2015. Ocean acidification for educators. Smithsonian Ocean Portal.

Anon. 2015. Seawater monitoring reveals ocean acidification risks to an Alaska shellfish hatchery. Pacific Fishing, August 2015.

Anon. 2015. UBC study speaks to adverse impacts on humpies. The Cordova Times, July 3, 2015.

Anon. Undated. Climate change and salmon production. Ocean World, Texas A&M University.

Associated Press. 2015. AP, July 28, 2015.

Azumaya, T, Y Ishida, et al. 1998. Long term and spatial correlations between survival rates of pink salmon *(Oncorhynchus gorbuscha)* and sea surface temperatures in the North Pacific Ocean. North Pacific Anadromous Fish Commission Tech. Rep 1:16-17.

Barange, M, G Merino, JL Blanchard, J Scholtens, J Harle, E. Allison, J.I Allen, J Holt, and S Jennings. 2014. Impacts of climate change on marine ecosystem production in societies dependent on fisheries. Nature Climate Change 4:211-216. http://dx.doi.org/10.1038/nclimate2119

Beamish, RJ. 2008. Impacts of climate and climate change on the key species in the fisheries in the North Pacific. PICES Science Report No. 35.

Beamish, RJ, and DR Bouillon. 1993. Pacific salmon production trends in relation to climate. Canadian Journal of Fisheries and Aquatic Sciences 50:1002-1016. http://dx.doi.org/10.1139/f93-116

BEST-BSIERP. 2012. Climate and Bering Sea fisheries: Beyond a northward march. North Pacific Research Board, BEST-BSIERP fact sheet. http://www.nprb.org/assets/images/uploads/BSH_72_Climate_and_Fisheries.pdf

BEST-BSIERP. Undated. Climate, population dynamics and predator-prey overlap. North Pacific Research Board, BEST-BSIERP Bering Sea Project. http://www.nprb.org/assets/images/uploads/BSH_60_Climate,_Population,_Predator-Prey.pdf

Bond, NA, MF Cronin, H Freeland, and N Mantua. 2015. Causes and impacts of the 2014 warm anomaly in the NE Pacific. Geophysical Research Letters 42(9). http://dx.doi.org/10.1002/2015GL063306

Brander, KM. 2007. Global fish production and climate change. Proceedings of the National Academy of Sciences 104(50). http://dx.doi.org/10.1073/pnas.0702059104

Brander, K. 2010. Impacts of climate change on fisheries. Journal of Marine Systems 79:389-402. http://dx.doi.org/10.1016/j.jmarsys.2008.12.015

Brodeur, RD, CE Mills, JE Overland, GE Walters, and JD Schumacher. 1999. Evidence for a substantial increase in gelatinous zooplankton in the Bering Sea, with possible links to climate change. Fisheries Oceanography 8(4):296-306. http://dx.doi.org/10.1046/j.1365-2419.1999.00115.x

Brotz, L, WWL Cheung, K Kleisner, E Pakhomov, and D Pauly. 2012. Increasing jellyfish populations: Trends in large marine ecosystems. Hydrobiologia 690(1):3-20. http://dx.doi.org/10.1007/s10750-012-1039-7

Card, T. 2014. UAF researchers monitor Gulf of Alaska and find waters warmer. KDLG Dillingham, Oct. 20, 2014.

Chapin III, FS, SF Trainor, P Cochran, H Huntington, C Markon, M McCammon, A McGuire, and M Serreze. 2014. Ch. 22: Alaska. In: JM Melillo, TC Richmond, and GW Yohe (eds.) Climate change impacts in the United States: The Third National Climate Assessment. US Global Change Research Program, pp. 514-536. http://dx.doi.org/10.7930/J00Z7150.

Clark, WG., and SR Hare. 2002. Effects of climate and stock size on recruitment and growth of Pacific halibut. North American Journal of Fisheries Management 22:852-862. http://dx.doi.org/10.1577/1548-8675(2002)022<0852:EOCASS>2.0.CO;2

Cornwall, W. 2015. Freshwater fish threatened by acidification. AAAS Science News, June 29, 2015.

Coyle, KO, LB Eisner, FJ Mueter, AI Pinchuk, MA Janout, KD Cieciel, EV Farley, and AG Andrews. 2011. Climate change in the southeastern Bering Sea: Impacts on pollock stocks and implications for the oscillating control hypothesis. Fisheries Oceanography 20(2):139-156. http://dx.doi.org/10.1111/j.1365-2419.2011.00574.x

Crozier, LG, P Hendry, PW Lawson, TP Quinn, NJ Mantua, J Battin, RG Shaw, and RB Huey. 2008. Potential responses to climate change in organisms with complex life histories: Evolution and plasticity in Pacific salmon. Evolutionary Applications 1(2):252-270. http://dx.doi.org/10.1111/j.1752-4571.2008.00033.x

Descoteaux, Raphaelle et al. 2012. Effects of ocean acidification on Dungeness crab larval development. Poster presentation at Alaska Marine Science Symposium, Anchorage.

De Young, CD Soto, T Bahri, and D Brown. Undated. Building resilience for adaptation to climate change in the fisheries and aquaculture sector. FAO.

Doney, S, AA Rosenberg, M Alexander, F Chavez, CD Harvell, G Hofmann, M Orbach, and M Ruckelshaus. 2014. Ch. 24, Oceans and Marine Resources. In: JM Melillo, TC Richmond, and GW Yohe (eds.), Climate change impacts in the United States: The Third National Climate Assessment. U.S. Global Change Research Program, pp. 557-578. doi:10.7930/J0RF5RZW

Doroff, Angela. Kachemak Bay Research Reserve, personal communication.

Downton, MW, and KA Miller. 1998. Relationships between Alaskan salmon catch and North Pacific climate on interannual and interdecadal time scales. Canadian Journal of Fisheries and Aquatic Science 55:2255-2265. http://dx.doi.org/10.1139/f98.106

Dunmall, KM., JD Reist, EC Carmack, JA Babaluk, MP Heide-Jørgensen, and MF Docker. 2013. Pacific salmon in the Arctic: Harbingers of change. In: F. Mueter, DMS Dickson, HP Huntington, JR Irvine, EA Logerwell, SA MacLean, LT Quakenbush, and C Rosa (eds.), Responses of arctic marine ecosystems to climate change. Alaska Sea Grant, University of Alaska Fairbanks.

Evans, Diana, fishery analyst, North Pacific Fishery Management Council, personal communication.

Evans, W. 2015. On the frontline: Tracking ocean acidification in an Alaskan shellfish hatchery. PLOS/One. http://dx.doi.org/10.1371/journal.pone.0130384

FAO. 2008. Report of the FAO Expert Workshop on Climate Change Implications for Fisheries and Aquaculture. FAO Fisheries Report No. 870.

Farley, EV, A Starovoytov, S Naydenko, R Heintz, M Trudel, C Guthrie, L Eisner, and JR Guyon. 2011. Implications of a warming eastern Bering Sea for Bristol Bay sockeye salmon. ICES Journal of Marine Science 68:1138-1146. http://dx.doi.org/10.1093/icesjms/fsr021

Fellman, J, E Hood, W Dryer, and S Pyare. 2015. Stream physical characteristics impact habitat quality for Pacific salmon in two temperate coastal watersheds. PlosOne. http://dx.doi.org/10.1371/journal.pone.0132652

Finney, BP, I Gregory-Eaves, J Sweetman, MSV Douglas, and JP Smol. 2000. Impacts of climate change and fishing on Pacific salmon abundance over the past 300 years. Science 290:795-799. http://dx.doi.org/10.1126/science.290.5492.795

Finney BP, I Gregory-Eaves, MS Douglas, and JP Smol. 2002. Fisheries productivity in the northeastern Pacific Ocean over the past 2,200 years. Nature 416: 729-33. http://dx.doi.org/10.1038/416729a

Fischer, D. 2009. Rising ocean acidity erodes Alaska's fisheries. Scientific American, Aug. 20, 2009.

Fluharty, D. 2011. Decision-making and action taking: Fisheries management in a changing climate. OECD Food, Agriculture and Fisheries Papers No. 36.

Francis, RC, and SR Hare. 1994. Decadal-scale regime shifts in the large marine ecosystems of the Northeast Pacific: A case for historical science. Fisheries Oceanography 3:279-291. http://dx.doi.org/10.1111/j.1365-2419.1994.tb00105.x

Freitag, Gary. University of Alaska Fairbanks, personal communication.

Gilbert, N. 2012. Pink salmon evolve to migrate earlier in warmer waters. Nature.com, July 11, 2012.

Grafton, RQ. 2009. Adaptation to climate change in marine capture fisheries. Environmental Economics Research Hub, Crawford School of Economics and Government, Canberra Australia, Report No. 37, November 5, 2009.

Hare, SR, and NJ Mantua. 2000. Empirical evidence for North Pacific regime shifts in 1977 and 1989. Progress in Oceanography 47:103-145. http://dx.doi.org/10.1016/S0079-6611(00)00033-1

Haufler, JB, CA Mehl, and S Yeats. 2010. Climate change: Anticipated effects on ecosystem services and potential actions by the Alaska Region. US Forest Service, Ecosystem Research Management Institute.

Haynie, AC, and L Pfeiffer. 2013. Climatic and economic drivers of the Bering Sea walleye pollock *(Theragra chalcogramma)* fishery: Implications for the future. Canadian Journal of Fisheries and Aquatic Sciences 70:841-853. http://dx.doi.org/10.1139/cjfas-2012-0265

Healey, M. 2011. The cumulative impacts of climate change on Fraser River sockeye salmon and implications for management. Canadian Journal of Fisheries and Aquatic Sciences 68(4):718-737. http://dx.doi.org/10.1139/f2011-010

Higman, Bretwood. Ground Truth Trekking, personal communication.

Himes-Cornell, A, and S Kasperski. 2015. Assessing climate change vulnerability in Alaska's fishing communities. Fisheries Research 162:1-11. http://dx.doi.org/10.1016/j.fishres.2014.09.010

Hollowed, AB, and S Sundby. 2014. Change is coming to the northern seas. Science 344(6188). http://dx.doi.org/10.1126/science.1251166

Hollowed, AB, M Barange, RJ Beamish, K Brander, K Cochrane, K Drinkwater, MGG Foreman, JA Hare, J Holt, S Ito, S Kim, JR King, H Loeng, BR MacKenzie, FJ Mueter, TA Okey, MA Peck, VI Radchenko, JC Rice, MJ Schirripa, A Yatsu, and Y Yamanaka. 2013. Projected impacts of climate change on marine fish and fisheries. ICES Journal of Marine Science 70(5):1023-1037. http://dx.doi.org/10.1093/icesjms/fst081

Hollowed, Anne B et al. 2016. Preliminary observations of the impact of anomalous ocean conditions on the distribution of marine fish in the Gulf of Alaska and California Current. Poster presented at the 2016 Alaska Marine Science Symposium.

Holmyard, N. 2014. Climate change: Implications for fisheries and aquaculture. University of Cambridge.

Hunt, GL, and PJ Stabeno. 2002. Climate change and the control of energy flow in the southeastern Bering Sea. Progress in Oceanography 55(1-2):5-22. http://dx.doi.org/10.1016/S0079-6611(02)00067-8

Hunt, GL, KO Coyle, LB Eisner, E. Farley, RA Heintz, F Mueter, JM Napp, JE Overland, PH Ressler, S Salo, and PJ Stabeno. 2011. Climate impacts on eastern Bering Sea foodwebs: A synthesis of new data and an assessment of the Oscillating Control Hypothesis. ICES Journal of Marine Science 68(6):1239-1243. http://dx.doi.org/10.1093/icesjms/fsr036

Hurst, TP, ER Fernandez and JT Mathis. 2013. Effects of ocean acidification on hatch size and larval growth of walleye pollock. ICES Journal of Marine Science 70:812-822. http://dx.doi.org/10.1093/icesjms/fst053

Ianelli, J, AB Hollowed, AC Haynie, FJ Mueter, and NA Bond. 2011. Evaluating management strategies for eastern Bering Sea walleye pollock *(Theragra chalcogramma)* in a changing environment. ICES Journal of Marine Science 68(6):1297-1304. http://dx.doi.org/10.1093/icesjms/fsr010

Irvine, JR, and M Fukuwaka. 2011. Pacific salmon abundance trends and climate change. ICES Journal of Marine Science 68(6):1122-1130. http://dx.doi.org/10.1093/icesjms/fsq199

Ishida, Y, and T Azumaya. 1999. Changes in abundance and biological character of Pacific salmon in the North Pacific Ocean 1972 to 1998. North Pacific Anadromous Fish Commission.

IUCN. Undated. Salmon and climate change. The IUCN Red List of Threatened Species.

Johnson, Fritz. Bristol Bay Economic Development Corporation, personal communication.

Johnson, T. 2004. Business tools and resources for Alaska salmon harvesters. Alaska Sea Grant Marine Advisory Bulletin 54.

Johnson, T. 2012. Fisheries adaptations to climate change. Alaska Sea Grant, University of Alaska Fairbanks. http://dx.doi.org/10.4027/facc.2012

Knapp, Gunnar. 2011. Kenai Peninsula climate change: Economic effects and strategies for adaptation. Presentation at Climate Friendly Refuge Workshop, 2011

Knapp, G, P Livingston, and A Tyler. 1998. Human effects of climate-related changes in Alaska commercial fisheries. Bering Sea Impact Study. http://www.besis.uaf.edu/besis-oct98-report/Fisheries.pdf.

Kruse, GH. 1998. Salmon run failures in 1997-1998: A link to anomalous ocean conditions? Alaska Fishery Research Bulletin 5(1).

Kruse, GH. 2007. What does climate change mean for Alaska's fisheries? Presentation. https://www.sfos.uaf.edu/news/2007/Kruse-ScienceforAlaska.pdf

Kruse, Gordon. Undated. Brief summary of climate change and fisheries research. University of Alaska Fairbanks.

Kruse, Gordon. University of Alaska Fairbanks, personal communication.

Lefebvre, KA, L Quakenbush, E Frame, K Burek Huntington, G Sheffield, R Stimmelmayr, A Bryan, P Kendrick, H Ziel, T Goldstein, JA Snyder, T Gelatt, F Gulland, B Dickerson, and V Gill. 2016. Prevalence of algal toxins in Alaskan marine mammals foraging in a changing arctic and subarctic environment. Harmful Algae 55:13-24. http://dx.doi.org/10.1016/j.hal.2016.01.007.

Leppi, J, DJ Rinella, RR Wilson, and WM Loya. 2014. Linking climate change projections for an Alaskan watershed to future coho salmon production. Global Change Biology 20(6):1808-1820. http://dx.doi.org/10.1111/gcb.12492

Link, JS, R Griffis, and S Busch (eds.) 2015. NOAA Fisheries climate science strategy. NOAA Tech Memo NMFS-F/SPO-155.

MacNeil, MA, NJ Graham, JE Cinner, NK Dulvy, PA Loring, S Jennings, NVC Polunin, AT Fisk, and TR McClanahan. 2010. Transitional states in marine fisheries: Adapting to predicted global change. Philosophical Transactions of The Royal Society 365(1558):3753-3763. http://dx.doi.org/10.1098/rstb.2010.0289

Mahon, R. 2002. Adaptation of fisheries and fishing communities to the impacts of climate change in the CARICOM Region. Fisheries and Environmental Consulting, Issues Paper.

Mathis, JT. 2014. Ocean Acidification Workshop, Anchorage, Alaska.

Mathis, JT, SR Cooley, N Lucey, S Colte, J Ekstrom, T Hurst, C Hauri, W Evans, JN Cross, and RA Feely. 2014. Ocean acidification risk assessment for Alaska's fishery sector. Progress in Oceanography 136:71-91. http://dx.doi.org/10.1016/j.pocean.2014.07.001

Mathis, JT, JN Cross, W Evans, and SC Doney. 2015. Ocean acidification in the surface waters of the Pacific-Arctic boundary regions. Oceanography 28(2):122-135. http://dx.doi.org/10.5670/oceanog.2015.36.

Mauger, S. 2013. Stream temperature monitoring network for Cook Inlet salmon streams 2008-2012. Cook Inletkeeper.

Mauger, Sue. 2016. Alaska's salmon streams in a changing climate. 2016 Workshop presentation on climate change adaptation

Mauger, Sue. Cook InletKeeper, personal communication.

McKittrick, Erin. Ground Truth Trekking, personal communication.

McKittrick, E, D Coil, and B Higman. 2013. Climate Change and Alaska Fisheries, Ground Truth Trekking.

Miller, B. 2015. Expert: We're 'locked-in' to 3 feet sea level rise. http://cnnphilippines.com/lifestyle/2015/08/28/Expert-Were-locked-in-to-3-feet-sea-level-rise.html

Miller, M. 2015. Return of The Blob. KTOO Juneau, May 5, 2015.

Miller, M. 2015. The Blob expands from Gulf of Alaska to Baja California. KTOO Juneau, June 2, 2015

Milstein, M. 2015. Puget Sound salmon face more ups and downs in river flows. NOAA Northwest Fisheries Science Center News, Feb. 2015.

Morado, F. 2007. Bitter crab syndrome: A major player in the global theater of marine crustacean disease. NOAA Alaska Fisheries Science Center Quarterly Report, July-Sept 2007.

Morrison, W, R Griffis, and E Seney. Undated. Managing marine fisheries in a changing climate. UNEP symposium report.

Mueter, FJ, and MA Litzow. 2008. Sea ice retreat alters the biogeography of the Bering Sea continental shelf. Ecological Applications 18(2):309-320. http://dx.doi.org/10.1890/07-0564.1

Mueter, FJ, RM Peterman, and BJ Pyper. 2002. Opposite effects of ocean temperature on survival rates of 120 stocks of Pacific salmon (*Oncorhynchus* spp.) in northern and southern areas. Canadian Journal of Fisheries and Aquatic Sciences 59(3):456-463. http://dx.doi.org/10.1139/f02-020

Mueter, FJ, NA Bond, JN Ianelli, and AB Hollowed. 2011. Expected declines in recruitment of walleye pollock (*Theragra chalcogramma*) in the eastern Bering Sea under future climate change. ICES Journal of Marine Science 68:1284-1296. http://dx.doi.org/10.1093/icesjms/fsr022

Mueter, FJ, C Ladd, MC Palmer, and BL Norcross. 2006. Bottom-up and top-down controls of walleye pollock on the eastern Bering Sea shelf. Progress in Oceanography 68(2-4):152-183. http://dx.doi.org/10.1016/j.pocean.2006.02.012

National Wildlife Federation. 2011. Climate change effects and adaptation approaches for marine and coastal ecosystems.

Nielsen, JL, GT Ruggerone, and CE Zimmerman. 2013. Adaptive strategies and life history characteristics in a warming climate: Salmon in the Arctic? Environmental Biology of Fishes 96:1187-1226. http://dx.doi.org/10.1007/s10641-012-0082-6

NOAA. 2012. Climate and fish sticks. NOAA Climate.gov, July 24, 2012

NOAA. 2013. A changing climate for endangered species. NOAA. http://www.nmfs.noaa.gov/stories/2013/12/12_4_2013climate_and_the_esa.html

NOAA. 2015a. Alaska Regional Office Strategic Plan 2016–2020. NOAA Fisheries.

NOAA. 2015b. Implications of less sea ice on fish production in the waters off Alaska. NOAA Alaska Fisheries Science Center News, May 5, 2015.

NOAA. 2015c. Invasive impact: What's the status of invasive species in Alaska? NOAA Fisheries press release, June 24, 2015.

NOAA. 2015d. Monitoring seawater reveals ocean acidification risks to Alaskan shellfish hatchery. NOAA Fisheries Research, July 1, 2015. http://www.noaanews.noaa.gov/stories2015/20150701-monitoring-seawater-reveals-ocean-acidification-risks-to-alaskan-shellfish-hatchery.html

NOAA. 2015e. NOAA Fisheries mobilizes to gauge unprecedented West Coast toxic algal bloom. NOAA Fisheries press release, June 15, 2015. http://www.westcoast.fisheries.noaa.gov/mediacenter/6.15.2015_final_algal_bloom_pr.pdf

NOAA. 2016a. NOAA/ESRL Physical Sciences Division, Boulder, CO. http://www.alaskapublic.org/2016/01/11/the-blob-on-winter-vacation-or-gone-for-good/

NOAA. 2016b. NOAA Alaska Fisheries Science Center. AFSC News, Feb. 10, 2016. www.afsc.noaa.gov/news/Regional_action_plan_Bering_Sea.htm

NOAA. Undated. NOAA and partners take action to help safeguard the nation's fish, wildlife, and plants in a changing climate. NOAA Office of Science and Technology.

NOAA, National Climate Assessment, Alaska Technical Report

NSIDC. 2012. National Snow and Ice Data Center. http://www.globalchange.gov/browse/multimedia/declining-sea-ice-extent

Ocean Acidification Research Center. Undated. Welcome to the Ocean Acidification Research Center. OARC, University of Alaska Fairbanks. https://www.sfos.uaf.edu/oarc/index.php

ODFW. 2015a. Higher water temperatures primary cause of early spring Chinook mortality. Oregon Department of Fish and Wildlife news release, June 18, 2015. http://www.dfw.state.or.us/news/2015/june/061815.asp

ODFW. 2015b. Bacterial infection kills sockeye salmon in Deschutes River. Oregon Department of Fish and Wildlife news release, July 8, 2015.

Oliver, SG. 2015. Lessons for Alaska: Oregon shellfish hatchery tackles ocean acidification. http://www.alaskapublic.org/2015/07/13/lessons-for-alaska-oregon-shellfish-hatchery-tackles-ocean-acidification/

Pettersen, T. 2015. Species from the Atlantic and the Pacific Oceans soon will start to mix. Barents Observer, Feb. 4, 2015.

Pfeiffer, Lisa, and Alan Haynie. 2011. Climate change and location choice in the Pacific cod longline fishery. Conference paper, American Fisheries Society 140th Annual Meeting, 2011.

Pickart, Bob. 2016. Impact of ice and wind on phytoplankton blooms in the Chukchi Sea in a changing climate. Presentation at the University of Alaska Fairbanks, May 24, 2016.

Pinsky, ML, and NJ Mantua. 2014. Emerging adaptation approaches for climate-ready fisheries management. Oceanography 27(4):146-159. http://dx.doi.org/10.5670/oceanog.2014.93

Portner, HO, and MA Peck. 2010. Climate change effects on fishes and fisheries: Towards a cause-and-effect understanding. Journal of Fish Biology 77(8):1745-1779. http://dx.doi.org/10.1111/j.1095-8649.2010.02783.x

Regnart, Jeff. Commercial Fisheries Division, Alaska Department of Fish and Game, personal communication.

Ridler, K. 2015. Half of Columbia River sockeye salmon dying due to warmer water. Associated Press, July 28, 2015.

Rojas-Rocha, X. 2014. Worsening ocean acidification threatens Alaska fisheries. sciencemag.org July 29, 2014.

Roncalli, V, JT Turner, D Kulis, DM Anderson, and PH Lenz. 2016. The effect of the toxic dinoflagellate *Alexandrium fundyense* on the fitness of the calanoid copepod *Calanus finmarchicus*. Harmful Algae 51:56-66. http://dx.doi.org/10.1016/j.hal.2015.11.003

Rosen, Y. 2015. Acidification takes toll on Beaufort Sea; threats loom in Chukchi and Bering. Alaska Dispatch News, June 15, 2015.

Rosenberg, EA, PW Keys, DB Booth, D Hartley, J Burkey, AC Steinemann, and DP Lettenmeier. 2010. Precipitation extremes and the impacts of climate change in stormwater infrastructure in Washington state. Climate Change 102:319-349. http://dx.doi.org/10.1007/s10584-010-9847-0

Sanders, J. 2015. Adapt, diversify or die in BC shellfish industry. Ocean Acidification Report 1(4)

Schindler, DE, DE Rogers, MD Scheuerell, and C Abrey. 2005. Effects of changing climate on zooplankton and juvenile sockeye salmon growth in southwestern Alaska. Ecology 86(1):198-209. http://dx.doi.org/10.1890/03-0408

Schlanger, Z. 2014. So long seafood! Ocean acidification projected to slam Alaskan fisheries. newsweek.com, 7/29/14.

Science Daily. 2009. Increased ocean acidification in Alaska waters, new findings show. Science Daily. sciencedaily.com/releases/2009/08/090813163158.htm

Science Daily. 2014. Ocean acidity is dissolving shells of tiny snails off U.S. West Coast. Science Daily. sciencedaily.com/releases/2014/04/140430101914.htm

Seattle Times, Feb. 24, 2016.

Shaul, LD, and HJ Geiger. 2015. Effects of climate and competition for ocean prey on runs of coho salmon to the Berners River in Southeast Alaska. In: Program and Abstracts, North Pacific Anadromous Fish Commission International Symposium on Pacific Salmon and Steelhead Production in a Changing Climate: Past, Present, and Future.

Shelton, C. 2014. Climate change adaptation in fisheries and aquaculture. FAO Fisheries and Aquaculture Circular No. 1088.

Sigler, M. 2012. Climate change and ocean acidification: Effects on Alaska fisheries. Presentation for Alaska Young Fishermen's Summit, 2012.

Sigler, M, A Haynie, A Himes-Cornell, A Hollowed, K Holsman, P Mundy, P Stabeno, S Zador, S Davis, and B Gerke. 2016. Regional Action Plan for Southeastern Bering Sea Climate Science (draft). NOAA Alaska Fisheries Science Center. http://www.afsc.noaa.gov/News/pdfs/NMFSClimateScienceStrategySoutheasternBering-Sea%20Feb%202016.pdf

Sigler, Mike. NOAA Fisheries, personal communication.

Smart, A. 2015. Toxic algae bloom west of Island threatens salmon. Times Colonist, June 20, 2015.

Spies, I, TK Wilderbuer, DG Nichol, and K Aydin. 2015. Assessment of the arrowtooth flounder stock in the eastern Bering Sea and Aleutian Islands. NOAA Alaska Fisheries Science Center, NPFMC SAFE. http://www.afsc.noaa.gov/REFM/Docs/2015/BSAIatf.pdf

Stelle, W. 2015. NOAA Fisheries is on the cutting edge of climate-change research when it comes to salmon. Seattle Times, Aug. 29, 2015.

Stopha, M. 2015. Alaska fisheries enhancement annual report 2015. Alaska Department of Fish and Game, Regional Information Report No. 5J16-03, p. 3.

Stram, DL, and DCK Evans. 2009. Fishery management responses to climate change in the North Pacific. ICES Journal of Marine Science 66(7):1633-1639. http://dx.doi.org/10.1093/icesjms/fsp138

Stram, DL, and JN Ianelli. 2009. Eastern Bering Sea pollock trawl fisheries: Variation in salmon bycatch over time and space. American Fisheries Society Symposium 70:827-850.

Strong, J, and KR Criddle. 2013. Fishing for pollock in a sea of change: A historical analysis of the Bering Sea pollock fishery. Alaska Sea Grant, University of Alaska Fairbanks. 188 pp. http://dx.doi.org/10.4027/fpschabspf.2013

Sullivan, J. Undated. *Ichthyophonus* in Yukon River salmon: What does it mean for subsistence and commercial fishing? Yukon River Drainage Fisheries Association.

Sullivan, Jane. University of Alaska Fairbanks, personal communication.

Taylor, SG. 2008. Climate warming causes phenological shift in pink salmon behavior at Auke Creek, Alaska. Global Change Biology 14:229-235. http://dx.doi.org/10.1111/j.1365-2486.2007.01494.x.

Tillman, P, and D Siemann. 2013. Climate change effects and adaptation approaches fin marine and coastal ecosystems of the North Pacific Landscape Conservation Cooperative region: Executive summary. In: Climate change effects and adaptation approaches for ecosystems, habitats, and species. A compilation of the scientific literature for the North Pacific Landscape Conservation Cooperative Region. National Wildlife Federation, December 2013.

US EPA. Undated. Climate impacts in Alaska. US Environmental Protection Agency. http://www3.epa.gov/climatechange/impacts/alaska.html

Van Pelt, T. (ed.) 2015. The Bering Sea Project: Understanding ecosystem processes in the Bering Sea. North Pacific Research Board.

Vega, SL. 2015. Marine-entry timing and growth rates of juvenile chum salmon in Alaskan waters of the Chukchi and northern Bering Seas. Master's thesis, University of Alaska Fairbanks.

Vestfals, Cathleen. Oregon State University, personal communication.

Volk, Eric. Alaska Department of Fish and Game, personal communication.

Walsh, B. 2013. Why warming oceans could mean dwindling fish. Time, http://science.time.com/2013/05/16/why-warming-oceans-could-mean-dwindling-fish/

Weingartner, Tom. University of Alaska Fairbanks, personal communication

Welch, C, and S Ringman 2011. Scientists fear ocean acidification will drive the collapse of Alaska's iconic crab fishery. Seattle Times. http://apps.seattletimes.com/reports/sea-change/2013/sep/11/alaska-crab-industry/

Welch, DW, Y Ishida, and K Nagasawa. 1998. Thermal limits and ocean migrations of sockeye salmon: Long-term consequences of global warming. Canadian Journal of Fisheries and Aquatic Sciences 55(4):937-948. http://dx.doi.org/10.1139/f98-023

Wisz, MS, O Broennimann, P Grønkjær, PR Møller, SM Olsen, D Swingedouw, RB Hedeholm, EE Nielsen, A Guisan, and L Pellissier. 2015. Arctic warming will promote Atlantic-Pacific fish interchange. Nature Climate Change 5:261-265. http://dx.doi.org/10.1038/nclimate2500

Wright, Bruce. Aleutian Pribilof Islands Association, personal communication.

Yasumiishi, Ellen et al. 2015. Alaska Marine Science Symposium presentation.

Zheng, J, and GH Kruse. 2000. Recruitment patterns of Alaskan crabs in relation to decadal shifts in climate and physical oceanography. ICES Journal of Marine Science 57:438-451. http://dx.doi.org/10.1006/jmsc.1999.0521

Zheng, J, and GH Kruse. 2003. Stock-recruitment relationships for three major Alaskan crab stocks. Fisheries Research 65:103-121. http://dx.doi.org/10.1016/j.fishres.2003.09.010

Zheng, J, and G Kruse. 2006. Recruitment variation of eastern Bering Sea crabs: Climate-forcing or top-down effects? Progress in Oceanography 68:184-204. http://dx.doi.org/10.1016/j.pocean.2006.02.002

CLIMATE CHANGE
AND ALASKA FISHERIES

Terry Johnson, Marine Advisory agent and professor
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This book summarizes knowledge of North Pacific climate change and its anticipated effects on Alaska fisheries through the middle of the 21st century. Based on scientific research and observations by the public and industry, the publication focuses on fisheries effects caused by long-term warming, looks at effects of climate variability phenomena, and considers ocean acidification. Author Terry Johnson concludes that during the working lifetime of today's younger fishermen, effects of long-term climate change on fisheries probably will be profound but not cataclysmic. In 30 years most existing fisheries will continue to be productive, with some becoming smaller and others flourishing. To survive and prosper, the industry must keep up to date on climate science, environmental changes, and advances in technology, finance, and the politics of resource management. Fishermen and communities will need to develop adaptive strategies.

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ORIGINAL RESEARCH

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From canopy to seed: Loss of snow drives directional changes in forest composition

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Abstract

Climate change is altering the conditions for tree recruitment, growth, and survival, and impacting forest community composition. Across southeast Alaska, USA, and British Columbia, Canada, *Callitropsis nootkatensis* (Alaska yellow-cedar) is experiencing extensive climate change-induced canopy mortality due to fine-root death during soil freezing events following warmer winters and the loss of insulating snowpack. Here, we examine the effects of ongoing, climate-driven canopy mortality on forest community composition and identify potential shifts in stand trajectories due to the loss of a single canopy species. We sampled canopy and regenerating forest communities across the extent of *C. nootkatensis* decline in southeast Alaska to quantify the effects of climate, community, and stand-level drivers on *C. nootkatensis* canopy mortality and regeneration as well as postdecline regenerating community composition. Across the plot network, *C. nootkatensis* exhibited significantly higher mortality than co-occurring conifers across all size classes and locations. Regenerating community composition was highly variable but closely related to the severity of *C. nootkatensis* mortality. *Callitropsis nootkatensis* canopy mortality was correlated with winter temperatures and precipitation as well as local soil drainage, with regenerating community composition and *C. nootkatensis* regeneration abundances best explained by available seed source. In areas of high *C. nootkatensis* mortality, *C. nootkatensis* regeneration was low and replaced by *Tsuga*. Our study suggests that climate-induced forest mortality is driving alternate successional pathways in forests where *C. nootkatensis* was once a major component. These pathways are likely to lead to long-term shifts in forest community composition and stand dynamics. Our analysis fills a critical knowledge gap on forest ecosystem response and rearrangement following the climate-driven decline of a single species, providing new insight into stand dynamics in a changing climate. As tree species across the globe are increasingly stressed by climate change-induced alteration of suitable habitat, identifying the autecological factors contributing to successful regeneration, or lack thereof, will provide key insight into forest resilience and persistence on the landscape.

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KEYWORDS
Callitropsis nootkatensis, climate change, community composition, diversity, forest mortality, yellow-cedar decline

1 | INTRODUCTION

Climate change is altering the conditions for tree recruitment, growth, and survival, and range shifts are a widely anticipated consequence of novel temperature and precipitation regimes. Local adaptation to historical climate is already creating mismatches between species' current distributions and suitable habitat conditions (Aitken & Bemmels, 2015; Aitken, Yeaman, Holliday, Wang, & Curtis-McLane, 2008), and these disparities are likely to be most extreme for seedlings, which have a narrower range of tolerance to climate conditions than mature individuals (Niinemets, 2010). As climate regimes shift, habitat suitable for survival of mature trees and the conditions necessary for germination and establishment may no longer correspond with each other, potentially leading to simultaneous canopy mortality and declines in regeneration, and, ultimately, shifts in species distributions (Walck, Hidayati, Dixon, Thompson, & Poschlod, 2011). The key to regeneration success and long-term survival will be continued synchronization of tree germination, establishment, and growth with local climate (Aitken & Bemmels, 2015). In contrast, asynchronization will likely lead to restructuring of forest communities through dieback (Oakes, Hennon, O'Hara, & Dirzo, 2014), regeneration failures (Holz, Wood, Veblen, & Bowman, 2015), or both (Anderegg, Kane, & Anderegg, 2013). Inhibition of conifer regeneration, for example, could lead to ecosystem type conversions (Allen & Breshears, 1998; Holz et al., 2015) and long-term changes in stand dynamics (Turner, Dale, & Everham, 1997). Thus, understanding the relative climatic tolerances of the mature and regeneration life phases of species is critical to predicting their response to climate change.

While the driving processes are difficult to disentangle, species range contractions consist of concurrent or sequential canopy mortality and regeneration failures. Climate change-induced canopy mortality is already a globally documented phenomenon (Allen, Breshears, & McDowell, 2015; Allen et al., 2010). Altered precipitation regimes (i.e., change in timing, amount, frequency, type) combined with simultaneous increases in temperature are leading to both drought mortality (Guarín & Taylor, 2005; Peng et al., 2011) and, at the other extreme, mortality attributed to earlier snowmelt and spring freezing events (Bourque, Cox, Allen, Arp, & Meng, 2005). Drought-induced canopy mortality is well-established (Allen et al., 2015; Anderegg et al., 2013), and recent studies have quantified the impacts of prolonged drought (Redmond, Weisberg, Cobb, & Clifford, 2018) and postfire drought conditions (Stevens-Rumann et al., 2017; Young et al., 2019) on regeneration. However, relatively little is known about the consequences of reduced snowpack and early season frost damage on canopy mortality and regeneration response, although these phenomena may become more common as the climate warms (Woldendorp, Hill, Doran, & Ball, 2008)—leading to root mortality and nutrient loss (Decker, Wang, Waite, & Scherbatskoy, 2003), needle and bud injury (Man, Kayahara, Dang, & Rice, 2009), canopy mortality (Buma, 2018), and seedling mortality (Camarero & Gutiérrez, 2004). Regardless of the climatic stressor, widespread canopy mortality is likely to be ongoing under the more extreme conditions predicted for the future, and under such conditions, range contraction potential will be governed by regeneration success or failure.

Not all climate-driven mortality will result in a range contraction, as regeneration after extensive mortality is dependent upon two conditions: (a) available sources of seed and/or vegetative reproduction and (b) the establishment environment (climatic, abiotic, and biotic). Seed supply generally decreases with a loss of mature trees (Tepley, Veblen, Perry, Stewart, & Naficy, 2016), and this loss can result in reductions in seedling abundances, lower recruitment into mature tree size classes, and the potential for local extirpation due to competition with nondecline-affected species (Oakes et al., 2014). Mortality of mature trees may, conversely, create more favorable establishment conditions by increasing available light and releasing advanced regeneration (Macek et al., 2017; Zeppenfeld et al., 2015) or leading to more successful germination and subsequent survival (Whitmore, 1989). Such increases in favorable microsites may partially offset canopy declines; under such conditions, regeneration of species declining in the canopy may increase despite a reduction in available seed—similar to pulses of recruitment following windthrow events (Dunn, Guntenspergen, & Dorney, 1983; Peterson & Pickett, 1995). Comparing the relative strength of seed source versus community competition and abiotic changes is therefore important in predicting the net effects of mortality and the potential for range shifts at broader scales—thus, resilience.

The effects of canopy mortality on regeneration are, however, difficult to isolate, as climate change-induced canopy mortality often leads to concurrent decline of multiple species. Concurrent declines challenge our ability to identify the factors driving reductions in suitable habitat for mature tree survival versus those leading to regeneration failures for individual species, as a variety of interspecific relationships are changing simultaneously. Simplified systems in which a single species undergoes climate-related mortality in isolation of climate effects on co-occurring species provide a means of parsing out the effects of climate change on mortality, regeneration, and the resultant ecological community.

Across the North Pacific coastal temperate rainforest (NPCTR) of southeast Alaska, USA, and British Columbia, Canada, *Callitropsis nootkatensis*, D. Don, Oesrt. Ex D.P. Little (Alaska yellow-cedar) is experiencing extensive, climate change-driven mortality over more than 400,000 ha and ten degrees of latitude (Buma et al., 2017).

Regional wintertime temperatures average 0°C; thus, a slight warming results in significant snow loss (Buma, 2018). Subfreezing weather events following snowmelt in late winter and early spring kills fine roots of mature *C. nootkatensis* (Hennon et al., 2016; Schaberg, Hennon, D'amore, & Hawley, 2008), and this phenomenon has been ongoing for several decades (Beier, Sink, Hennon, D'Amore, & Juday, 2008; Hennon, D'Amore, Schaberg, Wittwer, & Shanley, 2012). Mortality drivers in this complex pathway include the limited cold tolerance of roots, a reduction in insulating snowpack due to warmer winters, soil freezing due to lack of insulation, and a positive feedback loop in which canopy gaps in declining forests lead to further reductions in springtime snowpack (Beier et al., 2008; Schaberg et al., 2008). Given predicted future climate conditions, *C. nootkatensis* is likely to experience continued decline over most of its range (Buma, 2018) and be replaced by other regionally dominant conifers (Oakes et al., 2014). Co-occurring *Tsuga heterophylla* Raf. (Sarg) (western hemlock) and *Picea sitchensis* Bong. (Carr) (Sitka spruce) are not considered sensitive to snow loss (Buma & Barrett, 2015) and may increase in dominance when *C. nootkatensis* fails to regenerate (Oakes et al., 2014). Yet, despite extensive research on the drivers of decline (Barrett, Latta, Hennon, & Eskelson, 2012; Buma et al., 2017; Hennon et al., 2012; Hennon, Hansen, & Shaw, 1990; Hennon & Shaw, 1997; Hennon, Shaw, & Hansen, 1990; Schaberg et al., 2008), little is known about *C. nootkatensis* regeneration following canopy mortality, and the fate of *C. nootkatensis* and long-term dynamics of affected forests remain unknown.

To address these knowledge gaps and isolate the conditions differentiating habitat suitable for mature tree survival versus those key to successful regeneration in a climate mortality-affected system, we sampled declining *C. nootkatensis* forests over a five-degree latitude range in the NPCTR of southeast Alaska to ask the following: (a) "Does climate-induced mortality occur across all size classes of the affected species, and, specifically, does regeneration response correspond with the same climate conditions driving mortality?", (b) "If response is differential, what climatic and community factors drive tree mortality versus postdecline composition of the regenerating community?", and (c) "Is community composition stable or in the process of a decline-induced shift?". Our analysis provides new insight into stand dynamics in a changing climate by increasing understanding of forest ecosystem response and rearrangement following the decline of a single species. Obtaining information on life stage response to climate-induced mortality, postdecline community composition, and stand dynamics in the NPCTR and beyond will be essential to scientifically based forest management and vital to supporting conservation efforts in the face of climate change.

2 | METHODS

2.1 | Study area and species

Callitropsis nootkatensis is distributed across ~20° of latitude from northern California into Prince William Sound, Alaska (DellaSala et al., 2011). Half of the species' range occurs in the perhumid region of the NPCTR (10° of the 20° latitudinal distribution), where this study occurs, which is characterized by mild, consistently humid conditions and high annual precipitation (3,182 mm average, 621–9,332 range; extracted from ClimateWNA, Wang, Hamann, Spittlehouse, & Carroll, 2016). Across the NPCTR, *C. nootkatensis* co-occurs with *Picea sitchensis*, *Pinus contorta ssp. contorta* Douglas Ex. Louden (shore pine), *Thuja plicata* Donn ex D. Don (western redcedar), *Tsuga heterophylla*, and *Tsuga mertensiana* (Bong.) Carriere. *Sphagnum* spp. are common in areas of poor drainage and low forest productivity, decreasing in abundance with increasing slope and increasing depth to groundwater (Bisbing, Cooper, D'Amore, & Marshall, 2016; Neiland, 1971).

Callitropsis nootkatensis is locally distributed across the NPCTR's hydrologic gradient from emergent wetlands to upland forests, which corresponds to a gradient of low to high forest productivity (Hennon et al., 2012, 2016). This gradient drives the distribution, abundance, and biomass of the region's dominant tree species (Bisbing et al., 2016), with low-lying saturated peatlands limiting the success of most species but providing low-competition environments for stress-tolerant species, such as *P. contorta* (Bisbing et al., 2016) and *C. nootkatensis* (Caouette et al., 2015; Hennon, Hansen, et al., 1990). Background mortality rates in healthy *C. nootkatensis* forests average <25% (Hennon, Hansen, et al., 1990).

Callitropsis nootkatensis regeneration occurs via seed but also through vegetative reproduction. Vegetative layering is particularly common on lower-productivity peatlands with poor drainage and/or high snow cover; lower limbs will produce adventitious roots when depressed by accumulating *Sphagnum* and snow (Hennon et al., 2016). Individuals recruited through vegetative layering often persist on these lower-productivity peatlands despite mature tree mortality.

2.2 | Plot design and sampling

A total of 67 plots were compiled from published (Oakes et al., 2014) and ongoing research by the authors in the perhumid NPCTR subregion of southeast Alaska (Figure 1). This plot network represents all compatible studies in the region, with compatible defined as those including both regeneration and canopy community data, precise locations, comparable methodologies, and comparable scales. Due to aggregating across sources and studies, each with their own goals, plots were not randomly distributed across the region. However, the data products were compatible and collectively allowed for analysis of regeneration response to the canopy decline severity gradient.

Plots installed by Oakes and colleagues (2014, n = 50) were randomly selected from areas stratified by *C. nootkatensis* status—live forests (n = 20) and three time-since-mortality classes (n = 10 each in recent, mid-range, and old) on Chichagof Island and in Glacier Bay National Park (installed in 2011–2012, Figure 1). These plots represent the northernmost extent of the contiguous species distribution while also approaching the northernmost extent of documented decline. Data were collected in nested, fixed-radius plots: (a) 10.3m radius (~333 m^2) for mature trees (>25 cm diameter at breast

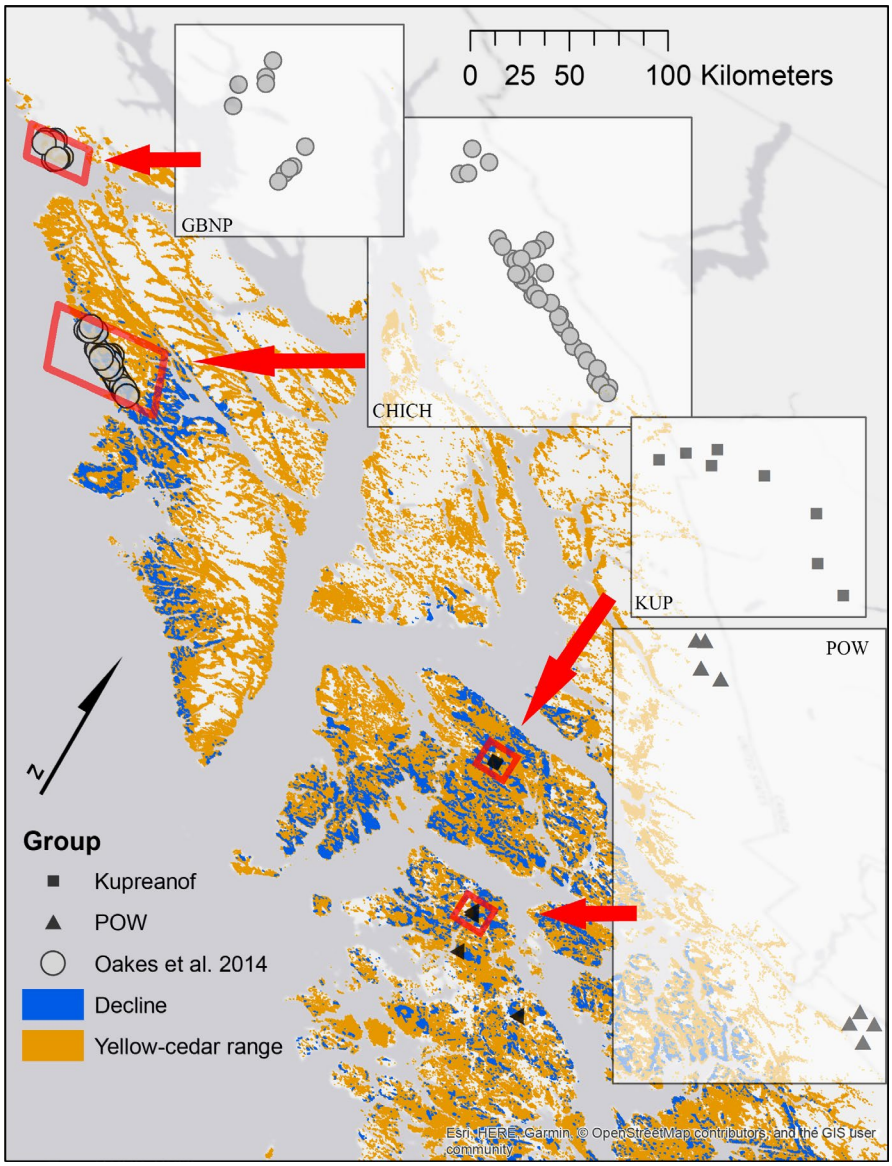

FIGURE 1 Map of *Callitropsis nootkatensis* plot network distributed across southeast Alaska. Previously established plots were installed by Oakes and colleagues in 2011 and 2012 in Glacier Bay National Park (GBNP) and Chichagof Island (CHICH), and additional plots were installed by the authors in 2015 and 2016 on Kupreanof Island (KUP) and Prince of Wales Island (POW). Inset plots for illustration of the numerical distribution of plots only (scale varies). For a complete range and decline map, see Buma et al. (2017) or Buma (2018)

height, DBH) and (b) 6m radius (~113 m^2) for saplings (<2.5 cm DBH and >1 m in height), treelets (2.5–9.9 cm DBH), and small trees (10–24.9 cm DBH, see Oakes et al., 2014 for details). In addition, conifer germinants and seedlings (<10 cm height) were sampled using eight one-m^2 quadrats (8m^2 total area sampled) installed in the cardinal directions at five and eight meters from plot center.

To extend inference across *C. nootkatensis*' distribution in southeast Alaska, we leveraged 17 additional nested, fixed-radius plots on Kupreanof and Prince of Wales Islands (installed 2015–2016, Figure 1). Mature and small trees (>10 cm DBH) were sampled over a 400-m^2 plot. Treelets, saplings, and advanced regeneration (>10 cm but <1.37m in height) were sampled in a nested 100-m^2 plot. Germinants and seedlings (<10 cm height) were tallied by species in four one-m^2 quadrats at the corners of the 400-m^2 plot (16 m^2 total area sampled). Hereafter, the term regeneration refers to the combined germinant and seedling classes, including all recently emerged germinants (i.e., cotyledons still visible) to seedlings less than 10cm in height and, presumably, <2 years of age.

Across all plots, species, DBH, tree status (live/dead), live crown condition, and snag class were sampled for all trees. Snags were identified to species, if possible, and *C. nootkatensis* snags classified into time-since-mortality classes according to Hennon, Shaw, et al. (1990). Unidentifiable snags were classified as unknown species. Additionally, regeneration was identified to the genus for *Tsuga* germinants (*heterophylla* and *mertensiana*) but to the species for all other species and size classes. Disturbed areas (e.g., windthrow, landslides) were eliminated from plot selection to avoid the confounding influence of disturbance on community composition.

2.3 | Environmental variables

Climate data were extracted from ClimateWNA v5.51 (http://www.climatewna.com, Wang et al., 2016), which provides spatially interpolated, locally downscaled climate data and derived biologically relevant climate variables. Data were obtained for three date ranges to capture drivers of ongoing decline and regeneration—the last few

decades (30-year normal, 1981–2010), the five-year period prior to and including sampling year (five-year average, range 2007–2016), and the year of sampling (annual, range: 2011–2016). Annual data were used to evaluate the influence of current year conditions on the regenerating community, while data from the five-year period were used to quantify the influence of multiyear climate on canopy mortality, potential seed availability and viability, and regenerating community composition. A five-year window was selected for two reasons: (a) *C. nootkatensis* cones take two to three years to mature and produce viable seed (Bonner & Karrfalt, 2008), and (b) we focus regeneration analysis on individuals presumed to be up to two years of age.

Prior to analysis, we ran a correlation analysis to reduce the full set of ClimateWNA variables to a minimally correlated set (<0.65) while retaining those considered biologically important in *C. nootkatensis* decline, including winter and spring temperatures and precipitation, length of the growing season, and frost period (Buma et al., 2017; Hennon et al., 2012). The following variables were selected as potential predictors: winter (December–February) and spring (March–May) minimum and maximum temperatures (°C); winter, spring, summer (June–August), and average annual precipitation (mm); number of frost-free days in winter and spring (days); average annual length of growing season (frost-free days), date of first frost (Julian date); and annual precipitation as snow (mm; Table 1).

Local topographic data were obtained from the NASA ASTER mission (30m resolution, LP DAAC 2017) and used to derive elevation, slope, and aspect. To assess the role of local soil drainage, which influences competition and rooting, we selected two metrics operating at different scales. At the local scale, we used *Sphagnum* coverage. To do so, we sampled bryophyte (n = 67) and *Sphagnum* (subset, n = 12) cover on replicate 1-m^2 quadrats (8–10 per plot). Bryophyte coverage was correlated with *Sphagnum*-specific coverage, so, on plots with bryophyte coverage only, a log-linear model was created to estimate *Sphagnum* coverage (R^2 = 0.48, F = 15.81 on 1,15 df, p < 0.001). Predicted *Sphagnum* coverages were used in overall model creation. At the landscape scale, we used contributing area derived from the ASTER elevation data, a metric of upslope area potentially contributing runoff to a location in which higher values

TABLE 1 Potential predictor variables included in regression tree modeling of *Callitropsis nootkatensis* (CANO) mortality and regeneration abundance following decline

Factors	Variables	Unit
Location	Group	Study area
Time	Time since onset of mortality	Years
Competition	CANO, PICO, PISI, THPL, TSHE, TSME	Live basal area in m^2/ha
	CANO, PICO, PISI, THPL, TSHE, TSME, Unknown, and Unknown *Tsuga*	Dead basal area in m^2/ha
	Total live basal area	m^2/ha
	Total dead basal area	m^2/ha
	Sphagnum coverage	Percent
Climate (annual, 5-year period, 30-year normal from 1981 to 2010)	Maximum and minimum temperatures: winter, spring	C
	Precipitation: winter, spring, summer, annual	mm
	Length of growing season	Days
	Frost-free days: winter, spring	Days
	Date of first frost	Julian Date
	Precipitation as snow	mm
Topographic	Elevation	Meters
	Aspect	Degrees
	Slope	Degrees
	Contributing area	Log_{10} (m^2)
	Wind exposure (Buma & Barrett, 2015)	1–8
	Landslide likelihood (Buma & Johnson, 2015)	0–1

Abbreviations: PICO, *Pinus contorta* spp. *contorta*; PISI, *Picea sitchensis*; THPL, *Thuja plicata*; TSHE, *Tsuga heterophylla*; and TSME, *Tsuga mertensiana*.

indicate wetter, lower-lying areas. All data processing and subsequent analyses were conducted in R version 3.4.1. (R Core Team, 2018)

2.4 | Data analyses

To control for the possibility of general forest declines, which would affect all species and obscure *C. nootkatensis*-specific mortality, we used simple linear regressions to assess the correlation between the proportion of dead *C. nootkatensis* (log-transformed) as compared to that of the other dominant co-occurring tree species, and Kruskal–Wallis tests for nonparametric, ranked data to assess variation in proportional mortality among species, locations, and size classes (as defined above). There were no significant concurrent declines in any co-occurring species ($p > 0.05$), so we focused subsequent mortality analyses on *C. nootkatensis* alone. We also used a Kruskal–Wallis analysis to test for significant differences in live tree abundances among species and locations. We then tested for significant differences in canopy and regenerating community composition among locations and as related to *C. nootkatensis* mortality with multivariate analysis of variance (MANOVA) tests using Bray–Curtis distances in the *vegan* package. The proportion of dead *C. nootkatensis* in the canopy (dead *C. nootkatensis* out of total *C. nootkatensis*) was also compared to regeneration density using a negative log-transformed linear regression. In Kruskal–Wallis and MANOVA tests, proportional mortality was categorized into the following mortality severity classes: low = 1%–25%, moderate = 25.1%–69.9%, high = 70%–99%, and all = 100%.

Next, we compared drivers of *C. nootkatensis* canopy mortality versus regeneration. Two random forests analyses were run—one to model the proportion of dead *C. nootkatensis* in the canopy and another the abundance of *C. nootkatensis* regeneration. Both were based on potential drivers related to climate, disturbance exposure, topography, drainage, and competition (Table 1). Random forests, an extension of regression tree analysis (Breiman, 2001), are well suited for complex, nonlinear interactions between variables and generally perform better than other methods in predictive accuracy (Prasad, Iverson, & Liaw, 2006).

We took a two-step process similar to importance-based variable selection procedures (Evans & Cushman, 2009). First, an initial forest was grown using all potential variables, and variable importance was calculated, based on the decrease in accuracy on the out-of-bag sample (independent data points not used in building the tree used for testing) when each variable is permuted compared to the original tree. This is averaged across all trees in the forest. Variables were then assessed for cross correlation with each other. The top ten important uncorrelated variables (<0.65) were retained. This was necessary as, while random forests are not generally subject to overfitting due to correlated variables, correlation between variables often means several highly correlated variables may all be simultaneously considered of high importance. While this may not be an impediment to modeling accuracy (Fox et al., 2017), it interferes with our ability to interpret the random forest outputs versus our hypotheses. Instead, the top uncorrelated variables were used to create a second, final model. Our model was then investigated for the marginal influence of the most important variables on proportion dead and regeneration density by running the final model while varying the single variable of interest and plotting projected values (sometimes called a partial plot). We used the *randomForest* package for analyses.

To determine regenerating community types and identify potential shifts in community composition, we analyzed conifer regeneration abundances across all sampling locations using a cluster analysis with the Bray–Curtis distance measure and Ward's hierarchical agglomerative method in the *vegan* package. Community types were determined with an indicator species analysis within the *indicspecies* package; the appropriate number of community types was classified by maximizing the number of statistically significant indicator species in each group (Dufrêne & Legendre, 1997). We assessed differences in community composition and cluster types with Kruskal–Wallis tests for nonparametric, ranked data, including location, time since mortality, and proportional mortality severity class as potential predictors.

We then used a suite of nonparametric, multivariate analyses to compare patterns in and identify drivers of regenerating community composition. First, we performed nonmetric multidimensional scaling (NMS) ordinations on regeneration abundances based on Bray–Curtis dissimilarity with the *vegan* package (Oksanen et al., 2007). Nonmetric multidimensional scaling avoids the assumption of linear or unimodal responses so is well suited to non-normal plant community data (McCune, Grace, & Urban, 2002). We employed permutational vector fitting (999 permutations) on biologically significant yet minimally correlated variables (<0.65, detailed above, Table 1) using a multiple linear regression technique with the *envfit* function to assess relationships between NMS ordinations of community structure and this reduced set of climate, community, and stand-level variables. Variables identified as significant using *envfit* were then evaluated with a generalized additive model to test for linear fit, and variables representing nonlinear relationships were removed from the final model.

3 | RESULTS

3.1 | Community composition, canopy mortality, and regeneration

Tree diversity is generally low in the region (Caouette et al., 2015; Neiland, 1971), and despite the latitudinal range, all plots were similar in species composition. The canopy was a mixed-conifer forest of *Tsuga (heterophylla* and/or *mertensiana*), *P. sitchensis*, and *C. nootkatensis*. *Picea sitchensis*, although common in the region, was rare on the plot network, with only one tree documented on many of the plots. *Pinus contorta* occurred in peatlands on Chichagof Island, while *T. plicata* was found only at higher elevations on Prince of Wales Island (other plots fell outside *T. plicata*'s range). Total basal area ranged from 9 to 87 m^2/ha, and higher *C. nootkatensis* basal areas were generally found on higher productivity, upland forests or in areas north of the decline (Table A1). *Callitropsis nootkatensis* regeneration abundance ranged from 0 to 9.6 per m^2 (mean 1.9/m^2, median = 1/m^2; Table A1).

Mortality was documented in each of the most common conifers on the plot network (*C. nootkatensis*, *P. sitchensis*, *T. heterophylla*, *T. mertensiana;* Figure 2) and across all size classes, but, with the exception of *C. nootkatensis*, proportions were in line with or lower than expectations of snag abundances for the region (Deal, Oliver, & Bormann, 1991; Hennon, Hansen, et al., 1990; Hennon & McClellan, 2003). Proportional mortality in mature *P. sitchensis* was high on Kupreanof Island (Figure 2), but this was driven by a lack of trees on the plot network (two dead of three total trees on eight plots). Mortality of less common *P. contorta* occurred only on Chichagof Island (mean = 30% ± 3% for mature and small trees), and no mortality was documented for *T. plicata*.

Callitropsis nootkatensis mortality did occur across all tree size classes (mature, small, and treelet; Figure 2), and estimated time since *C. nootkatensis* mortality ranged from 0 (in healthy stands) to 75 years (Table A1). Mortality was not documented in sapling and seedling size classes, likely due to the short-lived nature of this fine material. The proportion of dead *C. nootkatensis* averaged 74% (median = 75%, range = 4%–100%) across the extent of decline, while background mortality in healthy stands north of the decline averaged 16% (median = 12%, range = 0.01%–43%). Mortality of common co-occurring conifers was significantly lower than that of *C. nootkatensis* (Kruskal–Wallis chi-squared = 160.45, $df = 3$, $p < 0.001$). Canopy mortality was also significantly different among co-occurring species (Kruskal–Wallis chi-squared = 33.79, $df = 3$, $p < 0.001$); however, within-species mortality was not significantly different between size classes (NS within species, Kruskal–Wallis chi-squared (species pooled) = 2.77, $df = 2$, $p > 0.05$) or locations (NS within species, Kruskal–Wallis chi-squared (species pooled) = 6.81, $df = 3$, $p > 0.05$).

Species abundances were significantly different within both the canopy and regenerating communities. Live tree abundances varied by species (Kruskal–Wallis chi-squared = 43.17, $df = 5$, $p < 0.001$), but significance was driven by variation in live *C. nootkatensis* among sampling locations (Kruskal–Wallis chi-squared = 9.83, $df = 4$, $p < 0.05$). Live, mature *C. nootkatensis* continued to dominate the canopy in Glacier Bay National Park (mean dead = 8%), an area currently north of the region of decline, but was a minor component (>50% dead across all plots, mean = 75%) at the southern end of decline on Prince of Wales Island (Figure 3a). Canopy community composition (Figure 3a) varied significantly by location (MANOVA $R^2 = 0.13$, $df = 3$, $p < 0.001$) and as a function of the severity of *C. nootkatensis* mortality (MANOVA $R^2 = 0.29$, $df = 3$, $p < 0.001$). Regenerating community composition (Figure 3b) was highly variable among locations (MANOVA $R^2 = 0.29$, $df = 3$, $p < 0.001$) but closely related to canopy condition (Figure 3a) and the severity of *C. nootkatensis* mortality (MANOVA $R^2 = 0.09$, $df = 3$, $p < 0.05$). Areas of high severity *C. nootkatensis* mortality had the lowest abundances of *C. nootkatensis* regeneration (Kruskal–Wallis chi-squared = 23.02, $df = 3$, $p < 0.001$, Figure 3a, b). *Tsuga* species dominated the regenerating community across all locations and were the principal regenerating species in areas of high decline (Figure 3b).

3.2 | Climate and community drivers of mortality and regeneration

In the random forests model, higher *C. nootkatensis* mortality was correlated with cool winter temperatures and lower winter precipitation as well as two metrics of soil drainage—moderate *Sphagnum* percentage and higher slopes (mean squared residuals = 0.06, variance explained = 0.40; Figure 4). As a result, the highest proportional mortality on the plot network was found in cooler, relatively drier regions and on higher productivity upland forests.

Callitropsis nootkatensis regeneration abundances were strongly correlated with stand condition and canopy composition (variance

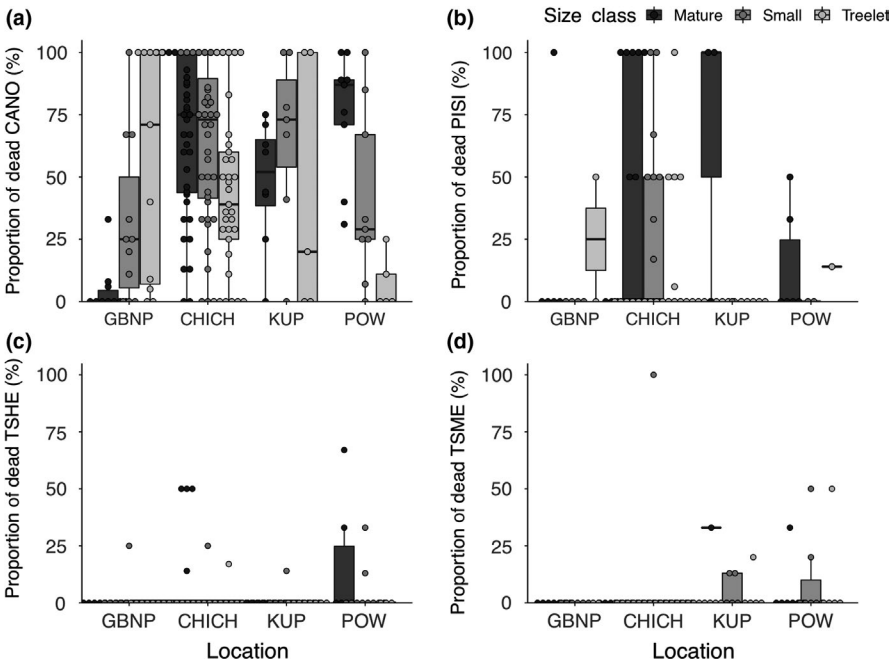

FIGURE 2 Proportional mortality (dots = plot-level data, boxplot = median and range) of common canopy species of southeast Alaska: (a) *Callitropsis nootkatensis* (CANO), (b) *Picea sitchensis* (PISI), (c) *Tsuga heterophylla* (TSHE), and (d) *Tsuga mertensiana* (TSME). Proportional mortality was significantly different among species ($p < 0.001$) but not among size classes within a species ($p > 0.05$). CANO mortality was not significantly different among locations ($p > 0.05$). CHICH, Chichagof Island; GBNP, Glacier Bay National Park; KUP, Kupreanof Island; and POW, Prince of Wales Island. Note that for KUP PISI, proportional mortality is pulled from only three trees across all sampled plots, so it is not representative of regional PISI mortality

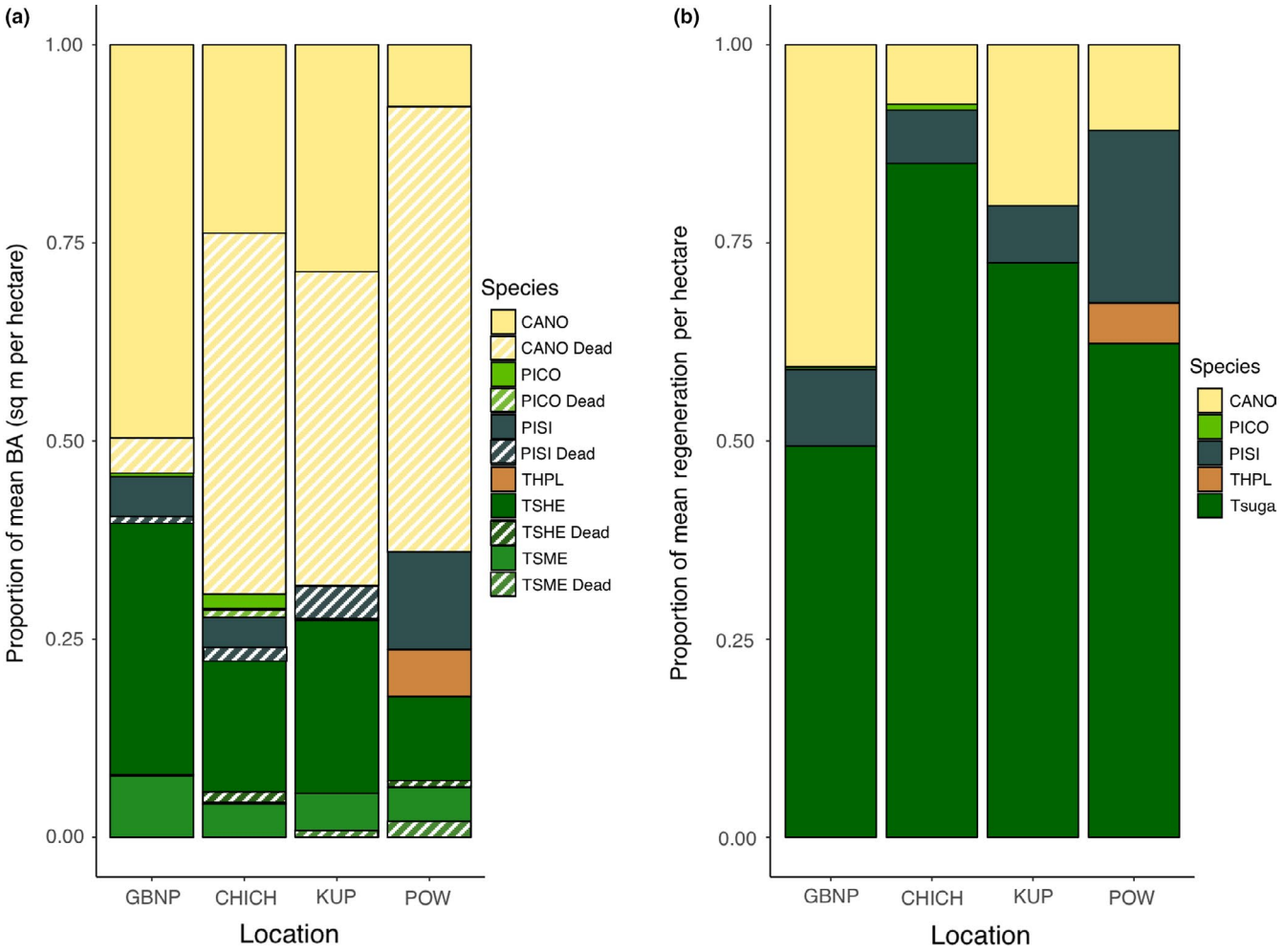

FIGURE 3 (a) Proportion of average canopy (mature trees, small trees, treelets, and saplings) live and dead basal area per hectare by species and location across southeast *Callitropsis nootkatensis* plot network. (b) Proportion of average regeneration densities (germinants and seedlings per hectare) by species and location across southeast *C. nootkatensis* plot network. CANO, *Callitropsis nootkatensis*; CHICH, Chichagof Island; GBNP, Glacier Bay National Park; KUP, Kupreanof Island; PICO, *Pinus contorta*; PISI, *Picea sitchensis*; POW, Prince of Wales Island; THPL, *Thuja plicata*; *Tsuga*, hemlock species. Community composition was significantly different among locations ($p < 0.001$) for the canopy and regenerating communities and across the severity of *C. nootkatensis* mortality ($p < 0.05$) for the regenerating community

explained = 0.45; mean squared residuals = 2.02). The top four variables in the model were basal area of dead and live *C. nootkatensis*, total live stand basal area (all species), and contributing area (Figure 5). *Callitropsis nootkatensis* basal area was the most important variable in explaining regeneration abundance, with higher regeneration in areas with a greater proportion of live *C. nootkatensis* in the canopy and a lower proportion of dead *C. nootkatensis* (Figure 5). This was corroborated by the direct comparison between canopy mortality and regeneration; regeneration (log-transformed) was negatively correlated with increasing mortality ($p < 0.001$, $r^2 = 0.38$, $F = 40.64$ on 1,65 *df*; Figure 6).

3.3 | Response and stability in regenerating community composition

Four regenerating community types were identified in the cluster and indicator species analysis. Community types were largely determined by extent of *C. nootkatensis* decline, with communities assigned to mixed-conifer (Mixed), *C. nootkatensis* (CANO), *Tsuga-P. sitchensis* (Tsuga-PISI), or *P.contorta* (PICO) clusters (Figure 7). The Mixed type was highly variable in location, climate, and drainage condition (no significant indicator species scores (ISS), $p > 0.05$; Figure 7). The CANO type occurred in low slope, lower-productivity plots in areas of low *C. nootkatensis* mortality (ISS = 70, $p < 0.01$). The Tsuga-PISI type was found on steeper slope, higher productivity plots and consisted of *Tsuga* (ISS = 81, $p < 0.01$) and *P. sitchensis* (ISS = 72, $p < 0.05$) in areas of moderate to complete *C. nootkatensis* mortality. The PICO type was assigned to low slope, lower-productivity peatlands with high bryophyte coverage (ISS = 60, $p < 0.05$). Plots of similar condition generally clustered into the same community types; plots with high to complete *C. nootkatensis* mortality were regenerating to Tsuga-PISI or PICO, with *C. nootkatensis* regeneration dominating in low mortality, lower-productivity peatlands. Location (Kruskal–Wallis chi-squared = 19.07, *df* = 3,

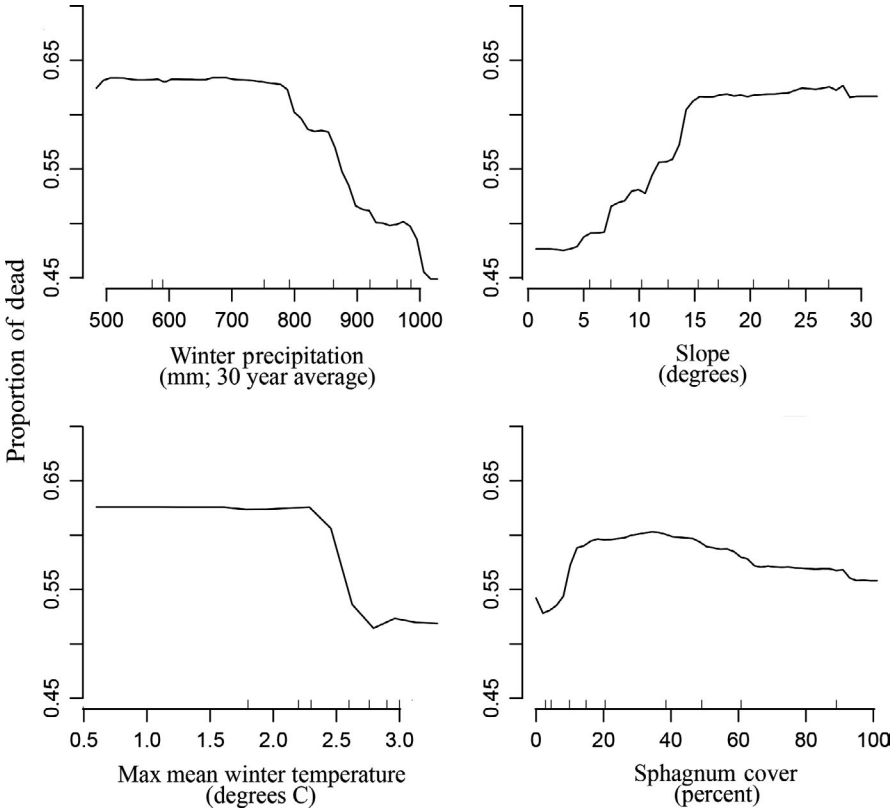

FIGURE 4 Change in predicted percent of mortality (modeled as proportion of dead *Callitropsis nootkatensis*) on the plot network as driven by the top four most significant uncorrelated variables in the final model. Y-axis is the modeled mortality percentage as a function of the overall random forest model while varying the top for variables, respectively. For example, mortality generally declines in areas of higher winter precipitation and lower slopes

$p < 0.001$), severity of *C. nootkatensis* mortality (Kruskal–Wallis chi-squared = 19.94, $df = 3$, $p < 0.001$), and time since mortality (Kruskal–Wallis chi-squared = 15.78, $df = 3$, $p < 0.01$) were significant predictors of regenerating community types, indicating that climate and both the timing and the extent of decline are primary determinants of community composition stability.

In areas of high *C. nootkatensis* decline, *C. nootkatensis* regeneration was low and replaced by *Tsuga* spp. (Figure 7), and community

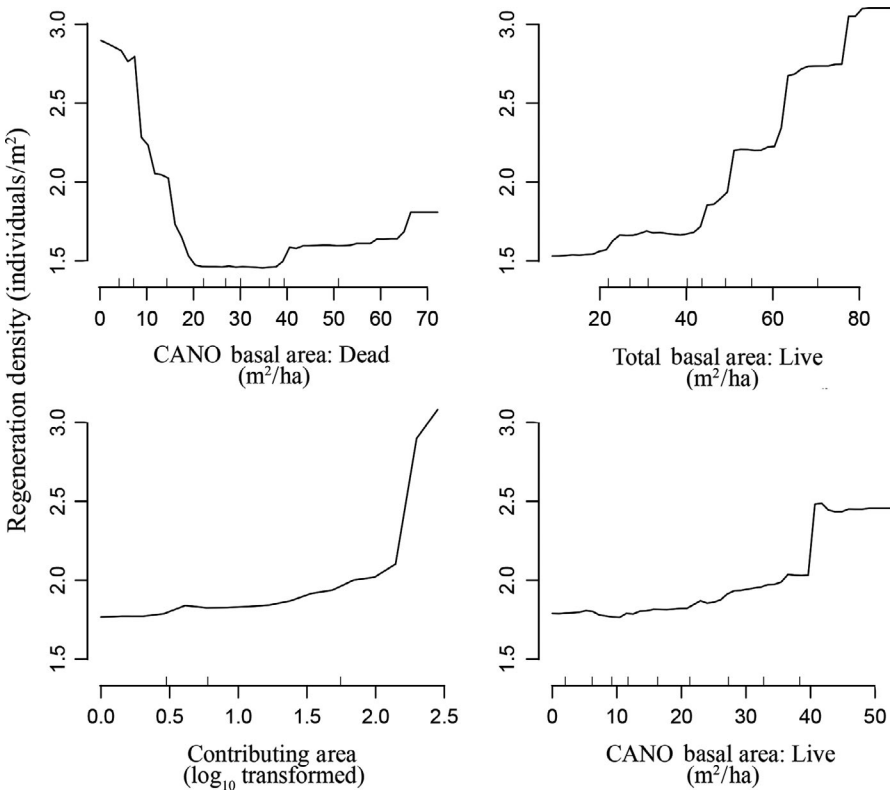

FIGURE 5 Change in predicted *Callitropsis nootkatensis* regeneration densities on the plot network as driven by the top four most significant uncorrelated variables in the final model. There is a clear relationship between forest health, seed source, and regeneration, with higher densities seen in areas of lower *C. nootkatensis* mortality, higher live *C. nootkatensis* (presumably seed source), and higher overall basal area. Higher densities are also found in wetter landscapes, with a higher contributing area

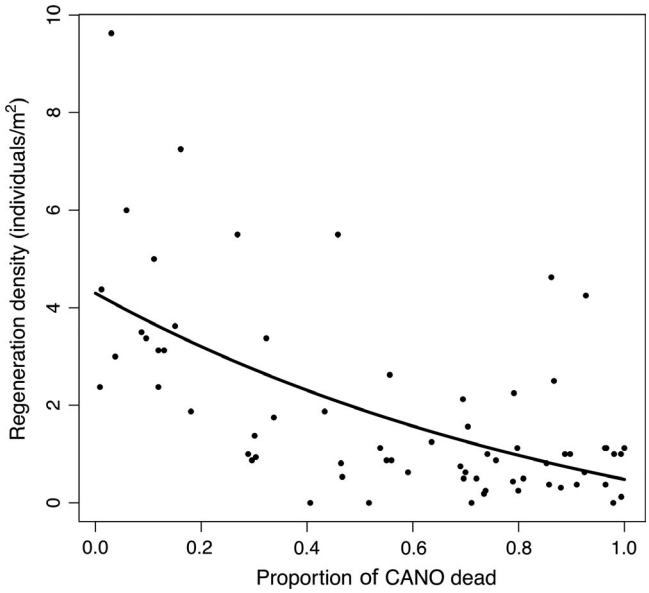

FIGURE 6 *Callitropsis nootkatensis* (CANO) regeneration densities (individuals per square meter) per plot (black, filled circles) as a function of the proportion of dead *C.nootkatensis* in the canopy. Regeneration densities decline with increasing severity of canopy mortality ($p < 0.001$)

composition was best explained by the following climatic variables in NMS analysis and vector fitting: maximum winter temperature ($R^2 = 0.30$, $p < 0.001$) and five-year average precipitation as snow ($R^2 = 0.22$, $p < 0.001$; Figure 7). Canopy community composition and stand characteristics additionally explained regenerating community composition; *P. contorta* ($R^2 = 0.27$, $p < 0.001$) and *P. sitchensis* ($R^2 = 0.12$, $p < 0.05$) live basal area plus slope ($R^2 = 0.10$, $p < 0.05$) drove community clustering (Figure 7). Variation in community composition was best explained by two axes (final stress = 0.10, nonmetric $R^2 = 0.99$, linear $R^2 = 0.96$). Axis 1 relates to a gradient of canopy mortality and local hydrologic condition (and associated ecosystem productivity), with *C. nootkatensis* successfully regenerating on low slope peatlands and *Tsuga* species dominating well-drained upland forests (Figure 7). Axis 2 divides forest ecosystem types by productivity (*P. contorta*-dominated peatlands from *Tsuga*–*P. sitchensis* upland forests).

4 | DISCUSSION

As the climate changes, successful tree regeneration is threatened by novel climate and disturbance conditions and associated shifts in canopy community composition. Our study highlights how species-specific sensitivity to climate change can lead to restructuring of the forest community following canopy mortality. We demonstrate that reductions in both mature tree and regeneration abundances after single-species mortality events occur via the same mechanism—death of mature, seed-producing trees. In the case of *C. nootkatensis*, our work suggests that climate-induced forest mortality is driving alternate successional pathways in forests where *C. nootkatensis* was once a major component, which is likely to lead to long-term shifts in community composition and stand dynamics. As suitable habitat conditions shift with ongoing global climate change, both mature trees and regeneration will be increasingly exposed to novel conditions, and identifying the autecological factors contributing to successful regeneration, or lack thereof, is an essential first step toward predicting forest response and resilience to climate change.

4.1 | Climate impacts on mortality and regeneration in Callitropsis nootkatensis

In the NPCTR, climate change-induced canopy mortality is restricted to a single species, *C. nootkatensis*, allowing for a focused examination of the effects of climate, seed source, and local conditions on regenerating community response and subsequent stand dynamics. Mature tree mortality across the study area corresponded with a reduction in *C. nootkatensis* regeneration (Figure 6) and a shift to surviving canopy species, predominantly *Tsuga* (Figure 3), a widespread species known to dominate the regenerating community following disturbance (Alaback and Tappeiner II (1991); Deal & Farr, 1994). *Callitropsis nootkatensis* regeneration constituted less than 20% of the regenerating community in decline areas (Figure 3) and appears to be limited by a lack of available seed and vegetative source, although drainage conditions, as determined by slope, and maximum winter temperatures also contribute to structuring regenerating community composition (Figure 7).

Local hydrologic regime and associated ecosystem productivity are key factors in both species' distributions (Bisbing et al., 2016) and in the extent of *C. nootkatensis* decline (D'Amore & Hennon, 2006). Mortality across this plot network was most extensive on wetter, lower-productivity peatlands; however, proportional mortality was greatest in productive upland forests. The apparent lack of congruity between these results and previous research, which reports higher mortality on lower slopes (D'Amore & Hennon, 2006), is explained by our use of proportional mortality rather than total. Although mortality is most extreme on saturated peatlands, it is likely that surviving individuals will allow for ongoing perpetuation of the species on lower-productivity peatlands.

Nonetheless, the loss of *C. nootkatensis* from both the canopy and the regenerating community across the extent of decline in southeast Alaska indicates that canopy trees and regeneration are in sync in their responses to climate change. Cold, low-snow winters have led to widespread mortality over our study area (Figure 4) and across the species' range (Buma et al., 2017), and local drainage conditions (i.e., slope, hydrologic regime) amplify or mitigate response of the canopy (Figure 4) and regenerating community (Figures 5 and 7). While this study cannot conclusively determine the mechanism for the lack of regeneration, the close correspondence between the canopy and regenerating communities is striking. These plot-level findings are consistent

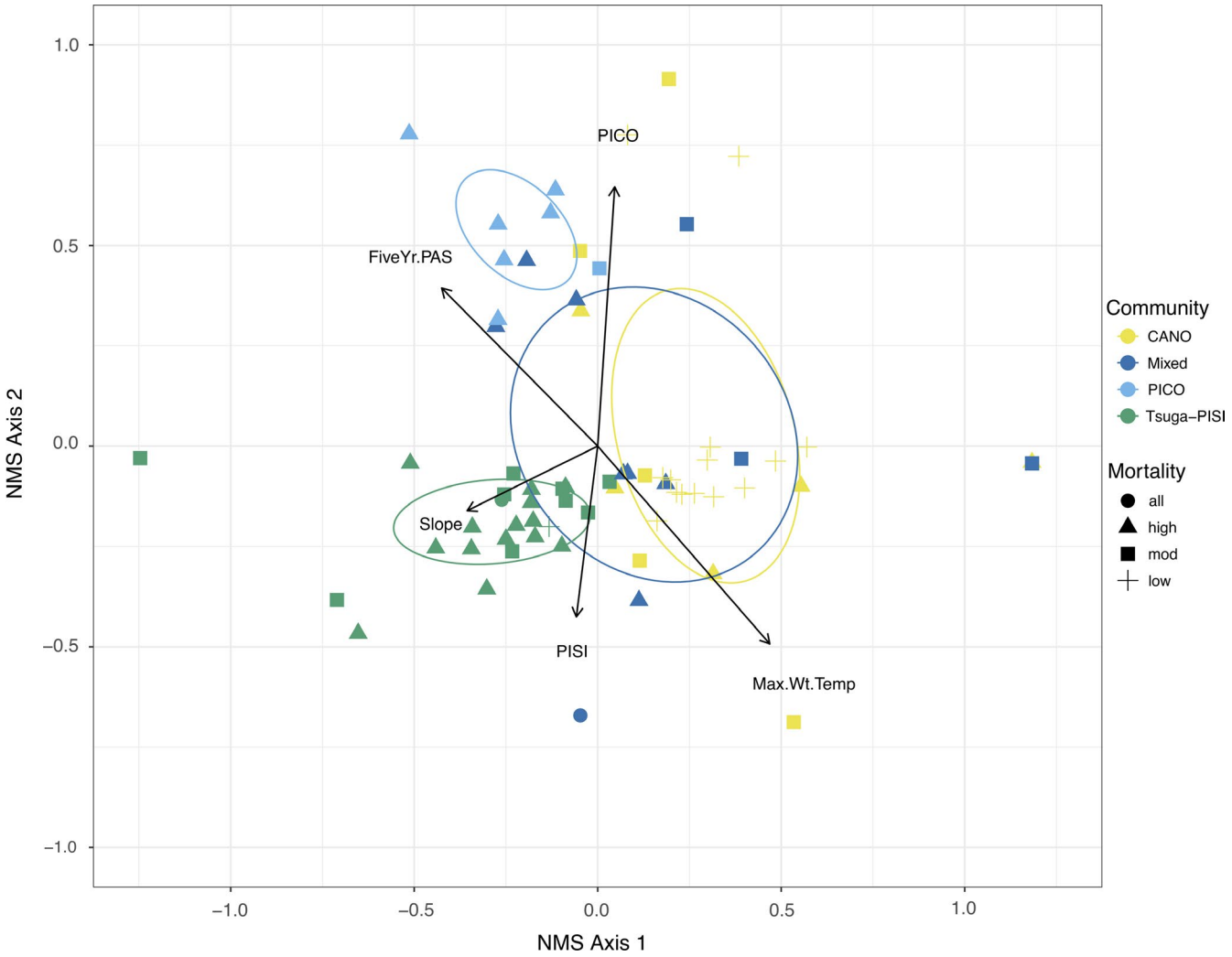

FIGURE 7 Nonmetric multidimensional scaling (NMS) of the regenerating community by classification of the severity of *Callitropsis nootkatensis* canopy mortality (shapes) and community type (colors), with each point representing individual sample plots. Mortality severity classes: low = 1%–25%, moderate = 25.1%–69.9%, high = 70%–99%, and all = 100%. Ellipses represent the mean scores of each NMS community cluster. Species labels represent the most abundant species in each NMS community cluster. CANO, *Callitropsis nootkatensis*; PICO, *Pinus contorta* spp. *contorta*; PISI, *Picea sitchensis*; THPL, *Thuja plicata*; and Tsuga, *Tsuga heterophylla* and *mertensiana*. Variables and associated vector arrows indicate the direction and magnitude of effects of the canopy community, local stand conditions, and local annual and five-year climate on regenerating community composition. Arrow length is proportional to the magnitude of correlation. Variables identified as both significant ($p < 0.05$) and minimally correlated include Max.Wt.Temp = maximum winter temperature (°C), Five.Yr.PAS, five-year average precipitation as snow (mm), average plot slope (°), PICO, *Pinus contorta* spp. *contorta* basal area; and PISI, *Picea sitchensis* basal area

with recent modeling work on drivers of canopy mortality that identified winter temperatures and slope as conditions leading to decline at broad scales (Buma et al., 2017). Mortality is predicted to be ongoing in areas above the winter snow threshold, and up to 50% of current suitable habitat is expected to experience climate conditions favorable to decline (Buma et al., 2017). Continued mortality of this conifer is likely to lead to more widespread shifts in community composition (Oakes et al., 2014; data presented here). The close relationship between seed source and composition of the regenerating community suggests that no compensation in the form of increased recruitment will make up for the loss of the *C. nootkatensis* canopy.

4.2 | *Single* versus *multiple species decline*

Mortality events specifically attributed to climate change (Breshears et al., 2005; Van Mantgem & Stephenson, 2007; Williams et al., 2010) do not typically discriminate but, instead, lead to decline or mortality of multiple species in the affected ecosystem. Sierra Nevada mixed-conifer forests have, for example, seen concurrent declines in shade tolerant *Abies* and shade-intolerant *Pinus* following years of temperature-driven drought stress (Van Mantgem & Stephenson, 2007), while extreme droughts in the arid southwest led to mortality in *Pinus edulis* and *Juniperus monosperma* (Mueller et al., 2005). In both cases, no immediate impacts on regenerating community

composition were evident, although higher *P. edulis* mortality indicated that long-term shifts are likely (Mueller et al., 2005). The climate change-induced *C. nootkatensis* mortality in the NPCTR is unique in its isolated effect on a single species but also in its observable, and now documented, postdecline shift in species dominance.

Regenerating community response in other single-species mortality events has been highly variable and largely driven by the severity of a biotic disturbance, such as insect attack (Burr & McCullough, 2014), on the canopy community and variability in local establishment conditions (Kayes & Tinker, 2012). In some cases, regeneration proceeds successfully following the loss of canopy species (Diskin, Rocca, Nelson, Aoki, & Romme, 2011; Macek et al., 2017), while, in others, species experience loss of dominance (Pelz & Smith, 2012), increasing the probability of ecosystem type conversions (Burr & McCullough, 2014; Klooster et al., 2014). Self-replacement of a single species following canopy morality has been documented following extreme drought (Suarez & Lloret, 2018) and bark beetle attack (Diskin et al., 2011), where co-occurring species established but failed to dominate. These instances of ongoing success, however, occurred in forest types where the impacted species dominated the canopy prior to the disturbance and either did not experience wholesale mortality, as is the case in *Nothofagus* drought mortality (Suarez & Lloret, 2018), or possessed a canopy seed bank, as occurs with *Pinus contorta* ssp. *latifolia* forests (Diskin et al., 2011).

Regeneration declines or failures have also been documented in cases of single-species mortality (Burr & McCullough, 2014; DeRose & Long, 2007; Klooster et al., 2014; Pelz & Smith, 2012). Laminated root rot in the Northwest has led to similar compositional changes as seen in *C. nootkatensis* forests, where *T. heterophylla* assumes dominance as canopy mortality of *Pseudotsuga menziesii* proceeds (Hansen & Goheen, 2000). Additionally, the 1990s *Dendroctonus rufipennis* attack on *Picea engelmannii* led to *Abies lasiocarpa* and *Populus tremuloides* dominance in the regenerating community, precluding *P. engelmannii* from returning to dominance (DeRose & Long, 2007). As with *C. nootkatensis* response to canopy mortality, the primary limiting factor in all cases is an available seed source.

Regenerating community response to canopy mortality is clearly influenced by a number of factors, such as establishment environment conditions, postdisturbance climate, seed availability, and herbivory—but available seed source is regularly identified as a primary limiting factor, regardless of disturbance type (e.g., fire vs. beetle attack) and magnitude (e.g., single vs. multiple species). Consistent with studies in other forest types and under different climate-induced disturbances, our findings suggest that seed source (DeRose & Long, 2007; Redmond et al., 2018; Urza & Sibold, 2017) and microsite/establishment environments (Harvey, Donato, & Turner, 2016; Redmond et al., 2018; Urza & Sibold, 2017) are the most important factors in regenerating community response. Species tolerant of postdecline conditions will have a higher likelihood of future dominance, further reducing available seed and vegetative source of the declining species.

Documenting changes in communities following canopy mortality will be crucial to identifying the ecological, and potentially economic, consequences of these losses. Identifying successional trajectories, in particular, will reduce the large uncertainty around the long-term impacts of climate change-driven forest mortality events. Forest response to novel disturbance conditions will be hard to predict, and the lessons learned from these cases can help shift our expectations of postdisturbance stand dynamics, particularly in climate-impacted systems.

4.3 | Ecosystem resilience and transition to alternate stable states

The consequences of rapid climate change on forest resilience remain uncertain and are likely to be highly variable, based on a particular forest's ecological memory (i.e., information legacies of ecological adaptations to disturbance; Johnstone et al., 2016). For forests to be resilient and resist transitions to alternate states, there must be synchrony between both information legacies (i.e., genetic adaptations to disturbance, like sprouting in avalanche-prone ecosystems) and material legacies (i.e., the physical legacies, such as seedbanks, that are present after a disturbance event; Johnstone et al., 2016). Historically, *C. nootkatensis'* shallow root system and early response to spring warming were beneficial, allowing for early, rapid growth each growing season (Hennon et al., 2016); however, this once advantageous legacy is now a deleterious adaptation. Mortality in mature trees limits the potential for biological inertia (Young et al., 2019) due to a lack of available seed. Instead, advanced regeneration via vegetative reproduction remains a successful strategy even in areas of severe decline (unpublished data/personal observation). This may help the species maintain a presence on the landscape during periods of mature tree mortality until periods more favorable for sexual reproduction, similar to the "orphaned cohort" example of *Fraxinus* in response to *Agrilus planipennis* invasion (Klooster et al., 2014). The immediate loss of seed-producing trees and seedlings (Figures 2 and 3), as well as competition from faster growing species, means these forests are lacking the biological inertia needed for resilience and are likely to transition to *T. heterophylla*-dominated forests even if *C. nootkatensis* maintains some temporary or disjunct presence on the landscape. For species or forest types undergoing similar climate-induced mortality events, ecologists will need to determine which legacies contribute to ecosystem resilience, or if novel climate or disturbance will remove these legacies that were historically critical.

Ecosystem resilience may also vary as a function of regional climate fluctuations over space and time, known as transitional climate mortality (Buma, 2018), where mortality is highest within a particular range of climatic conditions but decreases above or below this range. Currently, the mid-range of the *C. nootkatensis'* distribution is experiencing mortality, but, if emissions scenarios continue toward worst-case trajectories, it is possible that the mortality "donut-hole" will be relatively short-lived (Buma, 2018). Short, intense climate fluctuations may therefore be less deleterious to ecosystem resilience if there are deep enough ecological legacies to sustain species over time.

5 | CONCLUSIONS AND NEXT STEPS

Widespread mortality of tree species due to changing climate is a major concern in forests worldwide, but the potential for resilience is rarely assessed during an ongoing mortality event, a gap we have attempted to fill here. Species' responses to climate change-induced mortality will vary widely based on species-specific traits, sensitivity to climatic extremes, biotic stressors, and abiotic conditions of the establishment environment, thus requiring autecological studies on factors limiting versus promoting success. In *C. nootkatensis* forests, there is no increase in *C. nootkatensis* regeneration abundances to offset canopy mortality. As a result, this forest type is not resilient to mortality associated with ongoing snow loss, and a type change appears to be underway. This example of climate change-driven mortality in a single species highlights how species-specific sensitivity can lead to shifts in community composition and stand dynamics following canopy mortality via the same mechanism—death of mature seed trees.

Few strategies or solutions exist for forests vulnerable to ecosystem type conversion due to mature tree mortality and associated loss of seed source, and numerous knowledge gaps remain. In the case of *C. nootkatensis*, common garden studies using seed sources from across the species' range could allow for identification of genotypes with fine-root frost tolerance. Planting gardens across decline severity gradients would also allow for targeted research on regeneration response to concurrent canopy mortality and associated establishment conditions. Given the potential for a wave of transitional mortality across the *C. nootkatensis* range (Buma, 2018), however, survival of local versus foreign seed source is hard to predict. Long-term monitoring in our plot network will allow us to track forest response to the predicted transitional mortality phenomenon and provide demographic information on the impacts of climate on different size classes as well as on the growth and survival rates of regeneration across the decline severity gradient. Demographic studies will also resolve the confounding effects of seed availability, canopy mortality, and establishment conditions on regeneration. Simultaneously investigating climate-induced tree mortality and subsequent postmortality resilience gives a clearer view of the long-term consequences of climate change on forest health, and this observational study has just scratched the surface of filling the critical knowledge gaps essential to understanding and predicting long-term forest resilience to climate change.

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CONFLICT OF INTEREST

None declared.

AUTHORS CONTRIBUTION

A.B., B.B, and S.B. conceived of the study. A.B, B.B., S.B., J.K, and L.E.O. collected the data. B.B. and S.B analyzed the data. S.B. led the writing with contributions from all authors.

DATA ACCESSIBILITY

All plot-level and summary data generated for this study are available through the Dryad Digital Repository (https://doi.org/10.5061/dryad.23420f6).

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REFERENCES

Aitken, S. N., & Bemmels, J. B. (2015). Time to get moving: Assisted gene flow of forest trees. *Evolutionary Applications*, *9*(1), 271–290.

Aitken, S. N., Yeaman, S., Holliday, J. A., Wang, T., & Curtis-McLane, S. (2008). Adaptation, migration or extirpation: Climate change outcomes for tree populations. *Evolutionary Applications*, *1*, 95–111. https://doi.org/10.1111/j.1752-4571.2007.00013.x

Alaback, P. B., & Tappeiner II, J. C. (1991). Response of western hemlock (*Tsuga heterophylla*) and early huckleberry (*Vaccinium ovalifolium*) seedlings to forest windthrow. *Canadian Journal of Forest Research*, *21*, 534–539.

Allen, C. D., & Breshears, D. D. (1998). Drought-induced shift of a forest-woodland ecotone: Rapid landscape response to climate variation. *Proceedings of the National Academy of Sciences*, *95*, 14839–14842. https://doi.org/10.1073/pnas.95.25.14839

Allen, C. D., Breshears, D. D., & McDowell, N. G. (2015). On underestimation of global vulnerability to tree mortality and forest die-off from hotter drought in the Anthropocene. *Ecosphere*, *6*, 1–55. https://doi.org/10.1890/ES15-00203.1

Allen, C. D., Macalady, A. K., Chenchouni, H., Bachelet, D., McDowell, N., Vennetier, M., … Cobb, N. (2010). A global overview of drought and heat-induced tree mortality reveals emerging climate change risks for forests. *Forest Ecology and Management*, *259*, 660–684. https://doi.org/10.1016/j.foreco.2009.09.001

Anderegg, W. R. L., Kane, J. M., & Anderegg, L. D. L. (2013). Consequences of widespread tree mortality triggered by drought and temperature stress. *Nature Climate Change*, *3*, 30–36. https://doi.org/10.1038/nclimate1635

Barrett, T. M., Latta, G., Hennon, P. E., & Eskelson, B. N. I. (2012). Host-parasite distributions under changing climate: *Tsuga Heterophylla* and *Arceuthobium tsugense* in Alaska. *Canadian Journal of Forest Research*, *656*, 642–656.

Beier, C. M., Sink, S. E., Hennon, P. E., D'Amore, D. V., & Juday, G. P. (2008). Twentieth-century warming and the dendroclimatology of declining yellow-cedar forests in southeastern Alaska. *Canadian Journal of Forest Research*, *38*, 1319–1334. https://doi.org/10.1139/X07-240

Bisbing, S. M., Cooper, D. J., D'Amore, D. V., & Marshall, K. N. (2016). Determinants of conifer distributions across peatland to forest gradients in the coastal temperate rainforest of southeast Alaska. *Ecohydrology*, *9*, 354–367. https://doi.org/10.1002/eco.1640

Bonner, F. T., & Karrfalt, R. (2008). *The Woody Plant Seed Manual*. 1223.

Bourque, C. P., Cox, R. M., Allen, D. J., Arp, P. A., & Meng, F. (2005). Spatial extent of winter thaw events in eastern North

America: Historical weather records in relation to yellow birch decline. *Global Change Biology*, *11*, 1477–1492. https://doi.org/10.1111/j.1365-2486.2005.00956.x

Breiman, L. (2001). Random Forests. *Machine Learning*, *45*, 5–32.

Breshears, D. D., Cobb, N. S., Rich, P. M., Price, K. P., Allen, C. D., Balice, R. G., … Meyer, C. W. (2005). Regional vegetation die-off in response to global-change-type drought. *Proceedings of the National Academy of Sciences*, *102*(42), 15144–15148. https://doi.org/10.1073/pnas.0505734102.

Buma, B. (2018). Transitional climate mortality: Slower warming may result in increased climate-induced mortality in some systems. *Ecosphere*, *9*, e02170. https://doi.org/10.1002/ecs2.2170

Buma, B., & Barrett, T. M. (2015). Spatial and topographic trends in forest expansion and biomass change, from regional to local scales. *Global Change Biology*, *21*, 3445–3454. https://doi.org/10.1111/gcb.12915

Buma, B., Hennon, P. E., Harrington, C. A., Popkin, J. R., Krapek, J., Lamb, M. S., … Zeglen, S. (2017). Emerging climate-driven disturbance processes: Widespread mortality associated with snow-to-rain transitions across 10° of latitude and half the range of a climate-threatened conifer. *Global Change Biology*, *23*, 2903–2914. https://doi.org/10.1111/gcb.13555

Buma, B., & Johnson, A. C. (2015). The role of windstorm exposure and yellow cedar decline on landslide susceptibility in southeast Alaskan temperate rainforests. *Geomorphology*, *228*, 504–511. https://doi.org/10.1016/j.geomorph.2014.10.014

Burr, S. J., & McCullough, D. G. (2014). Condition of green ash (*Fraxinus pennsylvanica*) overstory and regeneration at three stages of the emerald ash borer invasion wave. *Canadian Journal of Forest Research*, *44*, 768–776.

Camarero, J. J., & Gutiérrez, E. (2004). Response of ecotones to climatic variability. *Climatic Change*, *63*, 181–200.

Caouette, J. P., Steel, E. A., Hennon, P. E., Cunningham, P. G., Pohl, C. A., & Schrader, B. A. (2015). Influence of elevation and site productivity on conifer distributions across Alaskan temperate rainforests. *Canadian Journal of Forest Research*, *46*, 249–261. https://doi.org/10.1139/cjfr-2015-0283

D'Amore, D. V., & Hennon, P. E. (2006). Evaluation of soil saturation, soil chemistry, and early spring soil and air temperatures as risk factors in yellow-cedar decline. *Global Change Biology*, *12*, 524–545. https://doi.org/10.1111/j.1365-2486.2006.01101.x

Deal, R. L., & Farr, W. A. (1994). Composition and development of conifer regeneration in thinned and unthinned natural stands of western hemlock and Sitka spruce in southeast Alaska. *Canadian Journal of Forest Research*, *24*, 976–984. https://doi.org/10.1139/x94-128

Deal, R. L., Oliver, C. D., & Bormann, B. T. (1991). Reconstruction of mixed hemlock-spruce stands in coastal southeast Alaska. *Canadian Journal of Forest Research*, *21*, 643–654. https://doi.org/10.1139/x91-088

Decker, K. L. M., Wang, D., Waite, C., & Scherbatskoy, T. (2003). Snow removal and ambient air temperature effects on forest soil temperatures in northern Vermont. *Soil Science Society of America Journal*, *67*, 1234–1242. https://doi.org/10.2136/sssaj2003.1234

DellaSala, D. A., Moola, F., Alaback, P., Paquet, P. C., Schoen, J. W., & Noss, R. F. (2011). *Temperate and Boreal Rainforests of the Pacific Coast of North America. Temperate and Boreal Rainforests of the World: Ecology and Conservation* (pp. 42–81). Berlin: Springer.

DeRose, R. J., & Long, J. N. (2007). Disturbance, structure, and composition: Spruce beetle and Engelmann spruce forests on the Markagunt Plateau, Utah. *Forest Ecology and Management*, *244*, 16–23. https://doi.org/10.1016/j.foreco.2007.03.065

Diskin, M., Rocca, M. E., Nelson, K. N., Aoki, C. F., & Romme, W. H. (2011). Forest developmental trajectories in mountain pine beetle disturbed forests of Rocky Mountain National Park, Colorado. *Canadian Journal of Forest Research*, *41*, 782–792. https://doi.org/10.1139/x10-247

Dufrêne, M., & Legendre, P. (1997). Species assemblages and indicator species: the need for a flexible asymmetrical approach. *Ecological monographs*, *67*(3), 345–366.

Dunn, C. P., Guntenspergen, G. R., & Dorney, J. R. (1983). Catastrophic wind disturbance in an old-growth hemlock–hardwood forest, Wisconsin. *Canadian Journal of Botany*, *61*, 211–217. https://doi.org/10.1139/b83-023

Evans, J. S., & Cushman, S. A. (2009). Gradient modeling of conifer species using random forests. *Landscape ecology*, *24*(5), 673–683.

Fox, E. W., Hill, R. A., Leibowitz, S. G., Olsen, A. R., Thornbrugh, D. J., & Weber, M. H. (2017). Assessing the accuracy and stability of variable selection methods for random forest modeling in ecology. *Environmental monitoring and assessment*, *189*(7), 316.

Guarín, A., & Taylor, A. H. (2005). Drought triggered tree mortality in mixed conifer forests in Yosemite National Park, California, USA. *Forest Ecology and Management*, *218*, 229–244. https://doi.org/10.1016/j.foreco.2005.07.014

Hansen, E. M., & Goheen, E. M. (2000). *Phellinus weirii* and other native root pathogens as determinants of forest structure and process in Western North America. *Annual Review of Phytopathology*, *38*, 515–539.

Harvey, B. J., Donato, D. C., & Turner, M. G. (2016). High and dry: Post-fire tree seedling establishment in subalpine forests decreases with post-fire drought and large stand-replacing burn patches. *Global Ecology and Biogeography*, *25*, 655–669. https://doi.org/10.1111/geb.12443

Hennon, P. E., D'Amore, D. V., Schaberg, P. G., Wittwer, D. T., & Shanley, C. S. (2012). Shifting climate, altered niche, and a dynamic conservation strategy for yellow-cedar in the North Pacific coastal rainforest. *BioScience*, *62*, 147–158. https://doi.org/10.1525/bio.2012.62.2.8

Hennon, P. E., Hansen, E. M., & Shaw, C. G. (1990). Dynamics of decline and mortality of Chamaecyparis nootkatensis in southeast Alaska. *Canadian Journal of Botany*, *68*, 651–662.

Hennon, P. E., & McClellan, M. H. (2003). Tree mortality and forest structure in the temperate rain forests of southeast Alaska. *Canadian Journal of Forest Research*, *33*, 1621–1634. https://doi.org/10.1139/x03-081

Hennon, P. E., Mckenzie, C. M., Amore, D. V. D., Wittwer, D. T., Mulvey, R. L., Lamb, M. S., … Cronn, R. C. (2016). *A climate adaptation strategy for conservation and management of Yellow-Cedar in Alaska* (382 p.). Gen Tech.

Hennon, P. E., & Shaw, C. G. (1997). The enigma of yellow-cedar decline: What is killing these long-lived, defensive trees? *Journal of Forestry*, *95*, 4–10.

Hennon, P. E., Shaw III, C. G., & Hansen, E. M. (1990). Dating decline and mortality of Chamaecyparis nootkatensis in southeast Alaska. *Forest Science*, *36*, 502–515.

Holz, A., Wood, S. W., Veblen, T. T., & Bowman, D. M. J. S. (2015). Effects of high-severity fire drove the population collapse of the subalpine Tasmanian endemic conifer *Athrotaxis cupressoides*. *Global Change Biology*, *21*, 445–458.

Johnstone, J. F., Allen, C. D., Franklin, J. F., Frelich, L. E., Harvey, B. J., Higuera, P. E., … Turner, M. G. (2016). Changing disturbance regimes, ecological memory, and forest resilience. *Frontiers in Ecology and the Environment*, *14*, 369–378. https://doi.org/10.1002/fee.1311

Kayes, L. J., & Tinker, D. B. (2012). Forest structure and regeneration following a mountain pine beetle epidemic in southeastern Wyoming. *Forest Ecology and Management*, *263*, 57–66. https://doi.org/10.1016/j.foreco.2011.09.035

Klooster, W. S., Herms, D. A., Knight, K. S., Herms, C. P., McCullough, D. G., Smith, A., … Cardina, J. (2014). Ash (*Fraxinus* spp.) mortality, regeneration, and seed bank dynamics in mixed hardwood forests following invasion by emerald ash borer (*Agrilus planipennis*). *Biological Invasions*, *16*, 859–873. https://doi.org/10.1007/s10530-013-0543-7

Macek, M., Wild, J., Kopecky, M., Cervenka, J., Svoboda, M., Zenahlikova, J., … Fischer, A. (2017). Life and death of *Picea abies* after bark

beetle outbreak: Ecological processes driving seedling recruitment. *Ecological Applications*, *27*, 156–167.

Man, R., Kayahara, G. J., Dang, Q.-L., & Rice, J. A. (2009). A case of severe frost damage prior to budbreak in young conifers in Northeastern Ontario: Consequence of climate change? *The Forestry Chronicle*, *85*, 453–462. https://doi.org/10.5558/tfc85453-3

McCune, B., Grace, J. B., & Urban, D. L. (2002). *Analysis of ecological communities*. Gleneden Beach, OR: MjM Software Design.

Mueller, R. C., Scudder, C. M., Porter, M. E., Talbot Trotter, R., Gehring, C. A., & Whitham, T. G. (2005). Differential tree mortality in response to severe drought: Evidence for long-term vegetation shifts. *Journal of Ecology*, *93*, 1085–1093. https://doi.org/10.1111/j.1365-2745.2005.01042.x

Neiland, B. (1971). The forest-bog complex of southeast Alaska. *Vegetatio*, *22*, 1–64. https://doi.org/10.1007/BF01955719

Niinemets, Ü. (2010). Responses of forest trees to single and multiple environmental stresses from seedlings to mature plants: Past stress history, stress interactions, tolerance and acclimation. *Forest Ecology and Management*, *260*, 1623–1639. https://doi.org/10.1016/j.foreco.2010.07.054

Oakes, L. E., Hennon, P. E., O'Hara, K. L., & Dirzo, R. (2014). Long-term vegetation changes in a temperate forest impacted by climate change. *Ecosphere*, *5*, art135. https://doi.org/10.1890/ES14-00225.1

Oksanen, J., Kindt, R., Legendre, P., O'Hara, B., Stevens, M. H. H., Oksanen, M. J., & Suggests, M. (2007). *The Vegan Package*. Community Ecology Package, 10, 631–637.

Pelz, K. A., & Smith, F. W. (2012). Thirty year change in lodgepole and lodgepole/mixed conifer forest structure following 1980s mountain pine beetle outbreak in western Colorado, USA. *Forest Ecology and Management*, *280*, 93–102. https://doi.org/10.1016/j.foreco.2012.05.032

Peng, C., Ma, Z., Lei, X., Zhu, Q., Chen, H., Wang, W., … Zhou, X. (2011). A drought-induced pervasive increase in tree mortality across Canada's boreal forests. *Nature Climate Change*, *1*, 467.

Peterson, C. J., & Pickett, S. T. A. (1995). Forest reorganization: A case study in an old-growth forest catastrophic blowdown. *Ecology*, *76*, 763–774. https://doi.org/10.2307/1939342

Prasad, A. M., Iverson, L. R., & Liaw, A. (2006). Newer classification and regression tree techniques: bagging and random forests for ecological prediction. *Ecosystems*, *9*(2), 181–199.

R Core Team, R. (2018). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing.

Redmond, M. D., Weisberg, P. J., Cobb, N. S., & Clifford, M. J. (2018). Woodland resilience to regional drought: Dominant controls on tree regeneration following overstorey mortality. *Journal of Ecology*, 625–639. https://doi.org/10.1111/1365-2745.12880

Schaberg, P. G., Hennon, P. E., D'amore, D. V., & Hawley, G. J. (2008). Influence of simulated snow cover on the cold tolerance and freezing injury of yellow-cedar seedlings. *Global Change Biology*, *14*, 1282–1293. https://doi.org/10.1111/j.1365-2486.2008.01577.x

Stevens-Rumann, C. S., Kemp, K. B., Higuera, P. E., Harvey, B. J., Rother, M. T., Donato, D. C., … Veblen, T. T. (2017). Evidence for declining forest resilience to wildfires under climate change. *Ecology Letters*. https://doi.org/10.1111/ele.12889

Suarez, M. L., & Lloret, F. (2018). Self-replacement after small-scale partial crown dieback in Austral *Nothofagus dombeyi* forests affected by an extreme drought. *Canadian Journal of Forest Research*, *420*, 412–420.

Tepley, A. J., Veblen, T. T., Perry, G. L. W., Stewart, G. H., & Naficy, C. E. (2016). Positive feedbacks to fire-driven deforestation following human colonization of the South Island of New Zealand. *Ecosystems*, *19*, 1325–1344. https://doi.org/10.1007/s10021-016-0008-9

Turner, M. G., Dale, V. H., & Everham, E. H. (1997). Fire, hurricanes, and volcanoes: Comparing large disturbances. *BioScience*, *47*, 758–768.

Urza, A. K., & Sibold, J. S. (2017). Climate and seed availability initiate alternate post-fire trajectories in a lower subalpine forest. *Journal of Vegetation Science*, *28*, 43–56. https://doi.org/10.1111/jvs.12465

Van Mantgem, P. J., & Stephenson, N. L. (2007). Apparent climatically induced increase of tree mortality rates in a temperate forest. *Ecology Letters*, *10*, 909–916. https://doi.org/10.1111/j.1461-0248.2007.01080.x

Walck, J. L., Hidayati, S. N., Dixon, K. W., Thompson, K. E. N., & Poschlod, P. (2011). Climate change and plant regeneration from seed. *Global Change Biology*, *17*, 2145–2161. https://doi.org/10.1111/j.1365-2486.2010.02368.x

Wang, T., Hamann, A., Spittlehouse, D., & Carroll, C. (2016). Locally downscaled and spatially customizable climate data for historical and future periods for North America. *PLoS ONE*, *11*, e0156720. https://doi.org/10.1371/journal.pone.0156720

Whitmore, T. C. (1989). Canopy gaps and the two major groups of forest trees. *Ecology*, *70*, 536–538. https://doi.org/10.2307/1940195

Williams, A. P., Allen, C. D., Millar, C. I., Swetnam, T. W., Michaelsen, J., Still, C. J., & Leavitt, S. W. (2010). Forest responses to increasing aridity and warmth in the southwestern United States. *Proceedings of the National Academy of Sciences*, *107*, 21289–21294. https://doi.org/10.1073/pnas.0914211107

Woldendorp, G., Hill, M. J., Doran, R., & Ball, M. C. (2008). Frost in a future climate: Modelling interactive effects of warmer temperatures and rising atmospheric [CO2] on the incidence and severity of frost damage in a temperate evergreen (*Eucalyptus pauciflora*). *Global Change Biology*, *14*, 294–308. https://doi.org/10.1111/j.1365-2486.2007.01499.x

Young, D. J. N., Werner, C. M., Welch, K. R., Young, T. P., Safford, H. D., & Latimer, A. M. (2019). Post-fire forest regeneration shows limited climate tracking and potential for drought-induced type conversion. *Ecology*, *100*(2), 1–12. https://doi.org/10.1002/ecy.2571

Zeppenfeld, T., Svoboda, M., Derose, R. J., Heurich, M., Star, M., Donato, D. C., & Pavla, C. (2015). Response of mountain Picea abies forests to stand-replacing bark beetle outbreaks : Neighbourhood effects lead to self-replacement. *Journal of Applied Ecology*, *52*, 1402–1411.

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APPENDIX

TABLE A1 Plot-level locational and compositional information from across network in southeast Alaska, USA

Plot ID	Location	Year	Latitude	Longitude	Dominant tree species - live BA	Time since CANO death (yrs)	CANO live BA per ha	CANO dead BA per ha	CANO regeneration per m^2	CANO regeneration per ha
1.1	KUP	2015	56.85047°N	133.53033°W	*C. nootkatensis*	35	38.0	26.0	0.0	0
1.2	KUP	2015	56.85076°N	133.53135°W	*T. heterophylla*	35	8.0	30.0	0.4	4,375
1.3	KUP	2015	56.85082°N	133.53009°W	*C. nootkatensis*	35	39.0	37.0	0.9	9,375
1.4	KUP	2015	56.85062°N	133.53244°W	*C. nootkatensis*	35	24.0	1.0	0.5	5,333
2.1	KUP	2015	56.85022°N	133.52821°W	*C. nootkatensis*	35	18.0	26.0	0.6	6,250
2.2	KUP	2015	56.84827°N	133.52614°W	*C. nootkatensis* – *T. heterophylla*	35	10.0	58.0	0.8	8,125
2.3	KUP	2015	56.84755°N	133.52513°W	*T. heterophylla*	35	3.0	22.0	0.3	3,125
2.4	KUP	2015	56.84936°N	133.52615°W	*C. nootkatensis*	35	15.0	13.0	0.8	8,125
3.1	POW	2016	56.21524°N	133.26588°W	*C. nootkatensis*	10	12.2	33.8	0.2	1875
3.2	POW	2016	56.21558°N	133.26656°W	*P. sitchensis*	10	0.3	47.0	1.0	10,000
3.3	POW	2017	56.21528°N	133.26707°W	*P. sitchensis*	10	17.4	41.4	1.6	15,625
3.4	POW	2017	56.21476°N	133.26645°W	*T. mertensiana*	10	17.3	14.6	5.5	55,000
4.1	POW	2016	56.22578°N	133.27412°W	*T. heterophylla*	10	2.6	31.9	0.6	6,250
4.2	POW	2016	56.22504°N	133.27389°W	*P. sitchensis*	10	6.1	39.7	2.5	25,000
4.3	POW	2017	56.22577°N	133.27365°W	*T. heterophylla*	10	15.2	37.4	<0.01	1
4.4	POW	2017	56.22473°N	133.27292°W	*C. nootkatensis*	10	25.1	26.9	<0.01	1
5.3	POW	2017	55.91775°N	132.85709°W	*T. heterophylla*	35	5.5	70.0	4.3	42,500
6.3	POW	2017	56.03667°N	133.23947°W	*T. heterophylla*	35	9.2	22.2	NA	NA
GB_010_066	GBNP	2011	58.22538°N	136.63204°W	*C. nootkatensis*	0	31.7	4.7	3.2	31,250
GB_011_071	GBNP	2011	58.24562°N	136.61262°W	*C. nootkatensis*	0	24.5	0.2	2.4	23,750
GB_012_064	GBNP	2011	58.21917°N	136.63780°W	*T. heterophylla*	0	29.5	5.2	3.6	36,250
GB_014_068	GBNP	2011	58.23110°N	136.62305°W	*C. nootkatensis*	0	45.4	5.7	5.0	50,000
GB_02_024	GBNP	2011	58.29816°N	136.67510°W	*C. nootkatensis*	0	52.2	0.6	4.4	43,750
GB_03_019	GBNP	2011	58.28641°N	136.68011°W	*C. nootkatensis*	0	41.7	1.3	9.6	96,250
GB_04_042	GBNP	2011	58.27781°N	136.71230°W	*C. nootkatensis*	0	41.8	2.6	6.0	60,000
GB_07_016	GBNP	2011	58.28207°N	136.67820°W	*C. nootkatensis*	0	28.1	3.8	3.1	31,250
GB_08_048	GBNP	2011	58.26283°N	136.71370°W	*C. nootkatensis*	0	36.0	3.8	3.4	33,750
GB_09_067	GBNP	2011	58.22911°N	136.62730°W	*C. nootkatensis*	0	44.6	4.3	3.5	35,000
H_02_062	CHICH	2011	57.55681°N	136.01001°W	*C. nootkatensis*	0	35.9	27.5	1.9	18,750

(Continues)

TABLE A1 (Continued)

Plot ID	Location	Year	Latitude	Longitude	Dominant tree species - live BA	Time since CANO death (yrs)	CANO live BA per ha	CANO dead BA per ha	CANO regeneration per m^2	CANO regeneration per ha
H_03_071	CHICH	2011	57.57203°N	136.04004°W	*C. nootkatensis*	0	35.9	6.9	7.3	72,500
H_04_091	CHICH	2011	57.62267°N	136.12257°W	*C. nootkatensis*	0	35.4	18.1	1.8	17,500
H_06_068	CHICH	2011	57.56611°N	136.02991°W	*C. nootkatensis*	0	37.8	1.5	3.0	30,000
H_08_124	CHICH	2011	57.57882°N	135.96251°W	*C. nootkatensis*	0	33.0	14.2	1.4	13,750
H_09_082	CHICH	2011	57.63800°N	136.07839°W	*T. heterophylla*	0	22.5	8.3	5.5	55,000
H_10_126	CHICH	2011	57.56995°N	135.97246°W	*C. nootkatensis*	0	38.8	5.2	2.4	23,750
H_13_088	CHICH	2011	57.62485°N	136.10913°W	*C. nootkatensis*	0	22.7	9.2	1.0	10,000
H_15_084	CHICH	2011	57.64685°N	136.11008°W	*C. nootkatensis*	0	30.3	12.7	0.9	8,750
H_16_129	CHICH	2011	57.56802°N	135.98041°W	*C. nootkatensis*	0	27.2	6.0	1.9	18,750
M_01_029	CHICH	2011	57.50626°N	135.90751°W	*T. heterophylla*	35	0.6	31.4	1.0	10,000
M_02_057	CHICH	2011	57.54192°N	135.98833°W	*T. heterophylla*	35	3.9	39.2	0.4	3,750
M_03_044	CHICH	2011	57.52819°N	135.96468°W	*T. heterophylla*	35	0.8	35.9	0.0	0
M_04_035	CHICH	2011	57.5157°N	135.91531°W	*T. heterophylla*	35	7.1	22.3	0.9	8,750
M_05_029	CHICH	2011	57.5045°N	135.90228°W	*C. nootkatensis*	35	9.4	26.9	1.0	10,000
M_06_029	CHICH	2011	57.50793°N	135.90987°W	*C. nootkatensis*	35	7.9	22.3	0.3	2,500
M_07_026	CHICH	2011	57.48985°N	135.88183°W	*C. nootkatensis*	35	11.1	28.5	0.5	5,000
M_08_031	CHICH	2011	57.51351°N	135.91613°W	*P. contorta* ssp. *contorta*	35	3.2	28.1	1.0	10,000
M_09_057	CHICH	2011	57.53963°N	135.98675°W	*C. nootkatensis*	35	9.6	22.0	0.5	5,000
M_10_051	CHICH	2011	57.53694°N	135.97525°W	*C. nootkatensis*	35	29.1	37.0	0.9	8,750
O_01_006	CHICH	2011	57.46517°N	135.82757°W	*T. mertensiana*	75	0.2	37.2	0.1	1,250
O_02_010	CHICH	2011	57.46275°N	135.83273°W	*C. nootkatensis*	75	16.3	36.3	0.8	7,500
O_03_022	CHICH	2011	57.4867°N	135.86483°W	*T. heterophylla*	75	6.5	51.4	1.0	10,000
O_04_005	CHICH	2011	57.45955°N	135.81151°W	*T. heterophylla*	75	6.9	43.0	4.6	46,250
O_05_028	CHICH	2011	57.49871°N	135.89103°W	*T. heterophylla*	75	1.3	32.8	1.1	11,250
O_06_019	CHICH	2011	57.48018°N	135.85594°W	*T. heterophylla*	75	11.4	14.3	2.6	26,250
O_08_011	CHICH	2011	57.46494°N	135.83600°W	*T. mertensiana*	75	1.1	29.9	0.4	3,750
O_09_010	CHICH	2011	57.46065°N	135.82668°W	*T. heterophylla*	75	21.2	25.9	0.9	8,750
O_10_015	CHICH	2011	57.47464°N	135.83629°W	*T. heterophylla*	75	2.5	72.2	1.1	11,250
O_14_002	CHICH	2011	57.45436°N	135.81272°W	*T. mertensiana*	75	8.5	36.1	0.5	5,000
R_01_133	CHICH	2011	57.55577°N	136.00360°W	*T. heterophylla*	10	13.2	30.1	2.1	21,250

(Continues)

TABLE A1 (Continued)

Plot ID	Location	Year	Latitude	Longitude	Dominant tree species - live BA	Time since CANO death (yrs)	CANO live BA per ha	CANO dead BA per ha	CANO regeneration per m^2	CANO regeneration per ha
R_02_055	CHICH	2011	57.53862°N	135.98150°W	*C. nootkatensis*	10	21.4	37.3	1.3	12,500
R_03_037	CHICH	2011	57.52466°N	135.93290°W	*C. nootkatensis*	10	15.3	58.2	2.3	22,500
R_04_059	CHICH	2011	57.54938°N	135.98393°W	*C. nootkatensis*	10	27.6	13.2	3.4	33,750
R_06_047	CHICH	2011	57.53040°N	135.96152°W	*C. nootkatensis*	10	9.6	58.0	0.4	3,750
R_07_058	CHICH	2011	57.54386°N	135.99047°W	*C. nootkatensis*	10	10.8	42.9	0.3	2,500
R_08_101	CHICH	2011	57.54978°N	135.95184°W	*C. nootkatensis*	10	20.5	23.9	1.1	11,250
R_09_133	CHICH	2011	57.55844°N	135.99534°W	*T. heterophylla*	10	0.0	62.0	1.1	11,250
R_10_041	CHICH	2011	57.52584°N	135.95378°W	*T. heterophylla*	10	12.9	50.7	1.1	11,250
R_11_059	CHICH	2011	57.54442°N	135.99834°W	*C. nootkatensis*	10	16.9	39.4	0.6	6,250

Abbreviations: BA, basal area (m^2/ha); CANO, *Callitropsis nootkatensis*; CHICH, Chichagof Island; GBNP, Glacier Bay National Park; KUP, Kupreanof Island; and POW, Prince of Wales Island.

Forest Service

Alaska Region

P.O. Box 21628
Juneau, AK 99802-1628

File Code: 1410; 2430; 2450 **Date:** May 31, 2017
Route To:

Subject: Results of the Big Thorne IRTC Supplemental Review

To: Chief

In June 2016, the Washington Office conducted an Activity Review of the Region 10 Forest Management Program. On October 6, 2016, I received the Final Report from that review. On November 21, 2016, you approved my request to conduct a more specific sale preparation and administration review of the Big Thorne IRTC.

A team was organized and chartered by the WO Forest Management Director to review all cruise and volume determination activities for the sale to assess whether the volume calculation followed established policy and procedure and the derived estimate could be consistently replicated. Additionally, the team was tasked with reviewing the appraisal process to ensure compliance with policy and procedure and to produce an updated appraisal based upon the results of the volume determination review. Lastly, the team was instructed to review all sale administration activities.

A final report from the team has been received and issues related to the sale preparation and appraisal activities were identified. The team utilized all of the original Big Thorne cruise data, ran it through processors using handbook prescribed factors, and generated a cruise that was 12,100 MBF less than the R10 cruise run used to appraise and offer the sale in 2014. The team then used the revised cruise volume and replicated the 2014 appraisal after correcting for two appraisal factors where policy was not followed in 2014. The net result of all corrections by the review team is a sale that was 12,100 MBF less of green saw timber volume, 229 MBF less Utility volume and an indicated advertised rate that was significantly less than originally advertised and subsequently awarded.

While Viking Lumber (Purchaser) does not know the specific numbers and results of the review, they have communicated a similar lower volume harvested and the same is expected in the future. This is based on the harvest to date and projections across the remaining acres. Purchaser has also communicated a similar reduction in indicated advertised rate based on his own review of the original appraisal for policy departures.

There is no contractual mechanism to correct these errors and inequities, which we think will cost the Purchaser money under the contract. Wishing to avoid a long and costly process in the Court of Federal Claims or the Board of Contract Appeals, the Purchaser has indicated a preference not to file a claim. Purchaser has limited volume under contract, yet is firm in the belief that some adjustments need to be made. The independent review shows unexplained departures from policy, which puts the Forest Service (FS) at risk of significant damages should

the Purchaser pursue a claim. The FS, in its discretion, will be well served to negotiate with the Purchaser to settle this matter administratively.

The following options are potential approaches to resolve this situation:

1) Mutual Contract Cancellation, re-package and re-offer:
    a. Purchaser is not likely to agree as it has no other FS Timber under contract. This is problematic because of a lack of FS capacity to issue a re-package and re-offer in a timely manner.

2) Unilateral Contract Cancellation by FS, re-package and re-offer:
    a. Probable Claim for significant damages by Purchaser, which the FS wishes to avoid.
    b. Same volume and capacity issues as listed in 1.

3) No Action: No change in volumes or values from what was originally contracted.
    a. Purchaser will log at an approximate loss of $85/mbf to supply customer orders.
    b. Purchaser will pursue a claim.

4) PREFERRED:
    a. Modify the Big Thorne IRTC contract to reflect the Validation Cruise volumes and Validation Appraisal advertised rates derived by the review team, plus the established Bid Premium. Modify the contract in the accounting system (ATSA) and make the revised rates retroactive to the beginning of harvest activities.
        i. Corrects contract volume and value to what should have initially been offered in accordance with policy.
        ii. Mandatory stewardship items are still covered.
        iii. Equitable to both parties.

I am requesting you assign an individual to enter into negotiations with Purchaser to determine a fair and equitable settlement for all parties. The R10 Director of Forest Management will provide the necessary staff work and documentation to the selected individual. I believe Option 4 above provides the most equitable solution for both parties. Final approval for any negotiated solution will reside within the Deputy Chief for NFS area. In this situation, it may be appropriate that any contract modifications necessary to implement the solution be executed by the appropriate Associate Deputy Chief or a letter of direction with specific modification actions be issued to the Contracting Officer. The anticipated solutions will certainly fall outside the scope of authority for the Contracting Officer for the Big Thorne IRTC unless directed.

Correcting the situation on Big Thorne IRTC is a high priority. Equally important is correcting the underlying causes for the errors locally. Corrective actions are planned and will be implemented.

Your prompt consideration of our request is appreciated.

Please contact Director, R10, RO, Forest Management, Dave Harris at (907) 586-7875 or dpharris@fs.fed.us for any further information.

Rebecca S. Nourse

REBECCA S. NOURSE
Acting Regional Forester

Enclosures: (2)

cc: Allen Rowley, John Crockett, Dave P. Harris

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FEATURED PAPER

Quantifying the Monetary Value of Alaska National Forests to Commercial Pacific Salmon Fisheries

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Abstract

Forested landscapes support a diversity of ecological processes and organisms having direct value to society. Assessments placing monetary value on forest processes and organisms can help inform management actions affecting these ecosystem services. The temperate rain forest ecoregion along the west coast of North America is home to five species of Pacific salmon *Oncorhynchus* spp. that support subsistence, personal-use, sport, and commercial fisheries. This study aimed to quantify the number and monetary value of commercially caught Pacific salmon originating from Alaska's Tongass and Chugach national forests, two adjacent national forests containing some of the world's largest remaining tracts of intact temperate rain forest. The proportion of commercially harvested wild Pacific salmon originating from streams and lakes within national forest boundaries was estimated by subtracting hatchery salmon and salmon originating outside national forest areas from the total commercial catch. The Tongass and Chugach national forests were major contributors to the overall number and value of commercially caught Pacific salmon in southeastern and southcentral Alaska. From 2007 to 2016 these national forests contributed an average of 48 million Pacific salmon annually to commercial fisheries, with a dockside value averaging US$88 million (inflation adjusted to the base year 2017). These "forest fish" represented 25% of Alaska's commercial Pacific salmon catch for this time period and 16% of the total commercial value. These findings emphasize the importance of Alaska's forest rivers and lakes for sustaining Pacific salmon and can contribute to discussions about alternative land management strategies that might impact Pacific salmon populations and associated commercial salmon fisheries.

Forest lands support multiple ecological processes and diverse assemblages of organisms that have direct and indirect value to society (Godoy and Bawa 1993; de Groot et al. 2002; Penaluna et al. 2017). Clean water, clean air, carbon sequestration, animal viewing, hiking, hunting, and fishing are just a few of the services that forests provide (Brown et al. 2007). These goods and services are frequently considered to be "free" (de Groot et al. 2002). Indeed, services such as clean water and air can be provided at essentially no cost by functioning forests. However, degradation of forests may diminish the capacity of these ecosystems to provide desired services, which can result in negative impacts to society (Stanturf et al. 2014). For example, deforestation of the Amazon has been

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thought to contribute to reduced precipitation (Malhi et al. 2008; Zemp et al. 2017) and associated water shortages in Brazilian cities (Malhi et al. 2008). In our current society, where decisions are frequently driven by economic pressures, managing forest lands to support diverse values can be informed by quantifying the monetary value of these "free" goods and services (Norberg 1999; Knowler et al. 2003).

Pacific salmon *Oncorhynchus* spp. are a good example of organisms that provide direct services to humans in the form of food but that have also been adversely affected by forest management practices (Everest and Meehan 1981; Nehlsen et al. 1991; Lichatowich 2001). The Pacific Northwest of the United States once supported the largest Pacific salmon runs and associated fisheries in the world (National Research Council 1996; Gustafson et al. 2007). However, within a century of European colonization many of these runs were critically imperiled, due in part to logging activities that deteriorated freshwater spawning and rearing habitat (Lichatowich 2001; Lackey 2003). This legacy of forest management—combined with dam construction, overharvest, mining, and urbanization—has resulted in billions spent on hatcheries and other restoration actions aimed at maintaining recreational, commercial, and subsistence fisheries that were once provided by intact ecosystems (Levin et al. 2001; Lackey et al. 2006). Both the United States and Canada now have policies and laws in place to protect wild Pacific salmon, such as requirements for tree buffers along streams and water quality standards (Budd et al. 1987; Richardson et al. 2012). Nevertheless, strong economic pressures still exist that may be at odds with maintaining healthy Pacific salmon habitat, such as intensive timber harvest, mining, and urbanization. Weighing the economic costs and benefits of these activities requires accounting for the value of forest resources—such as Pacific salmon—that might be negatively impacted by development or resource extraction.

Perhaps the largest and most productive "salmon forests" in the world are in Alaska (Baker et al. 1996; Halupka et al. 2000). The Tongass and Chugach national forests in southeastern and southcentral Alaska (Figure 1) represent some of the largest tracts of intact rain forest in the world (Orians and Schoen 2017), and these forests support productive Pacific salmon fisheries. In southeastern Alaska, for instance, commercial fishing and seafood processing is the largest private-sector industry, accounting for 15% of regional employment (McDowell Group 2017). Many of the ocean-caught Pacific salmon that support the fishing industry likely began their lives in forest streams that drain the Tongass and Chugach national forests. Like other forests, these forests—particularly the Tongass—have historically been valued for timber production (Durbin 1999). However, given the importance of Pacific salmon fisheries to Alaska's economy and culture, understanding and quantifying the economic value of salmon that originate from the Tongass and Chugach national forests is also critical (Gillespie et al. 2018).

Our goal was to quantify the monetary value of commercially harvested Pacific salmon from Alaska's national forest lands. Specifically, this study addressed three questions:

1. How many commercially caught Pacific salmon in southeastern and southcentral Alaska originate from lakes, rivers, and streams in the Tongass and Chugach national forests?
2. What is the monetary value of these "forest fish" to commercial fisheries?
3. What proportion of Alaska's commercial Pacific salmon harvest originates from Alaska national forest lands?

This information can be used to weigh management decisions that may adversely impact Pacific salmon, as well as those management actions (e.g., habitat restoration) aimed at improving habitat and restoring functions critical to freshwater salmon productivity. While subsistence, sport, and personal-use fisheries are not included here, estimating the monetary value of commercial fisheries is an important first step towards a more comprehensive socioeconomic valuation of national forests for fisheries production.

METHODS

Study areas.— The Tongass and Chugach national forests are the first and second largest national forests in the United States, with a total area of approximately 97,000 km^2 (Figure 1). The Tongass National Forest covers most of southeastern Alaska and the Alexander Archipelago (69,000 km^2). The Chugach National Forest (28,000 km^2) covers the Copper River delta, Prince William Sound, and part of the Kenai Peninsula. Most of the Tongass and Chugach national forests lie within the temperate rain forest ecoregion and have high levels of precipitation (1,500–5,000 mm on the Tongass and 500–6,000 mm on the Chugach; University of Alaska Fairbanks 2015). This precipitation feeds into streams, rivers, and lakes, supporting five species of commercially important Pacific salmon: Chinook Salmon *Oncorhynchus tshawytscha*, Coho Salmon *O. kisutch*, Sockeye Salmon *O. nerka*, Pink Salmon *O. gorbuscha*, and Chum Salmon *O. keta*.

The marine environments adjacent to the Tongass and Chugach national forests support lucrative commercial Pacific salmon fisheries. From 2007 to 2016, the total commercial Pacific salmon harvest from the Commercial Salmon Management Areas adjacent to the Tongass National Forest (Southeast Region) and Chugach National Forest (primarily Prince William Sound)

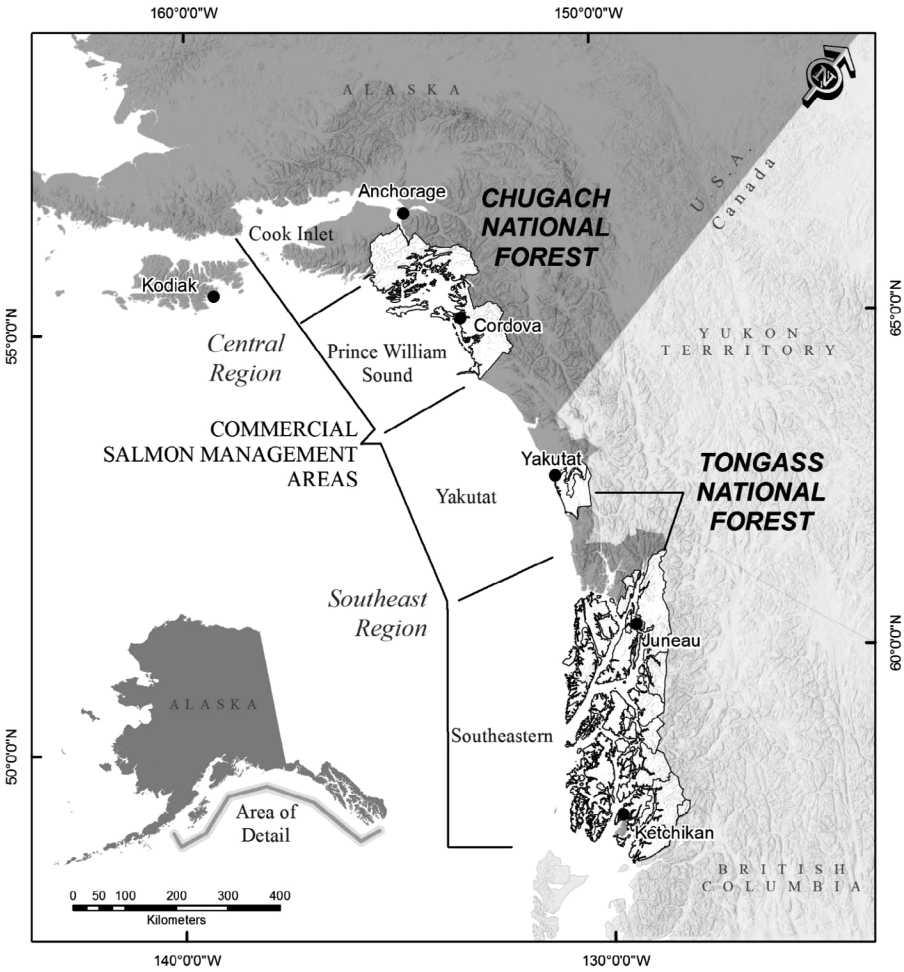

FIGURE 1. Map for the Tongass National Forest and Chugach National Forest (land area indicated in white with black border) and adjacent Alaska Department of Fish and Game Commercial Salmon Management Areas.

generally surpassed 100 million fish per year, with an annual value surpassing US$225 million (Conrad and Gray 2017; Russell et al. 2017). The Pacific salmon caught in these fisheries, however, do not all originate from national forest lands, and depending on the species and region, a large proportion of the fish may originate either from hatcheries or from lands outside Alaska's national forest boundaries. For instance, there are 21 hatchery facilities adjacent to the Tongass and Chugach national forests (Stopha 2017), which produce large numbers of Pacific salmon—primarily Chum Salmon and Pink Salmon—that are harvested in commercial fisheries.

Value assessment approach.— A simple set of calculations was made to estimate the number and monetary value of Pacific salmon originating from the Tongass and Chugach national forests that are harvested in commercial Pacific salmon fisheries. We define "originating from" as those Pacific salmon that emerged from stream gravels within Tongass or Chugach National Forest boundaries. Our approach began by obtaining estimates of the total annual commercial Pacific salmon harvest (*TotalHarvest*) from Commercial Fishing Management Areas adjacent to national forest lands (see Figures 1, 2). These values were then corrected to remove Pacific salmon not originating from either the Tongass or Chugach national forests, as follows:

$$ForestFish_i = TotalHarvest_i \times [1 - (PropHatchery_i + PropOutside_i)] \quad (1)$$

where $ForestFish_i$ represents the number of Pacific salmon of species i originating from national forest lands, $PropHatchery_i$ is the proportion of Alaska hatchery-produced Pacific salmon in the commercial harvest, and $PropOutside_i$ is the proportion of Pacific salmon that originate from streams, rivers, and hatcheries outside Alaska national forest lands. Once the number of Pacific salmon originating from Alaska's national forest lands

($ForestFish_i$) was estimated based on the geographic region, this value was converted to U.S. dollars by multiplying fish numbers by the average weight of each Pacific salmon species and the associated average ex-vessel price (i.e., dockside value) from Alaska Department of Fish and Game (ADFG) data (gross harvest number, weight, and value by species and harvest area; ADFG 2007–2016b). Average price per pound for fish was subsequently adjusted for inflation over time using the consumer price index averaged for U.S. cities (U.S. Department of Labor 2017) using January 2017 as the standard base.

Applying the approach.— We obtained commercial Pacific salmon harvest numbers for 2007–2016 for Commercial Salmon Management Areas adjacent to the Tongass and Chugach national forests from the ADFG statewide electronic fish ticket database (ADFG 2018a). For the Tongass National Forest, this comprised the Southeast Region, specifically the Yakutat Commercial Salmon Management Area and Southeastern Commercial Salmon Management Area (Figure 1). For the Chugach National Forest, this comprised the Central Region, specifically the Prince William Sound Commercial Salmon Management Area and a small portion (<10%) of the Cook Inlet Commercial Salmon Management Area, including the upper portion of Turnagain Arm west of Anchorage and a portion of the Kenai River draining into Cook Inlet (see Figure 1; Supplement A available in the online version of the article). In general, national forest boundaries and Commercial Salmon Management Areas closely overlapped (Figure 1). We then adjusted commercial Pacific salmon harvest numbers ($TotalCatch_i$) for these management areas using equation (1).

The proportion of the commercial Pacific salmon harvest that was of hatchery origin ($PropHatchery_i$) was determined from queries of ADFG databases with interpretation by ADFG fish biologists for 2006–2017 and other relevant references (Mark Stopha, Assistant Coordinator, Private Nonprofit Hatchery Program; Table 1; Supplement B available in the online version of the article). Most Alaska hatcheries thermally mark, chemically mark, or coded-wire-tag juvenile fish (ADFG 2007–2016a; see also Volk et al. 1999) as a means for ADFG to apportion hatchery harvest by origin. Estimates of commercially harvested, hatchery-origin fish were used in the calculation of nonforest fish for Chinook, Coho, Sockeye, Pink, and Chum salmons. Hatchery proportions included Pacific salmon harvested for hatchery brood stock and cost recovery (i.e., Pacific salmon harvested to pay for hatchery operations), as well as commercial common property fishery harvests.

The proportion of Pacific salmon that originated outside of national forest lands ($PropOutside_i$; Table 1) was estimated via two different approaches. In the Central Region (Prince William Sound and a portion of the Cook Inlet subregions), the proportion of Pacific salmon that did not originate from the Chugach National Forest was evaluated using the Alaska Anadromous Waters Catalog (AWC; Johnson and Blossom 2017; ADFG 2018b). We used the AWC to calculate the proportion of documented spawning habitat located outside Chugach National Forest boundaries. It was assumed that the proportion of spawning habitat outside of Chugach National Forest lands represented the fraction of Pacific salmon harvested from nearby fisheries that did not originate from neighboring national forest lands. It is important to note this approach assumes that all documented Pacific salmon streams produce the same number of salmon per unit distance of cataloged spawning habitat; we assumed this to be a reasonable assumption when averaging across the entire region. For the Southeast Region (Southeastern and Yakutat subregions), calculations using the AWC were not

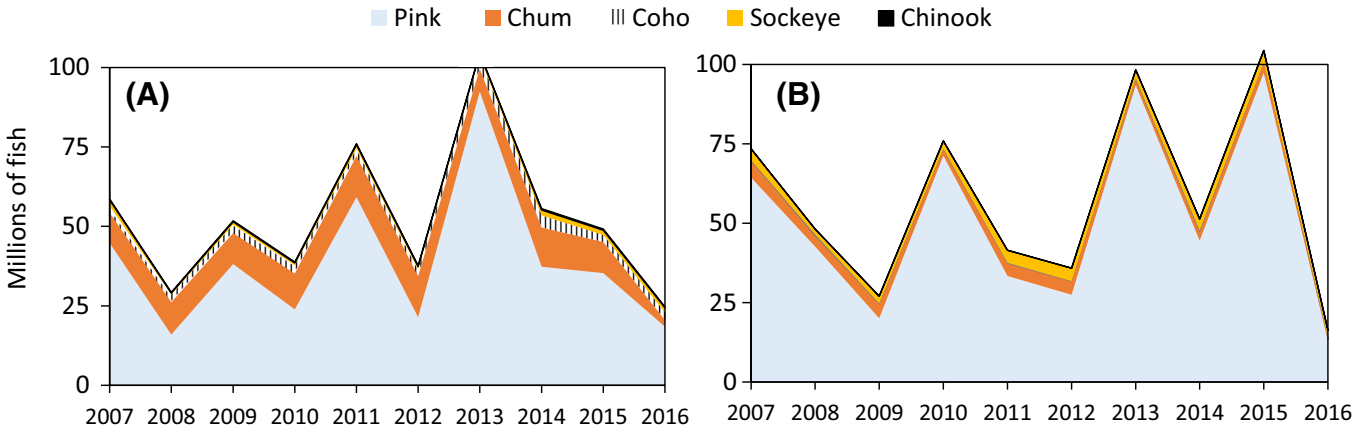

FIGURE 2. Total commercial harvest of Pacific salmon off shore from **(A)** the Tongass National Forest (Southeast Region Commercial Management Area, including Yakutat subregion) and **(B)** the Chugach National Forest (Prince William Sound subregion plus the Copper River and a portion of upper Cook Inlet).

TABLE 1. Estimates of the average percent and range of Pacific salmon caught in commercial fisheries from 2007 to 2016 that did not originate from the Tongass National Forest (within Southeast Region) or Chugach National Forest (within Central Region). Estimates include Pacific salmon from hatcheries and Pacific salmon originating from lands outside Tongass and Chugach National Forest boundaries. Ranges represent the minimum and maximum estimates for the 10-year period. Data is summarized from Alaska Department of Fish and Game reports and personal communication (see Methods for details).

Species and Commercial Salmon Management Area	Average percent fish from Alaska hatcheries (range)	Average percent fish from Washington, Oregon, Canada, or outside national forest lands (range)	References and personal contacts for sources of Alaska Department of Fish and Game data
Chinook Salmon			
Southeast Region	29 (16–42)	67 (55–80)	Hatchery data (Mark Stopha); Southeast Region forest fish (Peterson et al. 2017); Yakutat area (Nicole Zeiser); transboundary river information (Pacific Salmon Commission 2017); Glacier Bay (Dave Harris); Chilkat River (Richard Chapell)
Central Region	0 (no range)	93 (86–97)	Prince William Sound Region and Copper River contribution (Stormy Haught); Cook Inlet contribution (Mark Willette)
Sockeye Salmon			
Southeast Region	17 (10–28)	60 (47–66)	Hatchery data (Mark Stopha); Yakutat area (Nicole Zeiser); transboundary river information (Pacific Salmon Commission 2017, Steve Heinl, Troy Thynes, Julie Bednarski); Glacier Bay (Dave Harris); Taku, Chilkoot, Chilkat (Steve Heinl)
Central Region	44 (35–65)	25 (12–33)	Prince William Sound and Copper River contribution (Stormy Haught); Cook Inlet contribution (Mark Willette)
Coho Salmon			
Southeast Region	31 (24–39)	2 (1–5)	Hatchery data (Mark Stopha); Yakutat area (Nicole Zeiser); transboundary river information (Pacific Salmon Commission 2017); Glacier Bay (Dave Harris)
Central Region	23 (3–39)	16 (13–18)	Prince William Sound and Copper River contribution (Stormy Haught); Cook Inlet contribution (Mark Willette)
Pink Salmon			
Southeast Region	3 (1–6)	2 (0–6)	Hatchery data (Mark Stopha); Yakutat area (Nicole Zeiser); transboundary river information (Pacific Salmon Commission 2017); Glacier Bay (Dave Harris); Taku, Chilkoot, Chilkat (Steve Heinl)
Central Region	87 (74–97)	1 (0–3)	Prince William Sound and Copper River contribution (Stormy Haught); Cook Inlet contribution (Mark Willette)
Chum Salmon			
Southeast Region	84 (78–91)	1 (0–1)	Hatchery data (Mark Stopha); Yakutat area (Nicole Zeiser); transboundary river information (Pacific Salmon Commission 2017); Glacier Bay (Dave Harris); Taku, Chilkoot, Chilkat (Steve Heinl)
Central Region	94 (83–97)	1 (0–1)	Prince William Sound and Copper River contribution (Stormy Haught); Cook Inlet contribution (Mark Willette)

feasible for two reasons. First, much of the spawning habitat lies in large transboundary rivers in Canada and, thus, is not included in the AWC (Alsek, Stikine, and Taku rivers). Second, significant proportions (>50%) of Chinook Salmon harvested in the Southeast Region originate from Oregon, Washington, or southern British Columbia (Peterson et al. 2017). Rather than using the AWC, in the Southeast Region $PropOutside_i$ was based on expert opinion from local ADFG fisheries biologists. Making these estimates required combining harvest information and expert opinion from numerous fishing districts and subdistricts across southeastern Alaska. These $PropOutside_i$ estimates accounted for Pacific salmon originating from a variety of non-national-forest lands, including the following: (1) Glacier Bay and Wrangell–St. Elias national parks, (2) transboundary rivers that originate in Canada (Alsek, Stikine, and Taku rivers), and (3) Pacific salmon from outside the region (Oregon, Washington, and southern British Columbia) that may have returned to natal streams had they not been intercepted by Alaskan fisheries. All $PropOutside_i$ and $PropHatchery_i$ values for 2007–2016 are reported in Supplement B, and the assumptions underlying these proportions are detailed in Supplement A.

To understand how uncertainty in $PropOutside_i$ and $PropHatchery_i$ might influence our estimates, we conducted an uncertainty analysis (Manly 2007). To do this we assumed that the true value for each proportion was plus or minus 10% of the estimated value. For example, in 2016 we estimated that 64% of Sockeye Salmon caught in southeastern Alaska were progeny of fish that spawned outside of national forest lands, with an associated uncertainty range of 54–74%. When proportions were less than 10% or greater than 90%, the uncertainty range was capped at 0% and 100%, respectively. These ranges represent the general magnitude of uncertainty we expected in our proportions (which in some cases were coarse) and, thus, provided a reasonable assessment of how this uncertainty affects our estimates. We used these ranges to calculate 1,000 separate estimates of the total number and monetary value of Pacific salmon from national forest lands, whereby we randomly selected values of $PropOutside_i$ and $PropHatchery_i$ within the specified range assuming a uniform distribution. We used these 1,000 separate estimates to create uncertainty ranges for the total number and monetary value of Pacific salmon from the Tongass and Chugach national forests. Reported uncertainty values represent the 2.5 and 97.5 percentile values of the 1,000 estimates (i.e., 95% of the 1,000 estimates of fish number and value lie within between these values).

RESULTS

Total Pacific salmon harvests from Commercial Salmon Management Areas adjacent to the national forest lands totaled nearly 110 million fish annually, from 2007 to 2016 (Figure 2). During the 10-year study period, >70% of the harvest was Pink Salmon in both regions. Of the remaining Pacific salmon, on average, <20% was Chum Salmon (19% from Southeast Region, 5% from Prince William Sound subregion), <5% was Coho Salmon, <5% was Sockeye Salmon, and <1% was Chinook Salmon.

For the 10-year study period, the Tongass and Chugach national forests contributed, on average, approximately 44% of the Pacific salmon harvested from these Commercial Salmon Management Areas. From 2007 to 2016, an average of 48 million Pacific salmon originating (i.e., emerged as fry) from the Tongass and Chugach national forests were caught annually in Alaskan commercial Pacific salmon fisheries (Figure 3A; see Supplement B). In our uncertainty analysis, average forest contributions to commercial fisheries ranged between 35 to 53 million Pacific salmon annually for the 10-year study period, or approximately ±25% of our reported value (assuming 10% uncertainty in value of the proportions used to calculate our estimate; see Supplement C available in the online version

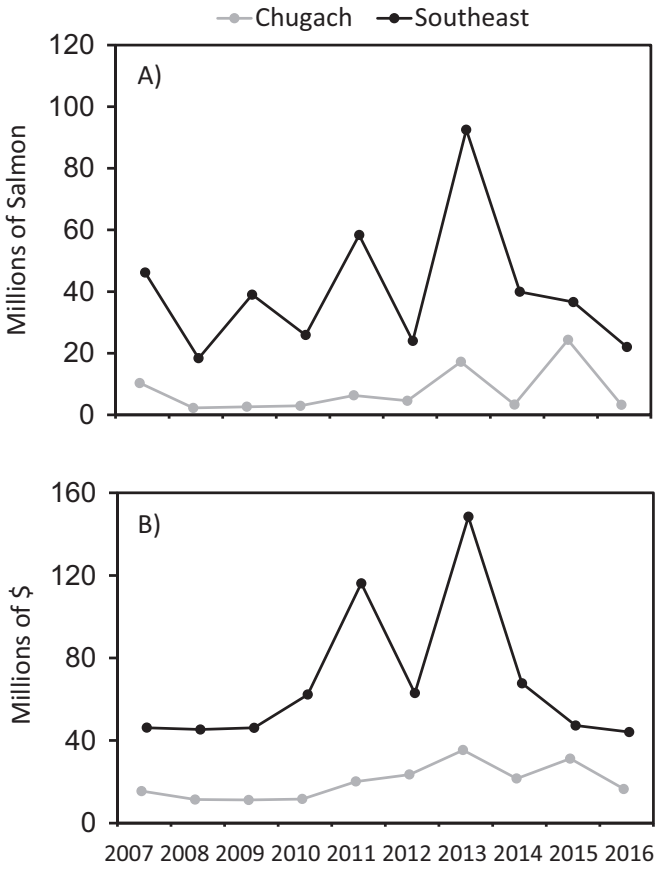

FIGURE 3. Estimates of the **(A)** total number and **(B)** value of Pacific salmon harvested in Alaska's commercial fisheries from 2007 to 2016 that originated from either the Chugach National Forest or the Tongass National Forest (Southeast Region).

of the article for annual values of uncertainty for 2007–2016). On average, these Pacific salmon had a dockside value of $88 million (Figure 3B), with an average annual uncertainty range of $63 to $98 million for the 10-year study period (Supplement C). Compared to the statewide commercial Pacific salmon harvest for 2007 to 2016, these "forest fish" represented, on average, approximately 25% of Alaska's total commercial Pacific salmon harvest number and 16% of the total value.

There were significant differences in the commercial harvest and value of Pacific salmon originating from the Tongass and Chugach national forests (Figure 3). Although the total commercial harvest in marine environments adjacent to the Tongass and Chugach national forests was similar (Figure 2), a much greater proportion of regional commercial Pacific salmon harvests originated from the Tongass National Forest than from the Chugach National Forest (75% average versus 13% average, respectively; Figure 4). This discrepancy was largely due to differences in the percentage of hatchery fish in the commercial harvests (Figure 4). On average for the 10-year study period, hatchery fish represented 21% of the commercial harvest in the Southeast Region (adjacent to the Tongass National Forest) but 84% of the commercial Pacific salmon harvest in the Prince William Sound subregion adjacent to the Chugach National Forest.

Although there was substantial year-to-year variation in the amount of Pacific salmon originating from the Tongass and Chugach national forests (Figure 3A), Pink Salmon were—by far—the most numerically dominant "forest fish" comprising the commercial Pacific salmon harvest (Figure 5). On average, Pink Salmon represented approximately 91% (37 million) and 83% (6.4 million) of the total commercial harvests from the Tongass and Chugach national forests, respectively. For the Tongass

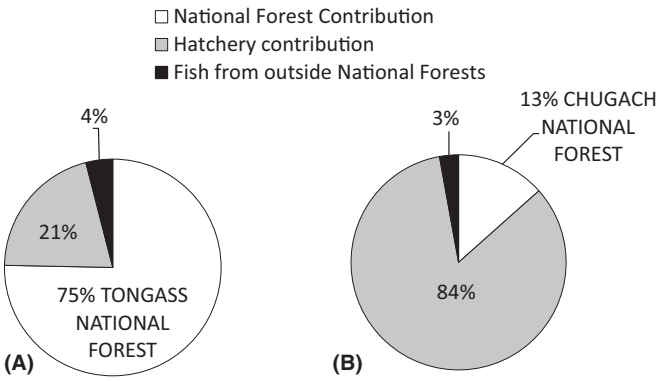

FIGURE 4. Pie charts showing the origin of Pacific salmon caught off shore from **(A)** the Tongass National Forest (Southeast Region) and **(B)** the Chugach National Forest (Prince William Sound subregion).

National Forest, Chum Salmon averaged 3% (1.6 million), Coho Salmon averaged 4% (11.8 million), Sockeye Salmon averaged <1% (276,000), and Chinook Salmon represented <0.1% (13,000) of commercial harvests. On the Chugach National Forest, Sockeye Salmon represented nearly 15% (922,000) of the commercial harvest, Coho Salmon averaged 4% (245,000), Chum Salmon averaged 2% (157,000), and Chinook Salmon averaged 0.01% (1,000).

From 2007 to 2016, the average Pacific salmon commercial value (in U.S. dollars) ranged from a low of $0.31 per pound for Tongass National Forest Pink Salmon to a high of $5.50 per pound for Chugach National Forest Chinook Salmon (Figure 6). Average price per pound of both Chum Salmon and Coho Salmon was higher for fish from the Tongass National Forest than for those from the Chugach National Forest ($0.65 versus $0.60 and $1.23 versus $1.07, respectively). Average price per pound of Pink, Sockeye, and Chinook salmons was higher for fish

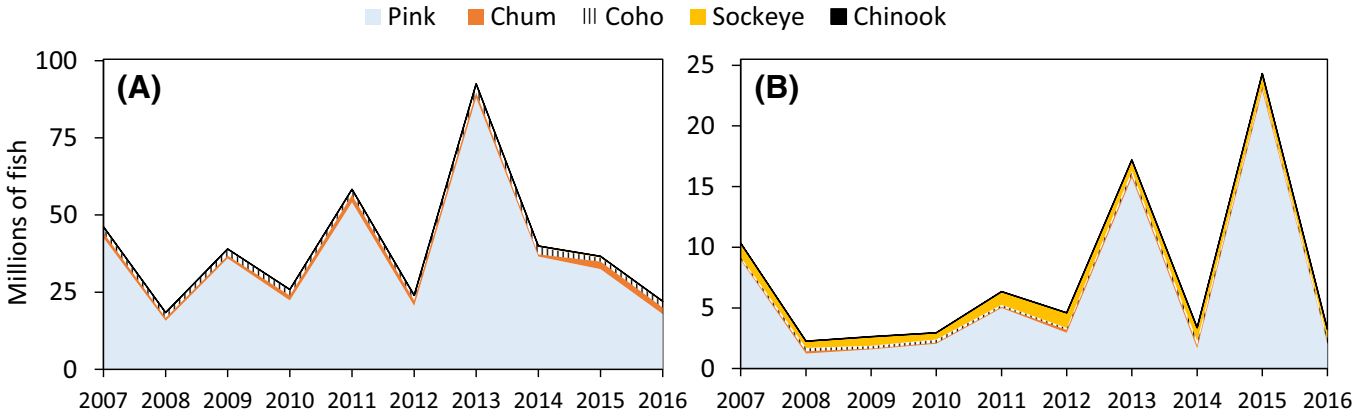

FIGURE 5. Estimated number of each Pacific salmon species originating from the **(A)** Tongass National Forest and **(B)** Chugach National Forest that are commercially harvested.

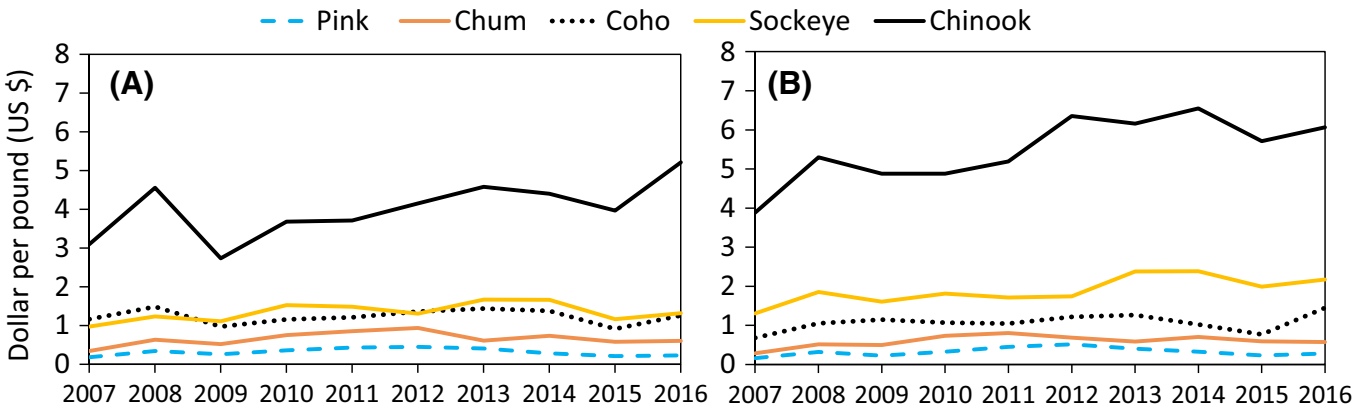

FIGURE 6. Average dockside price per pound paid for different Pacific salmon species harvested off shore from **(A)** the Tongass National Forest (Southeast Region) and **(B)** the Chugach National Forest (Prince William Sound subregion). Note that the price per pound for fish was adjusted for inflation.

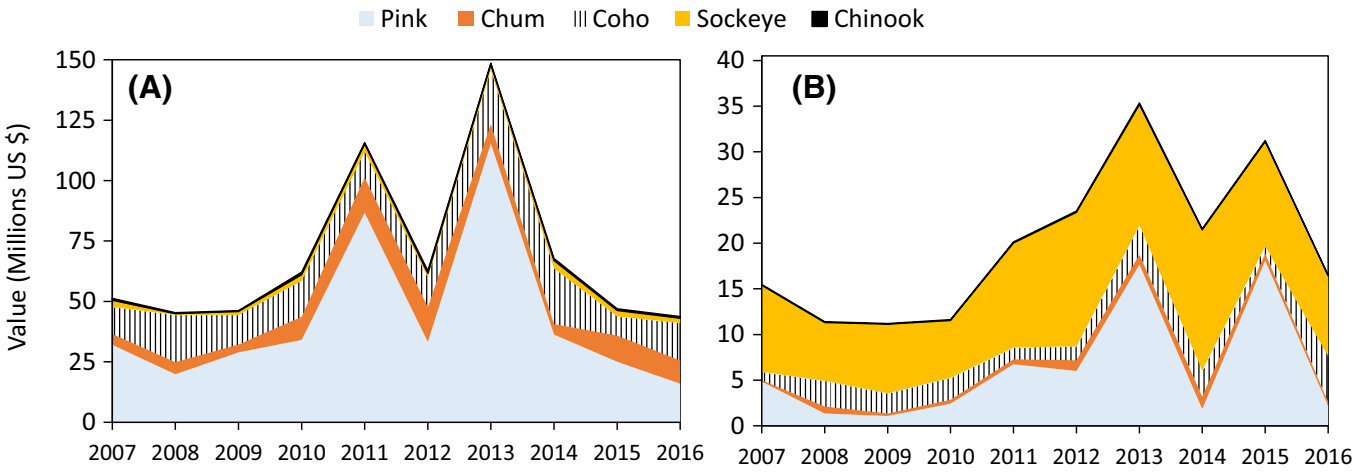

FIGURE 7. Estimated dockside value of each Pacific salmon species from the **(A)** Tongass National Forest and **(B)** Chugach National Forest that are commercially harvested.

from the Chugach National Forest than for those from the Tongass National Forest ($0.33 versus $0.31, $1.90 versus $1.34, $5.50 versus $4.00, respectively).

Pink Salmon originating from the Tongass National Forest, averaging $42 million annually for the study period, had the greatest overall value. Sockeye Salmon, averaging $10.5 million annually, had the highest total value on the Chugach National Forest (Figure 7). On the Tongass National Forest, the value of Chum, Coho, Sockeye, and Chinook salmons averaged $8.8 million, $14.8 million, $2.2 million, and $676,000, respectively, during the 10-year study period. On the Chugach National Forest, the value of Pink, Chum, Coho, and Chinook salmons averaged $6.2 million, $694,000, $2.3 million, and $107,000, respectively.

DISCUSSION

Using 2007 to 2016 existing fisheries data, we estimated the monetary value of Alaska's national forest lands to commercial Pacific salmon fisheries. We found that the Tongass and Chugach national forests—the largest national forests in the United States—were major contributors to the overall number and value of commercially caught Pacific salmon in southeastern and southcentral Alaska. In turn, these commercial fisheries are significant contributors to community well-being and the regional economy (e.g., Smith and Clay 2010; TCW Economics 2010; ASMI 2011; Gillespie et al. 2018). Alaska typically accounts for 12–15% of the global supply of Pacific salmon (ASMI 2011), and the Tongass and Chugach national forests, with a land area less than 100,000 km^2,

contributed an estimated 25% of the state's commercial Pacific salmon harvest. These findings further emphasize the importance of forest rivers and lakes for sustaining healthy fisheries (Goulding 1980; Naiman et al. 2000; Tanentzap et al. 2014).

Our estimates of the value of Pacific salmon from the Tongass and Chugach national forests can contribute to discussions about alternative land management strategies that might adversely impact salmon populations and associated commercial fisheries (e.g., road building, mining, and logging), as well as those management strategies aimed at improving forest conditions for Pacific salmon (e.g., habitat restoration). Moreover, our estimates provide the basis for a more inclusive evaluation of the socioeconomic value of Pacific salmon from forests that include sport, personal-use, and subsistence fisheries, as well as the indirect value of these fish to local communities.

Our analysis showed that Pink Salmon and Sockeye Salmon were the highest-commercial-value Pacific salmon species originating from forest lands on the Tongass National Forest and Chugach National Forest, respectively. The high value of Pink Salmon from the Tongass National Forest resulted from their numerical abundance. Despite their small size and lower price per pound, Pink Salmon were over an order of magnitude more abundant in the commercial catch than any other Pacific salmon species. Relative to Chinook Salmon, for instance, Pink Salmon were one-quarter the size, one-third the value, but 100 times more numerous. Pink Salmon also dominated commercial Pacific salmon harvests from the Chugach National Forest during the 10-year study period; however, Sockeye Salmon had a higher overall value due to the greater weight and higher price per pound of Sockeye Salmon relative to Pink Salmon (10-year average of $0.33 versus $1.90 per pound). Nevertheless, Pink Salmon were still the highest-value Pacific salmon derived from both national forests combined because of the total weight of the catch. That said, it is important to acknowledge that Chinook, Sockeye, and Coho salmons are more important for sport, subsistence, and personal-use fisheries (e.g., Jennings et al. 2007; Conitz 2008) because they are preferred and targeted by these user groups.

This study helped to clarify the magnitude of hatchery Pacific salmon harvests adjacent to national forest lands, particularly in the commercial fishing region adjacent to the Chugach National Forest, where hatchery fish comprised, on average, over 84% of the commercial harvest (versus 21% adjacent to the Tongass National Forest) for the study period. Hatcheries were established in the 1970s to rehabilitate depleted Pacific salmon fisheries. That said, concerns about hatchery effects on wild Pacific salmon populations are rising, warranting further review of multiple ecological and genetic interactions associated with hatcheries (Evenson et al. 2018). The concerns include the impacts of hatchery strays on wild stock population structure and productivity (Gorman et al. 2018), competition between hatchery- and wild-origin juvenile Pacific salmon and resulting density-dependent effects (Holt et al. 2008; Ruggerone et al. 2012; Lewis et al. 2015; Sergeant et al. 2017), and complications for wild-stock fisheries management (Evenson et al. 2018). Despite concerns about the potential effects of hatchery fish on wild fish, from a commercial fishery perspective, hatchery and wild fish are generally indistinguishable and thus have the same monetary value.

Despite their value, Pacific salmon are susceptible to the economic pressures of resource extraction (e.g., logging, mining; Beschta et al. 1987; Baker and McLelland 2003; Crone 2005; Scannell 2012) and development (e.g., dam construction, urbanization; Taylor 2002). These activities have contributed to the loss of populations of Atlantic Salmon *Salmo salar* across most of their historic range, as well as dramatic declines in Pacific salmon—particularly in the contiguous USA (California, Oregon, and Washington) (Nehlsen et al. 1991; Lichatowich 2001; Montgomery 2003). Although Alaskan Pacific salmon populations remain relatively healthy, these populations are susceptible to the same set of factors that have led to declines in other regions (Schoen et al. 2017). Moreover, these populations will have to contend with rapid environmental changes associated with climate change, which may negatively impact the capacity for forest streams to sustain Pacific salmon via a variety of mechanisms (Bryant 2009; Shanley and Albert 2014; Sergeant et al. 2017; Sloat et al. 2017). Our findings illustrate that reductions in the capacity of forest streams to produce Pacific salmon could have consequences for commercial fisheries, as well as the regional economy.

We acknowledge that assessing the number and value of Pacific salmon from national forests to commercial salmon fisheries required making numerous assumptions about the proportion of hatchery-origin fish, as well as fish that emerged from streams outside national forest boundaries. Our analysis would no doubt benefit from a more robust examination of these assumptions. In particular, better evaluation of the proportion of Pacific salmon harvests that did not originate from national forest lands ($PropOutside_i$) would improve our estimates. Nevertheless, our uncertainty analysis suggested that even relatively substantial changes to these proportions (±10%) do not dramatically modify our overall findings. Moreover, because our analysis was restricted to Pacific salmon that originated—i.e., emerged from the gravel as fry—on national forest lands, our estimates of Pacific salmon number and value from national forests to the commercial fishery could be considered conservative. Our estimates do not account for the numerous pathways by which forests support Pacific salmon. For instance, Pacific salmon fry that emerge upstream of national forest lands (e.g., in

transboundary rivers and large watersheds like the Copper River) will migrate downstream and may utilize rivers, lakes, and estuaries within national forest boundaries for rearing (e.g., Murphy et al. 1997). Streams and rivers in southeastern and southcentral Alaska also contribute massive fluxes of nutrients, organic matter, and organisms to the marine environment that may support ocean Pacific salmon productivity via numerous energetic pathways (Tanentzap et al. 2014; O'Neel et al. 2015; Whitney et al. 2018). Finally, and perhaps most importantly, our study does not account for subsistence, personal-use, and sport fisheries, which are extremely valuable to local communities, the regional economy, and the Alaskan way of life (TWC Economics 2010).

Management Implications and Conclusions

These analyses can be updated into the future to track changes in the number and value of forest salmon caught in the commercial fishery. In turn, this information can be used to communicate the value of Alaska's national forests for fish production and can contribute to discussions about management decisions that might influence the capacity of these forests to sustain Pacific salmon in the future. Furthermore, this study provides a starting point for more extensive analyses of salmon production from Alaska's national forest lands. Next steps could include further assessment of the value of sport, personal-use, and subsistence fisheries as well as the nonmonetary value of Pacific salmon to communities and culture. Additional research is needed to understand the mechanistic pathways by which forests support Pacific salmon production. In particular, food web studies are needed that illuminate the flows of energy and nutrients from forests to fish (e.g., Wipfli and Baxter 2010; Tanentzap et al. 2014; Rine et al. 2016). For example, in an Amazonian river, Correa and Winemiller (2014) found that both forest plant material and insects from the forest canopy were major contributors to fish diets. By understanding how forest streams support fish production, a value can be placed on the intermediate ecosystem goods and services (Boyd and Banzhaf 2007), such as aquatic macroinvertebrate diversity (Daniels et al. 2019), that are important for sustaining forest fishes.

We illustrate that Pacific salmon that originate from Alaska's national forests represent a substantial proportion of the number and value of Pacific salmon harvested in regional commercial fisheries. The Alaska salmon industry harvests enough Pacific salmon to feed every human on the globe at least one salmon meal per year (McDowell Group 2017), and our analysis suggests that for the 2007–2016 study period the Tongass and Chugach national forests contributed to at least 25% of this harvest. Although Pacific salmon populations are currently relatively healthy in Alaska, the forests that contribute to Pacific salmon production encounter the same threats that have led to the decline of Pacific salmon populations in other regions (e.g., habitat destruction and damming, mining, hatchery interactions, overharvest; Schoen et al. 2017). Moreover, ongoing climate change has the potential to significantly affect freshwater and saltwater habitats and associated Pacific salmon populations (Mueter et al. 2002; Bryant 2009; Brander 2010; Johnson et al. 2019). Maintaining the capacity for these and other forests to support healthy Pacific salmon will require adaptive learning and preserving the processes that create habitat complexity, including natural disturbances such as floods and landslides (Reeves et al. 1995; Johnson et al. 2000; Benda et al. 2003, 2004; Miller and Burnett 2008), factors promoting a diversity of Pacific salmon species and life histories that may be necessary to maintain productive and adaptive Pacific salmon populations in a changing world (Schindler et al. 2003; Moore et al. 2010; Schoen et al. 2017).

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REFERENCES

ADFG (Alaska Department of Fish and Game). 2007–2016a. Mark, tag, and age laboratory. Available: https://mtalab.adfg.alaska.gov/default.aspx. (July 2017).

ADFG (Alaska Department of Fish and Game). 2007–2016b. Commercial salmon harvest information. Available: http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyfisherysalmon.salmon_grossearnings_byarea. (June 2017).

ADFG (Alaska Department of Fish and Game) 2018a. Statewide electronic fish ticket database 1985 to present. ADFG, Division of Commercial Fisheries, Juneau.

ADFG (Alaska Department of Fish and Game) 2018b. 2018 Regulatory mapping data files—statewide AWC shapefiles. Available: https://

www.adfg.alaska.gov/sf/SARR/AWC/index.cfm?ADFG=maps.dataFiles. (October 2018).

ASMI (Alaska Seafood Marketing Institute). 2011. May 2011 seafood market bulletin. Available: http://www.alaskaseafood.org/fishingprocessing/seafoodweb_may11/index.html. (March 2016).

Baker, D. C., and J. N. McLelland. 2003. Evaluating the effectiveness of British Columbia's environmental assessment process for First Nations' participation in mining development. Environmental Impact Assessment Review 23:581–603.

Baker, T. T., A. C. Wertheimer, R. D. Burkett, R. Dunlap, D. M. Eggers, E. I. Fritts, A. J. Gharrett, R. A. Holmes, and R. L. Wilmot. 1996. Status of Pacific salmon and steelhead escapements in southeastern Alaska. Fisheries 21(10):6–18.

Benda, L. E., D. Miller, R. Sias, D. Martin, R. Bilby, C. Veldhuisen, and T. Dunne. 2003. Wood recruitment processes and wood budgeting. Pages 49–73 *in* S. V. Gregory, K. L. Boyer, and A. M. Gurnell, editors. The ecology and management of wood in world rivers. American Fisheries Society, Symposium 37, Bethesda, Maryland.

Benda, L. E., N. L. Poff, D. Miller, T. Dunne, G. Reeves, G. Pess, and M. Pollock. 2004. The network dynamics hypothesis: how channel networks structure riverine habitats. AIBS Bulletin 54:413–427.

Beschta, R. L., R. E. Bilby, G. W. Brown, L. B. Holtby, and T. D. Hofstra. 1987. Stream temperature and aquatic habitat: fisheries and forestry interactions. University of Washington Institute of Forest Resources Contribution 57:191–236.

Boyd, J., and S. Banzhaf. 2007. What are ecosystem services? The need for standardized environmental accounting units. Ecological Economics 63:616–626.

Brander, K. 2010. Impacts of climate change on fisheries. Journal of Marine Systems 79:389–402.

Brown, T. C., J. C. Bergstrp, and J. B. Loomis. 2007. Defining, valuing, and providing ecosystem goods and services. Natural Resources Journal 47:329.

Bryant, M. D. 2009. Global climate change and potential effects on Pacific salmonids in freshwater ecosystems of Southeast Alaska. Climatic Change 95:169–193.

Budd, W. W., P. L. Cohen, P. R. Saunders, and F. R. Steiner. 1987. Stream corridor management in the Pacific Northwest. I. Determination of stream-corridor widths. Environmental Management 11:587–597.

Conitz, J. M. 2008. Klawock Lake subsistence Sockeye Salmon project, 2006 Annual Report and 2004–2006 summary. Alaska Department of Fish and Game, Division of Sport Fish, Research and Technical Services, Juneau.

Conrad, S., and D. Gray. 2017. Overview of the 2016 Southeast Alaska and Yakutat commercial, personal use, and subsistence salmon fisheries. Alaska Department of Fish and Game, Fishery Management Report 17-25, Anchorage.

Correa, S. B., and K. O. Winemiller. 2014. Niche partitioning among frugivorous fishes in response to fluctuating resources in the Amazonian floodplain forest. Ecology 95:10–224.

Crone, L. K. 2005. Southeast Alaska economics: a resource-abundant region competing in a global marketplace. Landscape and Urban Planning 72:215–233.

Daniels, S., J. R. Bellmore, J. R. Benjamin, N. Witters, J. Vangronsveld, and S. V. Passel. 2019. Quantification of the indirect use value of functional group diversity based on the ecological role of species in the ecosystem. Ecological Economics 153:181–194.

de Groot, R. S., M. A. Wilson, and R. M. J. Boumans. 2002. A typology for the classification, description and valuation of ecosystem functions, goods and services. Ecological Economics 41:393–408.

Durbin, K. 1999. Tongass: pulp politics and the fight for the Alaska rain forest. Oregon State University Press, Corvallis.

Evenson, D. F., C. Habicht, M. Stopha, A. R. Munro, T. R. Meyers, and W. D. Templin. 2018. Salmon hatcheries in Alaska – a review of the implementation of plans, permits, and policies designed to provide protection for wild stocks. Alaska Department of Fish and Game, Special Publication 18-12, Anchorage.

Everest, F. H., and W. R. Meehan. 1981. Forest management and anadromous fish habitat productivity. Transactions of the North American Wildlife and Natural Resources Conference 46:521–530.

Gillespie, N., J. Epstein, S. Alexander, J. M. Bowker, R. Medel, M. Leonard, and A. Thoms. 2018. Socioeconomic benefits of recreational, commercial, and subsistence fishing associated with national forests. Fisheries 43:432–439.

Godoy, R., and K. Bawa. 1993. The economic value and sustainable harvest of plants and animals from the tropical forest: assumptions, hypotheses, and methods. Economic Botany 47:215–219.

Gorman, K., J. McMahon, P. Rand, E. Knudsen, and D. R. Bernard. 2018. Interactions of wild and hatchery Pink Salmon in Prince William Sound. Alaska Department of Fish and Game, Contract CT 160001756, Final Report for 2017. Available: http://www.adfg.alaska.gov/index.cfm?adfg=fishingHatcheriesResearch.findings_updates. (October 2019).

Goulding, M. 1980. The fishes and the forest: explorations in Amazonian natural history. University of California Press, Berkeley.

Gustafson, R. G., R. S. Waples, J. M. Myers, L. A. Weitkamp, G. J. Bryant, O. W. Johnson, and J. J. Hard. 2007. Pacific salmon extinctions: quantifying lost and remaining diversity. Conservation Biology 21:1009–1020.

Halupka, K. C., M. D. Bryant, M. F. Willson, and F. H. Everest. 2000. Biological characteristics and population status of anadromous salmon in Southeast Alaska. U.S. Forest Service General Technical Report PNW-GTR-468

Holt, C. A., M. B. Rutherford, and R. M. Peterman. 2008. International cooperation among nation-states of the North Pacific Ocean on the problem of competition among salmon for a common pool of prey resources. Marine Policy 32:607–617.

Jennings, G., K. Sundet, A. E. Bingham, and D. Sigurdsson. 2007. Participation, catch, and harvest in Alaska sport fisheries during 2004. Alaska Department of Fish and Game, Division of Sport Fish, Research and Technical Services, Juneau.

Johnson, A. C., J. Noel, D. P. Gregovich, L. E. Kruger, and B. Buma. 2019. Impacts of submerging and emerging shorelines on various biota and indigenous Alaskan harvesting patterns. Journal of Coastal Research 35:765–775.

Johnson, A. C., D. N. Swanston, and K. E. McGee. 2000. Landslide initiation, runout, and deposition within clearcuts and old-growth forests of Alaska. JAWRA Journal of the American Water Resources Association 36:17–30.

Johnson, J., and B. Blossom. 2017. Catalog of waters important for spawning, rearing, or migration of anadromous fishes – Southcentral Region, effective June 1, 2017. Alaska Department of Fish and Game, Special Publication 17-03, Anchorage.

Knowler, D. J., B. W. MacGregor, M. J. Bradford, and R. M. Peterman. 2003. Valuing freshwater salmon habitat on the west coast of Canada. Journal of Environmental Management 69:261–273.

Lackey, R. T. 2003. Pacific Northwest salmon: forecasting their status in 2100. Reviews in Fisheries Science 11:35–88.

Lackey, R. T., D. H. Lach, and S. L. Duncan. 2006. Wild salmon in western North America: forecasting the most likely status in 2100. Pages 57–70 *in* R. T. Lackey, D. H. Lach, and S. L. Duncan, editors. Salmon 2100: the future of wild Pacific salmon. American Fisheries Society, Bethesda, Maryland.

Levin, P. S., R. W. Zabel, and J. G. Williams. 2001. The road to extinction is paved with good intentions: negative association of fish hatcheries with threatened salmon. Proceedings: Biological Sciences 268:1153–1158.

Lewis, B., W. S. Grant, R. E. Brenner, and T. Hamazaki. 2015. Changes in size and age of Chinook Salmon *Oncorhynchus tshawytscha* returning to Alaska. PLoS ONE [online serial] 10(6):e0130184.

Lichatowich, J. 2001. Salmon without rivers: a history of the Pacific salmon crisis. Island Press, Washington, D.C.

Malhi, Y., J. T. Roberts, R. A. Betts, T. J. Killeen, L. Wenhong, and C. A. Nobre. 2008. Climate change, deforestation, and the fate of the Amazon. Science 319:169–172.

Manly, B. F. 2007. Randomization, bootstrap and Monte Carlo methods in biology. Chapman and Hall/CRC, Boca Raton, Florida.

McDowell Group. 2017. The economic value of Alaska's seafood industry. McDowell Group, Juneau, Alaska.

Miller, D. J., and K. M. Burnett. 2008. A probabilistic model of debris-flow delivery to stream channels, demonstrated for the Coast Range of Oregon, USA. Geomorphology 94:184–205.

Montgomery, D. R. 2003. King of fish: the thousand-year run of salmon. Westview Press, Boulder, Colorado.

Moore, J. W., M. McClure, L. A. Rogers, and D. E. Schindler. 2010. Synchronization and portfolio performance of threatened salmon. Conservation Letters 3:340–348.

Mueter, F. J., R. M. Peterman, and B. J. Pyper. 2002. Opposite effects of ocean temperature on survival rates of 120 stocks of Pacific salmon (*Oncorhynchus* spp.) in northern and southern areas. Canadian Journal of Fisheries and Aquatic Sciences 59:456–463.

Murphy, M. L., K. V. Koski, J. M. Lorenz, and J. F. Thedinga. 1997. Downstream migrations of juvenile Pacific salmon (*Oncorhynchus* spp.) in a glacial transboundary river. Canadian Journal of Fisheries and Aquatic Sciences 54:2837–2846.

Naiman, R. J., R. E. Bilby, and P. A. Bisson. 2000. Riparian ecology and management in the Pacific coastal rain forest. AIBS Bulletin 50:996–1011.

National Research Council. 1996. Upstream: salmon and society in the Pacific Northwest. National Academies Press, Washington, D.C.

Nehlsen, W., J. E. Williams, and J. A. Lichatowich. 1991. Pacific salmon at the crossroads: stocks at risk from California, Oregon, Idaho, and Washington. Fisheries 16(2):4–21.

Norberg, J. 1999. Linking nature's services to ecosystems: some general ecological concepts. Ecological Economics 29:183–202.

O'Neel, S., E. Hood, A. L. Bidlack, S. W. Fleming, M. L. Arimitsu, A. Arendt, E. Burgess, C. J. Sergeant, A. H. Beaudreau, K. Timm, and G. D. Hayward. 2015. Icefield-to-ocean linkages across the northern Pacific coastal temperate rainforest ecosystem. BioScience 65:499–512.

Orians, G., and J. Schoen, editors. 2017. North Pacific temperate rainforests: ecology and conservation. University of Washington Press, Seattle.

Pacific Salmon Commission. 2017. Joint Transboundary Technical Committee final estimates of transboundary river salmon production, harvest and escapement and a review of joint enhancement activities in 2015. Pacific Salmon Commission, Report TCTR (17)-2, Vancouver.

Penaluna, B. E., D. H. Olson, R. L. Flitcroft, M. A. Weber, J. R. Bellmore, S. M. Wondzell, J. B. Dunham, S. L. Johnson, and G. H. Reeves. 2017. Aquatic biodiversity in forests: a weak link in ecosystem services resilience. Biodiversity and Conservation 26:3125–3155.

Peterson, R., D. Evenson, S. Gilk-Baumer, K. Shedd, E. Jones, and J. Nichols. 2017. Harvest of Southeast Alaska wild-origin Chinook Salmon in the Southeast Alaska troll and sport fisheries, 2005–2017. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Memorandum, Juneau.

Reeves, G. H., L. E. Benda, K. M. Burnett, P. A. Bisson, and J. R. Sedell. 1995. A disturbance-based ecosystem approach to maintaining and restoring freshwater habitats of evolutionarily significant units of anadromous salmonids in the Pacific Northwest. Pages 334–349 *in* J. L. Nielsen and D. A. Powers, editors. Evolution and the aquatic ecosystem: defining unique units in population conservation. American Fisheries Society, Symposium 17, Bethesda, Maryland.

Richardson, J. S., R. J. Naiman, and P. A. Bisson. 2012. How did fixed-width buffers become standard practice for protecting freshwaters and their riparian areas from forest harvest practices? Freshwater Science 31:232–238.

Rine, K. M., M. S. Wipfli, E. R. Schoen, T. L. Nightengale, and C. A. Stricker 2016. Trophic pathways supporting juvenile Chinook and Coho salmon in the glacial Susitna River, Alaska: patterns of freshwater, marine, and terrestrial food resource use across a seasonally dynamic habitat mosaic. Canadian Journal of Fisheries and Aquatic Sciences 73:1626–1641.

Ruggerone, G. T., B. A. Agler, and J. L. Nielsen. 2012. Evidence for competition at sea between Norton Sound Chum Salmon and Asian hatchery Chum Salmon. Environmental Biology of Fishes 94:149–163.

Russell, C. W., J. Botz, S. Haught, and S. Moffitt. 2017. 2016 Prince William Sound area finfish management report. Alaska Department of Fish and Game, Fishery Management Report 17-37, Anchorage.

Scannell, W. P. 2012. Taku-Tulsequah River mining activity, background environmental monitoring and potential mining effects. Alaska Department of Fish and Game, Technical Report 12-01, Douglas.

Schindler, D. E., M. D. Scheuerell, J. W. Moore, S. M. Gende, T. B. Francis, and W. I. Palen. 2003. Pacific salmon and the ecology of coastal ecosystems. Frontiers in Ecology and the Environment 1:31–37.

Schoen, E. R., M. S. Wipfli, E. J. Trammell, D. J. Rinella, A. L. Floyd, J. Grunblatt, M. D. McCarthy, B. E. Meyer, J. M. Morton, J. E. Powell, and A. Prakash. 2017. Future of Pacific salmon in the face of environmental change: lessons from one of the world's remaining productive salmon regions. Fisheries 42:538–553.

Sergeant, C. J., J. R. Bellmore, C. McConnell, and J. W. Moore. 2017. High salmon density and low discharge create periodic hypoxia in coastal rivers. Ecosphere [online serial] 8:e01846.

Shanley, C. S., and D. M. Albert. 2014. Climate change sensitivity index for Pacific salmon habitat in Southeast Alaska. PLoS ONE [online serial] 9(8):e104799.

Sloat, M. R., G. H. Reeves, and K. R. Christiansen. 2017. Stream network geomorphology mediates predicted vulnerability of anadromous fish habitat to hydrologic change in Southeast Alaska. Global Change Biology 23:604–620.

Smith, C., and P. Clay. 2010. Measuring subjective and objective well-being: analyses from five marine commercial fisheries. Human Organization 69:158–168.

Stanturf, J. A., B. J. Palik, and R. K. Dumroese. 2014. Contemporary forest restoration: a review emphasizing function. Forest Ecology and Management 331:292–323.

Stopha, M. 2017. Alaska fisheries enhancement annual report 2016. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 5J17-04, Anchorage.

Tanentzap, A. J., E. J. Szkokan-Emilson, B. W. Kielstra, M. T. Arts, N. D. Yan, and J. M. Gunn. 2014. Forests fuel fish growth in freshwater deltas. Nature Communications 5:4077.

Taylor, J. E. III. 2002. Making salmon: an environmental history of the Northwest fisheries crisis. University of Washington Press, Seattle.

TCW Economics. 2010. Economic contributions and impacts of salmonid resources in Southeast Alaska. Final Report to Trout Unlimited Alaska Program, Anchorage.

University of Alaska Fairbanks. 2015. Scenarios Network for Alaska and Arctic Planning (SNAP). Available: https://www.snap.uaf.edu. (July 2017).

U.S. Department of Labor. 2017. Databases, tables & calculators by subject: CPI inflation calculator. Available: https://www.bls.gov/data/inflation_calculator.htm. (July 2017).

Volk, E. C., S. L. Schroder, and J. J. Grimm. 1999. Otolith thermal marking. Fisheries Research 43:205–219.

Whitney, E. J., A. H. Beaudreau, and E. R. Howe. 2018. Using stable isotopes to assess the contribution of terrestrial and riverine organic matter to diets of nearshore marine consumers in a glacially influenced estuary. Estuaries and Coasts 41:193–205.

Wipfli, M. S., and C. V. Baxter. 2010. Linking ecosystems, food webs, and fish production: subsidies in salmonid watersheds. Fisheries 35:373–387.

Zemp, D. C., C. F. Schleussner, H. M. Barbosa, M. Hirota, V. Montade, G. Sampaio, A. Staal, L. Wang-Erlandsson, and A. Rammig. 2017. Self-amplified Amazon forest loss due to vegetation-atmosphere feedbacks. Nature Communications 8:14681.

SUPPORTING INFORMATION

Additional supplemental material may be found online in the Supporting Information section at the end of the article.

Tonka Timber Sale DXPRE Post Harvest Monitoring Results

Manual/ Handbook Direction

2409.12 Timber Cruising Handbook:
Ch. 70 Designating Timber for Cutting
71.4 -Designating Without Marking Individual Trees;
Use designation by clear cut units, overstory or understory removal, or similar designations to reduce sale layout costs when such methods will accomplish the sale objectives.

2409.19 Renewable Resources Handbook:
60.5 – Definitions
Designation by Prescription;
A method of designating trees for removal by describing the desired end results of the treatment; for example, retain 60 percent basal area. Designation by prescription may be used for noncommercial material or for commercial material when, **for payment purposes, the quantity of products removed is determined post-harvest**. See section 61.3 for further direction.

61.3 - Designation without Marking;
Title 16, United States Code, section 2104 Note (c) (4) (sec. 60.1) allows for the use of designation of trees by description and designation of trees by prescription. **These methods must be used in a manner that ensures that the amount of material removed is verifiable and accountable.**

Designation by Prescription;
Designation by prescription (DxP) may be used for noncommercial material or for low value commercial material when, for payment purposes, the quantity of products removed can be determined post-harvest. When leave tree marking, the authorized officer shall ensure that the contractor marks leave trees with non-tracer paint and shall inspect and approve the marking prior to cutting. Clearly identify the boundaries of the area from which material is to be removed in accordance with FSH 2409.12, section 71.22. Washington Office special provision or regional special provisions approved by the Washington Office must be used for all designation of trees by prescription. Examples of appropriate use of DxP include:

- Thinning a stand to a 120 basal area factor.
- Leaving 10 scattered wildlife trees greater than 21 inches DBH, identified by species, per acre.
- Thinning to a 15' x 15'+ 2' spacing, always retaining healthy larger trees when selecting the leave tree.

In DxP, the contractor selects the trees to be cut or left. This type of tree designation requires close on-the-ground monitoring by the contract administrator.

Post-Harvest Monitoring Basal Area Results:

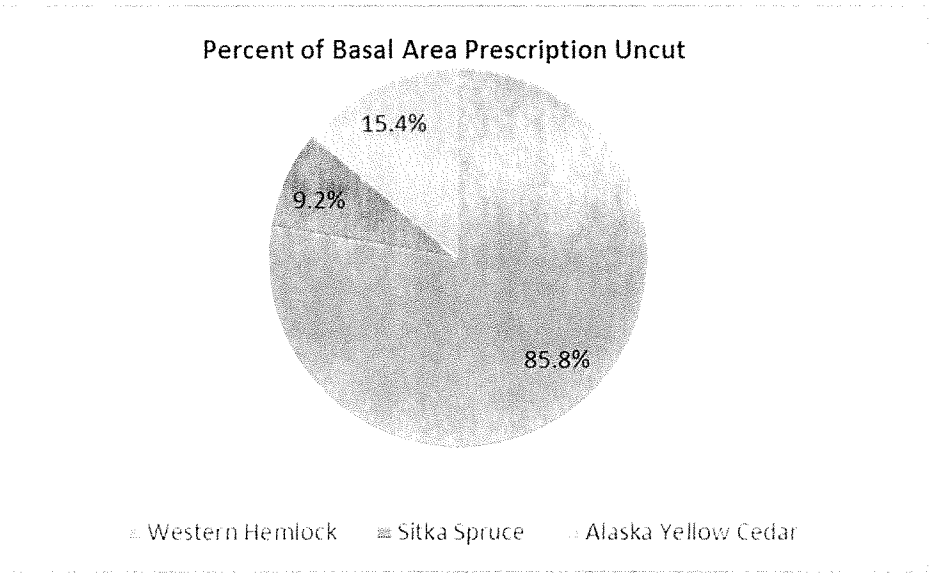
A total of 358 post-harvest Basal Area recon plots have been established in the Tonka Stewardship Helicopter Units using the same basal area factor as the Tonka cruise(1084 Acres = one plot per 3 acre grid).

The post-harvest helicopter basal area cruise results confirm the purchaser removed only 14.2% of the prescribed Western Hemlock (WH) basal area (BA), 90% of Sitka Spruce (SS) basal area, and 84.6% of Alaska Yellow Cedar (AYC) basal area that was identified in the harvest prescription, cruise, appraisal and timber sale contract.

The Contract basal area provisions are written with a plus/minus 10% tolerance in basal area. In Tonka, neither WH nor AYC met the basal are targets in NEPA, prescription, appraisal or contract. It is important to note that on a unit-by-unit level, over harvest and under harvest of basal area occurred in both SS and AYC and those basal area departures are very significant at the unit level. In some cases, exceeding 100% of prescribed basal area for one or both species.

Cut/Removed BA Percentages				Uncut BA Percentages		
WH	**SS**	**AYC**		**WH**	**SS**	**AYC**
14.2%	**90.8%**	**84.6%**		85.8%	**9.2%**	**15.4%**

Table 1. Cut/ Removed and Uncut Basal Area Percentages



Implemented Contract Volume Results:

For the Helicopter Units as a whole, the volume results show that the purchaser removed 12.5% of prescribed and contracted deficit Western Hemlock (WH), over cut the Sitka Spruce (SS volume by 1%), and harvested 96.7% of Alaska Yellow Cedar (AYC) prescription volume.

The uncut, yet appraised for mandatory removal volume in WH highlighted in Table 2, reflects 87.5% of the WH volume in helicopter units. The 4426.3 Net MBF/ 10,988.71 Gross MBF correlate to an estimated 35,353 trees, or 25% of the total estimated number of trees in the total sale volume. It is important to note that on a unit-by-unit level, over harvest and under harvest of RX volume occurred in both SS and AYC.

	Rx Volume				Uncut (-)/ Overcut (+) Volume		
Species	WH	SS	AYC		WH	SS	AYC
NMBF	5,060.50	2,244.48	768.34		-4426.3	+20.06	-25.35
GMBF	12,563.26	3,496.60	1868.32		-10988.71	+30.97	-61.64

Table 2: Helicopter Prescription Volume per Species compared to uncut/overcut per species volume.

RV Appraisal and Advertised Rate impacts Results/ Volume Adjustment Results:

The Appraisal of Record (AOR) appraised the Tonka Stewardship (original volume) at $837,021.00. Adjusting Net/Gross, Grade, and Helicopter Setting Volumes, including adjusting the number of days to logs the sale and the Camp & Tow Costs to reflect actually removed volume increased sale value to $2,108,172.00.

The Re-Appraised Residual Value (RV) Appraisal shows the dollar value lost to the government of difference $1,271,151 for not harvesting the contracted deficit WH basal area/volume. We also lost the additional target volume associated with the contract total over run.

The Tonka AOR helicopter volume logging cost originally appraised to $3,104,406.67, while helicopter actually removed/harvest logging cost appraised to $1,396,773.65. Camp Costs, number of days to log, and Tow Costs were adjusted to reflect the volume uncut and reduced the camp costs by $32,890, days to log by 143 Days, and $706,887 in reduced tow costs.

Advertised Rates:

The original indicated advertised rates per MBF for SS ($57.72), AYC ($78.55), and WH ($2.00) as noted in the Table 3 below set the foundation for the advertised rates and contract value.

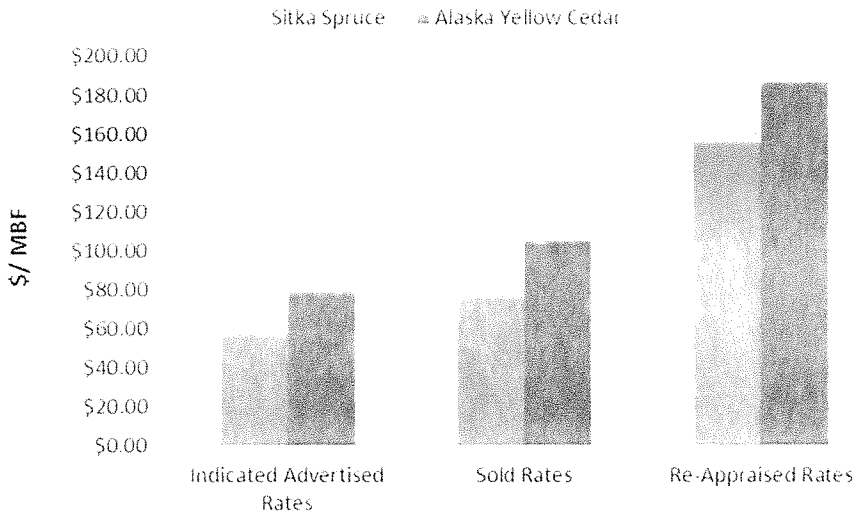
The sale was awarded to Viking Lumber Company at a total bid value of $1,111,155.61, locking rates per MBF accordingly at WH $2.66/MBF, SS $76.89/MBF, and AYC $104.64/MBF as noted below in Table 3.

Updating the re-appraised RV volumes to what was cut/removed in the helicopter units drastically reduced the volume of deficit WH and in turn increased the appraised rates for SS to $155.67/MBF and AYC $186.23/MBF as highlighted below.

This not only compounds the value lost in the appraisal, but also daylights the value lost by way of additional scaled volume after it was sold. Currently known sale over-run is estimated to be 8,000 MBF. Realizing the additional volume is surly not associated with WH volume and noting that the Re-Appraisal Advertised Rates of SS and AYC are within $30.00 the difference in the additional volume at Sold vs Re-advertised rated daylights an additional value loss of $620,000.00-$640,000.00.

Species	Sold Contract Volume	Re-Appraised helicopter Cut Volume	Indicated Advertised Rates	Sold Rates	Re-Appraised Rates	Value at Indicated Advertised Rates	Value at Sold Rates	Value at Re-Appraised Rates
WH	17,811.00	13,385.77	$2.00	$2.66	$2.00	$35,622.00	$47,377.26	$35,622.00
SS	10,867.00	10,886.65	$57.72	$76.89	$155.67	$627,243.24	$835,563.63	$1,691,665.89
AYC	2,073.00	2,048.37	$78.55	$104.64	$186.23	$162,834.15	$216,918.72	$386,054.79
HU	4,453.00	4,453.00	$2.00	$2.00	$2.00	$8,906.00	$8,906.00	$8,906.00
SSU	1,195.00	1,195.00	$2.00	$2.00	$2.00	$2,390.00	$2,390.00	$2,390.00
Total	36,399.00	31,968.79				$836,995.39	$1,111,155.61	$2,124,638.68

Table 3. Excel version: Appraised Rates and Value by volume of each species.



Lessons Learned:

Pre-Sale

- Need to cruise Rx take volume on the ground during implementation. This includes describing tree characteristics according to the intent of the RX/ NEPA and taking into account industry preferences.

Administration:

- Can't say enough about DXPRE and the need for basal area/acre plot inspection. The cost of not inspecting and not following the contract and RX was close to 2 million dollars (table 3) more than double the original stumpage.
- We can no longer rely on cutter reports on small pieces of paper, tallied on a tree by tree basis. All inspection need to be BA/Acre, like the cruise and RX.
- We need to hold the purchaser accountable to meet the intent of the Rx on all acres (Burt Burkhart of Columbia helicopter's) –has openly stated he is not held to the Rx or contract and only cuts what purchaser tells him to.
- Need to hold Sale Administration accountable not to accept a unit until leave Rx is met. S.O. Contracting Officer gets in the way of District Timber Staff and sale administration supervision in the administration of the contract and daily tasks.
- Sale administration needs to become more transparent in day to day operations and have transparent & informative inspection reports that can be routed for others to review (digital inspection forms posted in the O-drive) be accountable to everyone and meet the intent of the Timber Sale Contract and NEPA requirements.

- Contract modifications need to be timely, transparent and formal. Verbally altering the RX, logging system or contract roads or other "informal" altering of the contract should not occur.

NEPA

- Prescription is developed utilizing Timber Sale Cruise- We need to cruise the prescription (kind of cart in front of horse).
- We need prescription that identifies the removal specifics by unit (such as BA, species diameters etc.
- Prescriptions in helicopter units require a comprehensive look at the unit level basal area and species composition. The currently practiced 1 plot per 10 acres grid does not reliably capture the variability of the harvest unit or BA or species specifics.
- Stand exam current plots per acre (1/10) do not capture basal area and species variability of the individual harvest units and should be used only for sale area level analysis is not unit specific prescriptions.
- Stand exams need to estimate defect and net volumes. Planning volumes need to estimate net harvest volume; not estimated gross volume to reduce volume fall down.

Tongass Road Condition Survey Report

by

Linda Shea Flanders
Southeast Regional Supervisor

And

Jim Cariello
Area Habitat Biologist

Technical Report No. 00-7

June 2000

Alaska Department of Fish and Game **Habitat and Restoration Division**

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Copies of this report may be obtained from the Southeast Regional Office of the Habitat and Restoration Division, Alaska Department of Fish and Game, 802 3rd Street, Douglas, AK, 9982400020.

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EXECUTIVE SUMMARY

The Tongass Road and Stream Crossing Project and associated work were conducted by the USDA Forest Service (FS) and the Alaska Department of Fish and Game (ADF&G) over the past three years. ADF&G's participation was partially funded with funds from the State's federal grant under Section 319 of the Clean Water Act. This project evaluated fish passage and sources of sediment from non-point source pollution along 60% of the miles of permanent (system) roads on the Tongass National Forest in Southeast Alaska. The remaining 40% of the permanent roads, as well as all of the temporary roads, on the Tongass will have the road condition survey completed in 2001.

This comprehensive monitoring effort initially developed a protocol to collect and analyze data related to fish passage and non-point source pollution control. Then the FS and ADF&G jointly inspected all stream crossings and sources of sediment along 2153 miles roads. There were 273 anadromous fish stream culverts and 622 resident fish stream culverts evaluated for fish passage. Preliminary results indicate that 66 percent of the culverts across anadromous streams (FS' Class I streams) are assumed not to be adequate for fish passage (a total of 179 culverts). Eighty-five percent of the culverts across resident fish streams (FS' Class II streams that naturally do not support anadromous fish) are assumed not to be adequate for fish passage (a total of 531 culverts). Adequate fish passage requires that the weakest swimming fish present in a watershed can pass upstream and downstream through culverts at all flow levels when that species would be likely to pass the same point in the stream, absent the culvert. The above results rely heavily on assumptions regarding swimming capability of juvenile fish and estimated stream flow. While some culverts may be complete barriers to both adults or juveniles, many of the culverts on anadromous streams identified in this report as assumed not to be adequate for fish passage most likely only restrict the movement of juvenile salmonid fish.

Velocity is the most common cause of fish passage restriction in culverts. If a culvert is installed at too steep a gradient or the culvert width is significantly narrower than the streambed width, the water velocity will be increased within the culvert. Very slight changes in the slope of the culvert and the roughness of the substrate within the culvert may significantly change velocity and the ability of fish to pass through the culvert during all of the times of year when they normally move upstream or downstream. Other frequent causes of fish passage problems include perching of the culvert outlet above the water surface, blockage by excessive substrate or woody debris within the culvert and structural damage to the culvert. In most cases, multiple factors interact to restrict fish passage.

The resulting database will be used to maintain historical information on roads, identify existing and potential risks to fish habitat and passage, and prioritize and estimate the costs of needed road maintenance and fish habitat restoration. The FS has been using the data from this collaborative project to identify needed fish habitat restoration work. The data has already helped them obtain an additional $500,000 in annual road maintenance funds for the Tongass for the past two years.

INTRODUCTION

The Tongass Roads and Stream Crossing Project was a collaborative effort between the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Environmental Conservation (ADEC) and the USDA Forest Service (FS). The Road Condition Survey Report is a final project report on the project's comprehensive three-year monitoring effort that focused on Best Management Practices (BMPs) for forest roads. The project assessed the degree of compliance with BMPs that are intended to prevent nonpoint source pollution from the construction, maintenance and closure of culverts, bridges and roads and evaluated the ability of existing culverts to efficiently pass fish. This project is part of the FS' overall effort to evaluate the condition of roads and stream crossings on the Tongass National Forest. This report reflects the initial and second phase of the road condition survey. The FS and ADF&G will continue collaborate over the next two years to complete the Road Condition Survey of all roads on the Tongass and to prioritize the identified needs for maintenance and restoration of fish habitat.

The ADF&G and ADEC cooperated with the FS to finalize the Road Condition Survey protocols that the FS had initiated in 1994 (FSH 7709.58-99-2). The protocol provided a standard mechanism for the long-term collection and storage of information and data analysis related to fish passage and non-point source pollution sources. It established a database and associated tools (GIS, ability to query) to maintain historical information, identify existing and potential threats to fish habitat and passage, prioritize maintenance and restoration, estimate the costs of such efforts and objectively discuss these issues both internally and with other interested parties. Since the initiation of the survey, the road condition survey protocol has been revised to gather more specific data to better evaluate fish passage.

The collection of Road Condition Survey data by the FS and ADF&G over the past three years greatly improved our knowledge and awareness of site-specific and programmatic problems associated with logging roads and stream crossing structures. This project has provided agencies with a mutual interest in protection of fish habitat and migration an opportunity to address these joint concerns in a cooperative and objective manner. Perhaps the most important result of this project has been establishment of a common foundation of information upon which ADF&G, ADEC and the FS can base discussions and decision making relative to prioritizing maintenance and managing stream crossings.

HISTORY OF FOREST SERVICE'S FISH HABITAT PROTECTION POLICIES

The current Tongass Land and Resource Management Plan, or TLMP (USDA, 1999) directs the FS to "maintain fish passage through stream crossing structures." While TLMP now provides more specific guidelines, criteria and species-specific requirements for evaluating fish passage and protecting fish habitat, the core requirement to provide fish passage is not new. Previous land management plans and area guides provided direction relative to fish passage since 1977. The details of the passage requirements also requiring fish passage on some Class II streams but allowing fish passage to be restricted based upon benefit cost analysis of sites. These FS policy changes followed scientific review of the fish habitat relative to stream crossings and consideration of review comments by other agencies. A summary of the policy changes follows.

The Southeast Alaska Area Guide (USDA, 1977) was developed with the participation of the State of Alaska and many concerned citizens and organizations. It provided management direction for fish passage, including the following policy statement: "Fish passage must be assured at all locations where roads cross fish streams." It supported this fish passage policy with the following explanation:

> "Adult and juvenile salmonids must have unhampered access to all fish habitat. Coho, steelhead, cutthroat and Dolly Varden tend to spawn in headwater areas and their fry disperse downstream to fully utilize all habitat, while juvenile fingerlings move about considerably as rearing populations adjust themselves to carrying capacities. Juveniles also move in significant numbers to overwinter in small tributaries where temperatures are moderated by groundwater sources.
>
> Road crossing structures such as round culverts can cause increases in water velocity when improperly designed, often resulting in scouring at the downstream end during periods of high runoff. The scouring of gravel below culverts results in streambed instability and in culvert outlets elevated above the water level. Since the jumping ability of juveniles is limited, and their swimming capabilities in high velocity currents are restricted, fishery biologists recommend the use of crossing structures which maintain the natural stream gradient, width and bottom material. Culvert and bridge installations must not cause to exceed 40 cm./sec. (1.3 ft./sec.) and must allow passage of fish as small as 50 mm. (2 inches) at normal and low flows. These requirements are best met by using small bridges or full arch culverts."

The Tongass Land Management Plan (USDA, 1979) stated: "The Forest Service's goal is to *protect and or enhance fish resources and their habitat* (Area Guide, p. 79). Stated another way, the goal is to preserve the biological productivity of every fish stream on the Tongass" (TLMP, FEIS, Part 1, 1979).

In 1986, the Aquatic Habitat Management Handbook (AHMU)(FSH 2609.24) was developed with the following objectives:

1. Ensure a consistent Regional approach to aquatic habitat management through established standards, guidelines and prescriptions.
2. Coordinate the management of multiple watershed resources through the interdisciplinary team process and interaction with cooperating agencies.

The AHMU handbook also allowed for site-specific management in situations where there is a limited amount of fish habitat upstream. (See AHMU PRESCRIPTIONS (64.13a & 64.23a). The management prescription for AHMU Class I stated: "Provide fish passage on all streams with natural stream gradients of 4% or less, using typical designs for bridges or culverts installed at a gradient of 1 percent or less. For streams with gradients steeper than 4 percent, evaluate the potential trade-off between loss of rearing fish production and the cost of providing rearing fish passage. The 4-6 percent gradient stream reaches are especially critical since standard culvert design cannot be implemented to provide fish passage. Thus, fish passage involves open-bottom structures, baffled culverts or other non-standard structures which are much more costly than standard designs. Evaluate this trade-off using the Fish Passage Trade-off Evaluation appended to this AHMU Project Level Category. In most situations, the high economic and resource value of Class I fish habitat will justify additional expenses required to provide fish passage….In cases where after the evaluation, fish passage is foregone, a copy of the completed form (R10-2600-11 [1/86]) shall be sent to the local Alaska Department of Fish and Game, Habitat Division representative. Original forms shall be kept on file at District Offices."

The management prescription for AHMU Class II streams stated: "Provide fish passage on all streams with natural stream gradients of 4% or less, using typical designs for bridges or culverts installed at a gradient of 1 percent or less. For Class II streams with gradient steeper than 4 percent, do not provide fish passage unless economically justified (use form in Section 64.13c)."

The report Fish Passage Through Culverts (USDA Forest Service Report No.FHWA-FL-90-006, 1990) explains the critical need to identify and replace existing road drainage structures. In addition to the need to accommodate efficient fish passage when a culvert or bridge is installed, the report emphasizes that fish passage must be maintained over the design life of the structure. The report states: "The identification and planning for replacement of existing road drainage structures is an area of high national need. This will require unprecedented cooperation among biologists, engineers and hydrologists. The dollars associated with drainage structure replacement will be staggering, as is the potential impact to remaining fish runs." The report estimates that in areas of high streambed abrasion or corrosive soils the design life of pipes is less than 20 years. Where these pipes are located under substantial road fill, the cost of replacement may become very expensive. The age of many structures on the Tongass National Forest approaches or exceeds 30 years.

The Anadromous Fish Habitat Assessment Report (USDA, 1995), was written by a panel of experts in fisheries and hydrology in response to direction from Congress. The study reported on the effectiveness of the FS' salmon and steelhead habitat protection program

on the Tongass and that additional protection was needed. The report raised concerns over road maintenance and fish passage through culverts, and stated:

> "Maintaining roads was a concern identified by some of the field review experts and our Team. Funds for maintaining the many miles of open roads on the Tongass seem inadequate. Low-use roads typically are not stabilized or "put to bed"--such as by removing culverts, constructing waterbars, outsloping road surfaces, and seeding after timber harvest.
>
> Stream crossings should be designed and maintained to ensure the upstream and downstream movement of all life stages of anadromous fish. Similar passage criteria are desirable for resident streams. Site-specific exceptions are to be approved by a line officer in consultation with a fisheries biologist and the Alaska Department of Fish and Game."

The FS directed in the April 1999 Record of Decision for the Tongass Land and Resource Management Plan that the FS implement Standards and Guidelines that fulfill the recommendations of the Anadromous Fish Habitat Assessment Report As stated in the April 1999 ROD:

> "Another Regional Forester decision was made to incorporate all the recommendations made in the Anadromous Fish Habitat Assessment (AFHA) report for additional protection, because AFHA is the most comprehensive and credible scientific review of the measures needed to protect fish habitat on the Tongass National Forest."

The current Tongass Land and Resource Management Plan includes the following standards that pertain to the protection of fish habitat.

"G. Maintain fish passage through stream crossing structures. (Consult the Aquatic Habitat
Management Handbook, FSH 2609.24.)

> 1. Stream Class I: Maintain, restore or improve the opportunities for fish migration.
>
> a) Use juvenile coho as the design species for upstream fish migration.
> b) When a culvert is selected for stream crossing, design, install, and maintain the culvert to prevent the creation of water velocity or height barriers at the outlet of the pipe, and to allow upstream passage of juvenile coho. Passage may be delayed for up to 4 days due to high water velocity during the mean annual flood.
>
> 2. Stream Class II: Maintain, restore or improve the opportunities for the natural migration of resident fish, where feasible (see glossary). Overall, the intent is to

provide passage of resident fish in all Class II streams, but occasionally it is not feasible to protect short sections of habitat and passage will be restricted.

a) In determining feasibility, consider the following:

1) Presence of known sensitive or unique fish populations.

2) The cumulative impacts of not providing fish passage at multiple sites in the same watershed.

3) In Class II streams which flow directly into Class I streams: the upstream and downstream linkages between the anadromous and resident life strategies of the same species.

4) Advice from the Alaska Department of Fish and Game.

b) Use Dolly Varden char, rainbow trout, and/or cutthroat trout juveniles (greater than one year old) as the design species for fish migration in Moderate Gradient-Mixed Control (MM) and Flood Plain (FP) process groups (see Appendix D), depending on which specie(s) is(are) present. Use adult Dolly Varden char, rainbow trout, and/or cutthroat trout as the design species in all other process groups."

FEDERAL AND STATE LAWS REGARDING FISH HABITAT PROTECTION

The federal Clean Water Act also includes an overarching requirement for providing fish passage at forest road stream crossings. Section 404 of the Act normally requires authorization from the U.S. Army Corps of Engineers prior to the discharge of dredge or fill material into waters of the United States, including wetlands and tributaries to navigable waters. Section 404(f)(1) provides an exemption to this requirement for the construction or maintenance of forest roads. It states: *"where such roads are constructed and maintained in accordance with Best Management Practices (BMPs) to assure that flow and circulation patterns and chemical and biological characteristics of waters of the United States are not impaired, that the reach of the waters of the United States is not reduced, and that any adverse effect on the aquatic environment will be otherwise minimized."* Of the fifteen BMPs, which must be implemented to qualify for this exemption, BMP vii specifically states: *"The design, construction and maintenance of the road crossing shall not disrupt the migration or other movement of those species of aquatic life inhabiting the waterbody."*

The State standard for fish passage is found in Alaska Statute 16.05.840:

> "If the commissioner considers it necessary, every dam or other obstruction built by any person across a stream frequented by salmon or other fish shall be provided by that person with a durable and efficient fishway and a device for efficient passage of downstream migrants. The fishway or device or both shall be maintained in a practical and efficient manner in the place, form and capacity the commissioner approves, for which plans and specifications shall be approved by the department upon application to it. The fishway or device shall be kept open, unobstructed, and supplied with a sufficient quantity of water to admit freely the passage of fish through it."

The ADF&G has worked to assure anadromous fish habitat protection and anadromous and resident fish passage on Tongass National Forest roads since Statehood. Prior to 1998, ADF&G had limited review opportunity for the design of instream structures on the Tongass National Forest. Their review was restricted to the conceptual stream crossings identified by the FS in documents prepared under the National Environmental Policy Act (NEPA) and under the Alaska Coastal Management Program (ACMP). In March of 1998, the ADF&G and the FS signed the Supplemental Memorandum of Understanding No. 1 (SMOU) Regarding Fish Habitat and Fish and agreed to:

- Protect fish habitat and provide for efficient passage;
- Reach concurrence prior to instream activities;
- Work together to develop design standards; and
- Resolve disputes in a timely manner.

The SMOU recognizes common management goals related to protection of fish habitat and efficient fish passage, and provides an updated interagency procedure for reviewing proposed fish stream crossings and other activities that could affect fish habitat.

It is important to understand the distinction between performance standards vs. design standards. References made to fish passage in Title 16(State of Alaska) and Section 404(COE) are performance standards. Design standards are more detailed and need to meet the objective of the performance standards. The TLMP Standards and Guidelines are a combination of both.

METHODS

DEVELOPMENT OF ROAD CONDITION SURVEY PROTOCOLS

The USFS began development of the Road Condition Survey Protocols in 1994, and started systematic surveys in 1995 with surveys of roads on the Petersburg Ranger District. In 1998 ADF&G and ADEC became involved in the revision of the protocols. The protocols are structured to collect data, which can be easily sorted, displayed and queried. Defined descriptive codes are used to ensure objective and maximize consistency between field crews.

The protocols have evolved as field crews and data users identified needs for additional data or clarification of existing procedures. The most significant changes have been the transition to more precise measurements of culverts and stream characteristics at verified fish streams, including the culvert slope streambed gradient, tailcrest and other relationships between the culvert and the stream. This level of precision provides data needed for hydraulic models such as FishXing.

Additional descriptive codes have been added to address most conditions encountered in the field and avoid dependence on notes to capture data.

DATA COLLECTION

FS and ADF&G personnel collected Field data, with additional assistance from the Alaska Department of Environmental Conservation (ADEC). Field crews used the protocols documented in the "TRANSPORTATION SYSTEM MAINTENANCE HANDBOOK FSH 7709.58-99-2" (Appendix A). The majority of the data was collected in 1998 and 1999. Although, most of the data on the Petersburg District was originally collected earlier, with additional measurements taken in 1999. As protocols evolved, data collected under earlier protocols was reviewed and updated with additional field visits as needed.

Appendix A contains channel cross-section diagrams and descriptions of measurements. Culvert, road, and stream data was collected primarily by USFS personnel. ADF&G provided habitat biologists and technicians to capture and identify fish, assist in collection of measurements and evaluate fish habitat. When possible, crews were comprised of an engineer and a fisheries biologist or technician. Biologists from both the Forest Service and ADF&G also reevaluated fish presence and habitat in subsequent years to verify the quality of data collected in previous years, fill any data gaps and collect additional data required for more detailed analysis.

Data was collected using Hewlett Packard palmtop computers containing an MS Excel® spreadsheet and downloaded onto a personal computer upon returning to the office. The milepost was recorded using a digital odometer with an accuracy of +/- 0.002 miles where access by a vehicle was possible. A measuring wheel with similar accuracy was used where roads were inaccessible by vehicle. The project leaders initiated a procedure

of writing the milepost on each culvert with a paint pen for future reference. This recommendation was implemented on the Petersburg and Wrangell Ranger Districts. The other districts have implemented other processes to track individual culvert identity.

Fish presence was verified using an electroshocker, baited minnow traps and/or visual verification. The protocols called for electroshocking upstream and downstream for a distance of five pools or 100 feet, whichever was greater. Minnow traps were used where electroshocking was likely to be inefficient, such as palustrine channels, and in waters inhabited by steelhead. Steelhead were occasionally captured by electroshocking where their presence was previously unknown. Minnow traps were soaked for at least 30 minutes. Sampling was done during periods when flows allowed efficient sampling (low to moderate flows), and when juvenile and adult fish were likely to be present (between May 15 and September 30).

QUALITY CONTROL

To ensure consistency of data collected, training sessions were conducted prior to each field season for all personnel scheduled to participate in the surveys, whether or not they had been previously trained. In addition to basic protocol instruction, training addressed changes in protocols from year to year.

Training sessions included both office and field sessions to familiarize participants with the structure of the database and data collection procedures, including fish identification, fish sampling (electroshocker and minnow traps), channel type classification, measurement techniques, use of palmtop computers and safety.

Consistency of data collection was stressed in training sessions and in training materials. An MS PowerPoint® presentation was prepared with photos of typical scenarios and sample data collection forms showing the correct data elements and codes to be recorded (Appendix B).

The project's technical supervisor continued to assist field crews after the initial training to check their understanding of protocols and their thoroughness in collecting and recording data.

Data collected was periodically checked for completeness by both the USFS and ADF&G. Field verification visits were conducted to ensure that data collected in previous years was accurate and complete. Field surveys were repeated on sites to correct errors and collect additional information.

Despite continued supervision and review, errors and data gaps inevitably occur in a project of this magnitude. Some records with missing measurements could still be used for this analysis. For example, if a culvert was completely blocked yet was missing a bedwidth measurement, it was not eliminated from the sample because it obviously blocked fish passage.

Similarly, if anadromous fish were verified downstream, but not upstream of the structure, the structure was still considered to be a potential anadromous stream crossing. The same assumption was applied to resident fish. While habitat is assumed to be present upstream, in some cases the extent of upstream habitat may be very limited. This is more likely to be true on resident-only fish streams. Roads are typically located at natural slope breaks, particularly in the upper portions of watersheds, where the natural stream gradient is often steeper above the road than below the road. This is also accompanied by a change in channel process group, usually from high-gradient contained to moderate-gradient, mixed control.

Detailed assessment of the quantity and quality of habitat upstream of road crossings was beyond the scope of this project. A cursory estimate may be possible using GIS analysis of channel types. Even this, however, is a very limited option since up to 50% of the resident streams are probably not currently in the GIS database since these streams are often very small. The FS has recently begun an assessment of the habitat upstream of the culverts thought to restrict fish passage. This assessment will help to prioritize reconstruction work.

Measurements necessary for analysis of fish passage were missing for 156 anadromous fish stream culverts and 332 resident fish stream culverts where fish presence was verified. Most of these were culverts surveyed in 1998, prior to requiring more detailed measurements to better evaluate fish passage. However, the Road Condition Survey was never intended as a substitute for the more detailed hydrological data needed to design a stream crossing structure. Only those Districts on which the early protocol was implemented (Petersburg, Wrangell, Thorne Bay, Craig and Yakutat) are affected. The remaining districts (Ketchikan, Sitka, Hoonah and Juneau) were not involved in early implementation, and therefore have benefited from a more fully developed protocol. Stream crossing structure measurements, grouped by FS Ranger District, are shown in Appendix E.

The Draft Road Condition Survey Protocol, project proposal, operational plan and draft technical report were all submitted for peer review. All substantive recommendations and questions were addressed. The following is the list of agencies, organizations and independent scientists from which peer review was requested:

Alaska Department of Fish and Game
Alaska Department of Environmental Conservation
Alaska Department of Natural Resources
Alaska Department of Transportation and Public Facilities
U.S. Environmental Protection Agency
USDA Forest Service
U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers
National Marine Fisheries Service
Sealaska Corporation
Independent fisheries biologist

DATA ANALYSIS

There are approximately 3594 miles of system or permanent roads on the Tongass National Forest. As of March 2000, Road Condition Surveys have been completed on 2153 miles of these roads. The Road Condition Survey database contained over 50,000 records as of January 2000. These included approximately 900 culverts with associated fish verification data and complete measurements for relevant protocols.

The data was organized by FS Ranger District to facilitate handling such a large database. Data was checked for consistency of column headings, column order and the correct units of measurement. Obvious errors were corrected. Those records containing questionable data were not used for analysis. Records missing measurements needed for the evaluation of fish passage were pasted into a separate worksheet to allow for analysis at a later date when the measurements have been collected. Additional columns were added for Verified Aquatic Habitat Management Unit category, Cumulative Verified Fish Presence, Culvert Perch Height (tailcrest), Culvert Perch Height (water surface), Culvert Gradient, Bedload Depth at the Culvert Inlet, Invert Bedload Percent and Culvert/Bedwith ratio. Descriptions of the formulas used for these measurements are contained in Appendix C.

Analysis of data was primarily done with a series of queries of the Excel data. The data for each District was grouped into a series of worksheets representing specific data elements. The following is a list of the worksheets along with a description of their contents:

ALL CULVERTS	All corrugated metal pipe and plastic culvert records
ALLFISH	All sites where fish presence was verified (bridges and culverts)
FISHPASS	All culverts with complete measurements
MISSING DATA	All culverts with verified fish and incomplete measurements
REMOVED	All sites where a structure (bridge or culvert) was removed
BRIDGES	All bridges
CROSS SECTION	All cross sectional features
EROSION	Parameter designated cutslope, fillslope or surface erosion.
BLOCKED	All blocked culverts
DITCH	Parameter designated as ditch plugging
INLET EROSION	All stream courses with inlet erosion noted
OUTLET EROSION	All stream courses with outlet erosion noted
CATCH BASIN	All records with an entry for catchbasin
DITCH BLOCK	All records with an entry for ditch block

FISH PASSAGE

Evaluation of the potential for efficient fish passage through culverts is a complex issue. Efficient fish passage means that the weakest swimming fish likely to be present in a waterbody can pass upstream and downstream through the structure at all flow levels when that fish would be likely to pass the same point in the stream, absent the structure. Fish passage is not required at all flow levels, only at levels when the naturally occurring

species and life stages of fish in a particular drainage would normally be moving either upstream or downstream. This analysis relies heavily on assumptions regarding swimming capability of juvenile fish, fish movement in relationship to discharge and estimated flow discharge. While some culverts may be complete barriers to both adults and juveniles, many of the culverts that this study determined were "assumed not to be adequate for fish passage" may restrict only the movement of juvenile fish at certain flow conditions.

The presence of fish above a culvert is an inadequate indicator of the ability of that culvert to efficiently pass fish for the following reasons:

- While a few juvenile or small fish may be strong enough to swim against the increased velocity in the culvert, the majority may not, or passage may be restricted to very limited time periods related to high or low flows, resulting in underutilization of available habitat;
- Adults may pass through the culvert and spawn, while juveniles from downstream (or which have moved downstream at some time) are unable to pass through the culvert; and
- Resident fish above a culvert may represent an established population that was stranded by the blockage.

The best evaluation of fish passage would be actual field assessments of fish swimming performance in natural conditions during all flow conditions when various age classes of fish want to move either upstream or downstream. However, this is not cost-effective or practicable at every culvert.

Velocity is the most common cause of fish passage restriction in culverts. If a culvert is installed at too steep a gradient or the culvert width is significantly narrower than the streambed width, the water velocity will be increased within the culvert. Very slight changes in the slope of the culvert and the roughness of the substrate may significantly change velocity. For example, a slope change of only .5 to 1.0% may represent a significant change in the efficiency of the culvert with respect to fish passage. Recognition of this sensitivity was the primary reason for modifying protocols to increase the precision of measurements at fish stream crossings.

Other frequent problems include perching of the culvert outlet above the water surface, blockage with substrate or woody debris and structural damage to the culvert. In most cases multiple factors contribute to restricting fish passage.

Juvenile coho salmon reach approximately 55 millimeters in length by the autumn of their first year when they normally move upstream during relatively high streamflows. This age class of coho salmon have been identified as the design fish for fish passage in Southeast Alaska because they are assumed to be the weakest swimming fish that typically pass upstream through culverts during the season of heaviest rain. The 55-millimeter size is based on the average size of juvenile coho at the end of their first season of growth, which ends in September. This size was determined from trapping data collected across the Tongass.

Kahler and Quinn of the University of Washington recently completed an extensive literature search regarding juvenile and resident salmonid movement and passage through culverts (Kahler and Quinn, 1998). Their report states: "Redistribution of juvenile coho upstream to winter rearing areas often begins in September, usually triggered by the first major freshet. Most studies showed a peak in movement in October-November. Upstream movement was often into smaller tributaries from larger rivers or into off-channel habitats. The distances moved ranged from hundreds of meters to tens of kilometers. Many studies found fish moving upstream into off-channel areas throughout the winter."

Studies in Southeast Alaska also documented, juvenile salmonids migrate upstream in search of overwintering habitat in September and October. Movement is mostly up lower-order tributaries and into off-channel habitats (Murphy et al. 1984). Most studies report the largest peak in upstream movement during fall to early winter (e.g. Peterson and Reid 1984.

Despite the substantial knowledge about juvenile fish movement and passage, more knowledge is needed in some specific areas. Assessment of juvenile coho swimming capability through various types of culverts in natural field conditions is necessary to verify the assumptions used in mathematical predictions during culvert design. Some culvert design assumptions are based upon studies of species not native to the Tongass. Additional information is needed on the migration timing of juvenile fish to determine if the State of Alaska's Q2-2 day duration flow is an appropriate standard. This standard requires that a culvert or bridge accommodate the efficient passage and movement of fish, both upstream and downstream, at all flows up to and including a mean annual seasonal flood discharge with a two-day duration for the specific times of year that the weakest swimming fish (the design fish) present in the waterbody must be assured safe passage. More field research is needed on the biological implications of a more frequent or longer delay in fish migration through a culvert. Specific information is also needed on the migratory habits of fish in high gradient, headwater streams supporting only resident fish.

Although this analysis uses a 55-mm juvenile coho as the design fish, it is likely that smaller and weaker coho salmon would be more appropriate and, therefore, the criteria for maximum flow through the culvert would be different. Movement both up and downstream has been documented for emerging coho fry (Kahler and Quinn, 1998) that would be smaller than a 55-mm juvenile. Likewise, both salmonids and resident fish must seek residual pools and flowing water during dry periods in the summer when portions of streams commonly go dry. It is reasonable to expect these fish to go either upstream or downstream depending on the location of the nearest residual water. Fish passage needs for fry emerging from their redds and later during the summer represent areas for future research in Southeast Alaska.

Culverts may also impede the movement of both adult and juvenile fish at low flows. If the culvert is not properly bedded or buried, water may flow under as well as through the

culvert. This is a common problem where shot rock is used for bedding material without sufficient fine materials to seal the bed and prevent leakage of water below the culvert. Burial of a culvert in proper bedding material should be a minimum of 20 percent of the height for arch pipes and more for round culverts.

Sub-surface flows occur naturally in streams. Low flows can be exasperated if a culvert is significantly wider than the natural stream channel in which it is installed. In this case, the culvert may spread minimal flows over too wide an area, reducing depths enough to prevent fish passage. If gravel is present in such a culvert, the flow may be subsurface, even though it passes through the barrel of the culvert. This problem can be corrected by installing a weir across the culvert to raise the water level within the culvert.

In essence, fish need to efficiently pass through a culvert at all normal flows during which fish movement is naturally occurring. As flows approach the two-year average flood, natural fish movement is assumed to cease until flows fall to a passable level. The very limited hydrological flow data available for small watersheds in Southeast Alaska indicates that within 24 hours on each side of a flood with a 2-year return period flows drop to about 40% of the flood flow (Gubernick, 1999). While no scientific studies have documented fish passage across these various flows, ADF&G and the FS have assumed that juvenile coho are unlikely to move upstream for a short period of time under natural conditions at peak flows.

A working group comprised of ADF&G, Alaska Department of Transportation and Public Facilities and the FS culvert and fish passage experts developed criteria to evaluate if existing stream crossing structures were providing for efficient passage of juvenile coho salmon in Southeast Alaska. This group included:

Mike Furniss	FS, Six Rivers National Forest Watershed Interactions Team
Susan Firor	FS, Six Rivers National Forest Watershed Interactions Team
Ken Vaughn	FS, Region 10
Bob Gubernick	FS, Stikine Area, Tongass National Forest
Steve Levesque	FS, Ketchikan Area, Tongass National Forest
John McDonell	FS, Petersburg Ranger District
Dick Aho	FS, Stikine Area, Tongass National Forest
Bill Lorenz	FS, Chatham Area, Tongass National Forest
Mark Miles	ADOT, Juneau
Mac McLean	ADF&G, Habitat and Restoration Division
Bill Hanson	ADF&G, Habitat and Restoration Division
Jim Cariello	ADF&G, Habitat and Restoration Division

Figure 1 below contains a flowchart developed by the group, which depicts the process used to evaluate fish passage through existing structures. Table 1 displays assumptions regarding restrictions to fish passage that was developed by the working group based on the best information available in 1999 and their expertise. These criteria will be updated through a similar interagency process as new information becomes available.

Figure 1- Fish passage evaluation flowchart

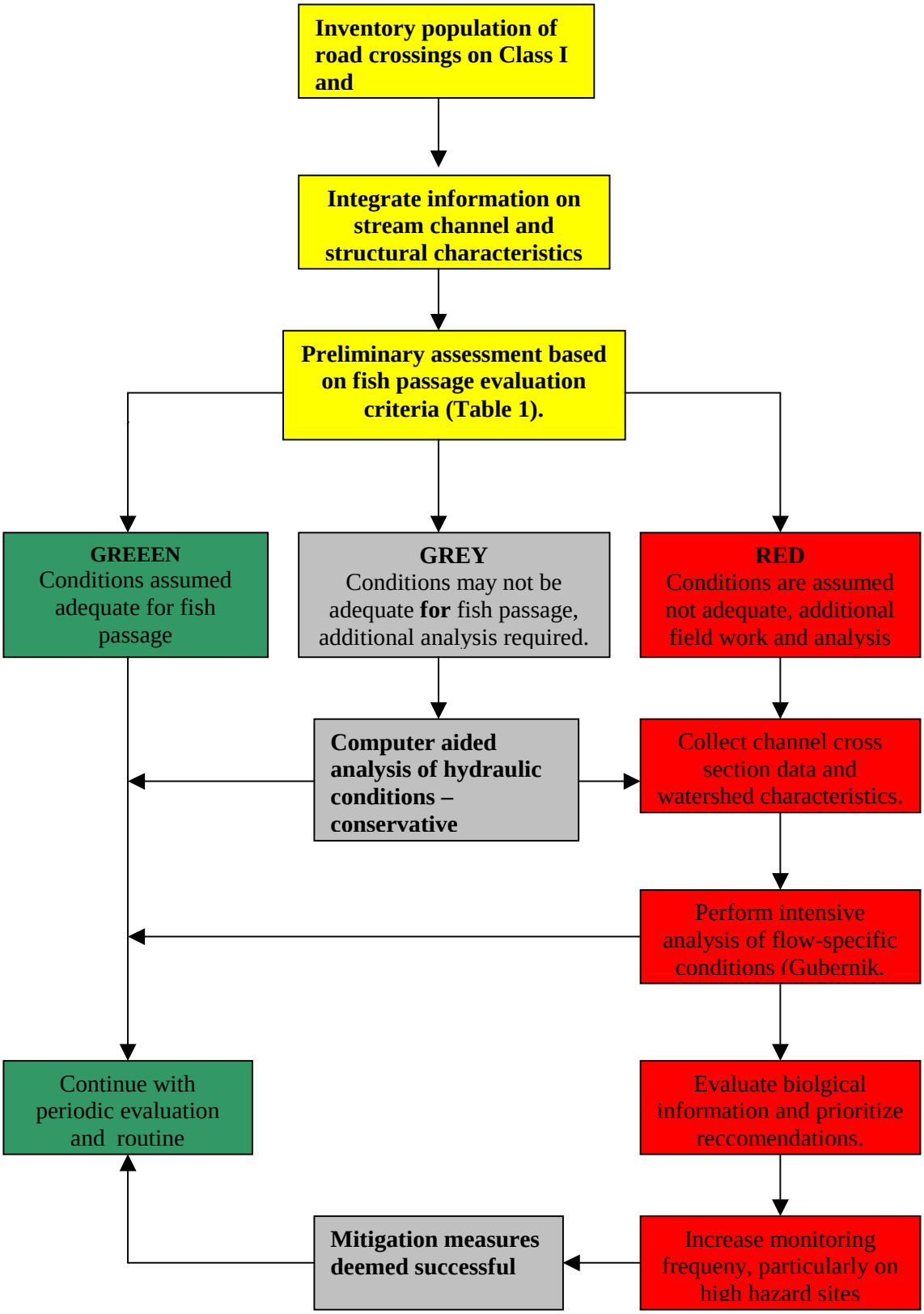


Table 1. Fish passage evaluation criteria.

	Structure	***Green1***	***Grey2***	***Red3***
1	Bottomless pipe arch or countersunk pipe arch, substrate 100% coverage, invert depth greater than 20% of culvert rise.	Installed at channel grade (+/- 1%), culvert span to bankful width ratio of 0.9 to 1.0, no blockage.	Installed at channel grade (+/- 1%), culvert span to bankful width ratio of 0.5 to 0.9, less than 10% blockage.	Not installed at channel grade (+/- 1%), culvert span to bankful width ratio less than 0.5, greater than 10% blockage.
2	Countersunk pipe arches (1x3 corrugation and larger). Substrate less than 100% coverage, invert depth less than 20% of culvert rise.	Grade less than 0.5%, no perch, no blockage, culvert span to bedwidth ratio greater than 0.75.	Grade between 0.5 -2.0%, less than 4" perch, less than 10% blockage, culvert span to bedwidth ratio of 0.5 to 0.75.	Grade greater than 2.0%, greater than 4" perch, greater than 10% blockage, culvert span to bedwidth ratio less than 0.5.
3	Circular CMP 48 inch span and smaller, spiral corrugations, regardless of substrate coverage.	Culvert gradient less than 0.5%, no perch, no blockage, culvert span to bedwidth ratio greater than 0.75	Culvert gradient 0.5 to 1.0%, perch less than 4 inches, less than 10% blockage, culvert span to bedwidth ratio of 0.5 to 0.75.	Culvert gradient greater than 1.0%, perch greater than 4 inches, blockage greater than 10%, span to bedwidth ratio less than 0.5.
4	Circular CMPs with annular corrugations larger than 1x3 and 1x3 spiral corrugations (>48" span), substrate less than 100% coverage, invert depth less than 20% culvert rise.	Grade less than 0.5%, no perch, no blockage, culvert span to bedwidth ratio greater than 0.75.	Grade between 0.5 -2.0%, less than 4" perch, less than 10% blockage, culvert span to bedwidth ratio of 0.5 to 0.75.	Grade greater than 2.0%, greater than 4" perch, greater than 10% blockage, culvert span to bedwidth ratio less than 0.5.
5	Circular CMPs with 1x3 annular corrugations (all spans) and 1x3 spiral corrugations (>48" span), 100% substrate coverage, substrate depth greater than 20% of culvert rise.	Grade less than 1%, no perch, no blockage, culvert span to bedwidth ratio greater than 0.75	Grade 1.0 to 3.0%, perch less than 4 inches, less than 10% blockage, culvert span to bedwidth ratio of 0.5 to 0.75.	Culvert gradient greater than 3.0%, perch greater than 4 inches, blockage greater than 10%, culvert span to bedwidth ratio less than 0.5.
6	Circular CMPs with 2x6 annular corrugations (all spans), 100% substrate coverage, substrate depth greater than 20% of culvert span.	Grade less than 2.0%, no perch, no blockage, culvert span to bedwidth ratio greater than 0.75	Grade 2.0 to 4.0%, less than 4" perch, less than 10% blockage, culvert span to bedwidth ratio of 0.5 to 0.75.	Grade greater than 4.0%, greater than 4 inch perch, greater than 10% blockage, culvert span to bedwidth ratio less than 0.5.
7	Baffled or multiple structure installations		All	
8	Log stringer or modular bridge	No encroachment on bedwidth.	Encroachment on bedwidth (either streambank).	Structural collapse.

To avoid misinterpretation, users must understand that this table and flowchart do not represent design standards. Rather, these attempt to define whether efficient fish passage is achieved at the current time through existing structures. Well-designed culverts must achieve efficient fish passage over the entire useable life of the structure. It is also important to understand that while this flowchart and table represent thoughtful consideration and significant field experience, as well as available literature, the criteria are likely to change as they are verified in the field.

The table categorizes existing culverts into three classes:

- **GREEN**: Conditions are **assumed to be adequate for fish passage** using the Q2-2 day duration flow standard
- **RED**: Conditions are **assumed not to be adequate for fish passage**) using the Q2-2 day duration flow standard; and
- **GREY**: **Additional analysis is required** to determine if conditions are adequate for fish passage using the Q2-2 day duration flow standard. Computer aided analysis of hydraulic conditions using the FishXing program is necessary for a definitive answer.

The fish passage design criteria for high flows corresponds to the mean annual flood with a two-day duration for the specific time of year that the design fish is moving upstream. The mean annual flood discharge (Q2) is the arithmetic mean of all annual floods at a given site and should not be confused with the flood having a recurrence interval of one year. The mean annual flood has a recurrence interval of 2-years for normal distributions and 2.33 years according to the theory of extreme values as applied to floods.

An exception to the Fish Passage Evaluation Criteria Table was made for culverts in palustrine channels. Palustrine channels are very low gradient (generally <1%) streams associated with low relief landforms and wetlands. Water movement is slow, so these channels typically act as traps and storage areas for fine organic and inorganic sediments. Beaver activity is frequently associated with them, making it difficult to properly measure the bedwidth of the channel and other culvert measurements referenced in the fish passage table. In addition, it is difficult to install culverts at a level gradient since soft silt and organic bed material often allows the culvert to settle following installation. The culvert width/bedwidth ratio and culvert gradient were evaluated individually in palustrine channels. Culverts in these channels often contain standing water at all flows, water velocities and culvert gradients, so fish passage problems are uncommon.

Perching of the culvert outlet above the surface of the exit pool is another very common obstacle to fish passage. For the purposes of this analysis, efficient fish passage was assumed for perch heights (jumps) of 4 inches or less.
The water level present in the culvert at the time of the survey is not a true measure of perch height since it is flow dependent. Evaluation of perch height was done using a conservative analysis that compared the elevation of the bottom of the culvert at the outlet, to the elevation of the tailcrest. The tailcrest is a deposition of bedload

downstream of the culvert, which controls the water level inside the culvert. In situations where there was no true tailcrest, a tailwater control elevation was taken at a point three times the culvert diameter downstream from the outlet. For these culverts, analysis of perch height required evaluation of the outlet pool depth and comments recorded in the field to determine if the culvert outlet was perched.

Ideally, perch height should be evaluated at various discharges below and up to the high flow discharge criteria. A more accurate way to determine perch would be to perform a backwater calculation of the edge of the tailwater reach and then compare the computer model's estimate of water surface with the culvert invert over a range of discharges up to the design discharge for fish passage. However, the data required to run these calculations was too time consuming to collect for this comprehensive survey of all the culverts across the Tongass.

Appendix D contains a sample of the final product of the FishXing analysis.

WATER QUALITY

Analysis of road prism features affecting water quality was done with both queries of the Excel data and spatial analysis using Arcview GIS. The data element "Descriptive Parameter" contains several codes that were useful in identifying water quality concerns associated with the road prism. Cut-Slope, Fill-Slope, Ditch, Quarry and Surface Erosion were the primary parameters queried. In addition, the data elements "Ditch Block", "Catch Basin", "Inlet Erosion", "Outlet Erosion" and "Failure Mechanism" also provided valuable information concerning erosion and related to water quality concerns.

An approach to using GIS to conduct spatial analysis of the road condition survey data was developed to further assess the potential risks to fish habitat of sediment sources. This would identify "sediment source risk zones" 200 feet in diameter around documented sediment sources, such as cutslopes and eroding ditches. A "high potential for sediment delivery risk zone" would be identified within 200 feet of the banks of fish streams. Where these risk zones overlap, fish habitat would be considered at risk from non-point source pollution, or sediment.

RESULTS

FISH PASSAGE

273 Class I culverts (anadromous fish streams) and 622 Class II culverts (resident fish only) were evaluated for fish passage. The culverts used for the analysis of fish passage represent 65% of the culverts on streams with verified fish presence in the database. The remaining 35% of the culverts that are missing measurements should be made a high priority so that an evaluation of fish passage can be completed.

The database contains 60% of the system (permanent) roads on the Tongass National Forest. The remaining 40% of the roads will be surveyed during 2000 and 2001. For the 2153 miles of system road surveyed, there was an average of one culvert across an anadromous stream every 5.0 miles of road, and one culvert across a resident stream every 2.25 miles of road. This average frequency does not include bridges or removed culverts and must be considered a low estimate due to the limited fish sampling effort to verify fish presence above and below each culvert and the seasonality of fish presence at specific sites. The average frequency of all types of stream crossings, including culverts and bridges, was one across anadromous fish streams for every 3.9 miles of permanent road, and one across resident fish streams for every 2.1 miles of permanent road.

GREEN/GREY/RED CATEGORIES OF CULVERTS

There were a total of 895 culverts, which contained the measurements necessary to evaluate fish passage. The following table displays the results of the analysis using the fish passage evaluation criteria.

Table 2. -Analysis of culverts in the GREEN/GREY/RED categories.

	GREEN	GREY	RED
ANADROMOUS STREAMS	47 (17%)	47 (17%)	179 (66%)
RESIDENT STREAMS	36 (6%)	55 (9%)	531 (85%)
TOTAL	83 (9%)	102 (11%)	710 (80%)

Note: The FS typically installed bridges in floodplain channels of anadromous fish streams due to the extensive spawning habitat that would be adversely impacted by crossing structures other than clear-span open-bottom culverts or bridges.

RED CATEGORY CULVERTS ACROSS ANADROMOUS FISH STREAMS

Of the 179 culverts in the RED category, 105 (59%) exhibited multiple causes of block fish passage: 53 culverts had two causes, 43 culverts had three, 8 culverts had four and 1 culvert had five.

Of the 74 culverts (41%) assumed not to be adequate for fish passage due to a single factor, unacceptably steep gradient was the most frequent cause. Of the 33 culverts with gradient as sole problem, 12 culverts had gradients less than 2% and 21 culverts had gradients between 2 and 11%. Further analysis of the twelve records with a gradient less than 2 % using FishXing software may be warranted to confirm the criteria used in the Fish Passage Evaluation Chart.

The following graphs display the frequency and reasons for culverts being assumed to block salmonid fish passage for a single reason. It is assumed that adult salmon can negotiate higher velocity water through a culvert and greater culvert perch heights as long as there is adequate water depth.

Figure 2. Anadromous fish streams: number of reasons for RED designation

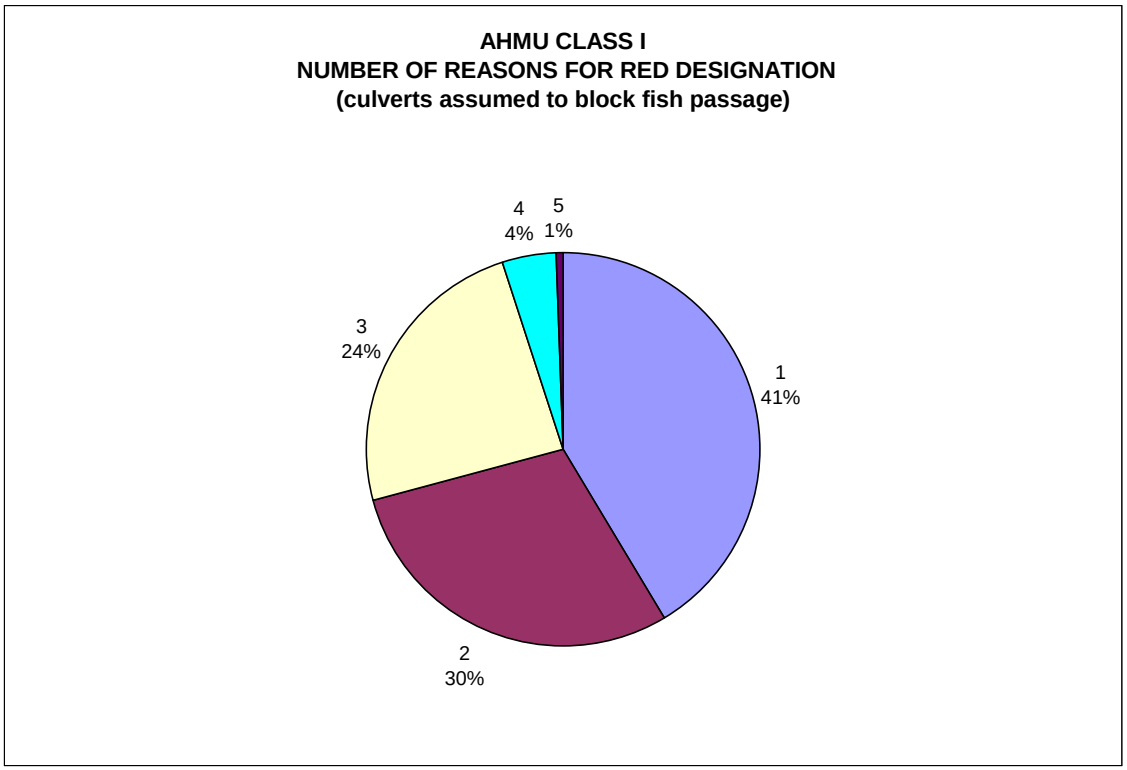
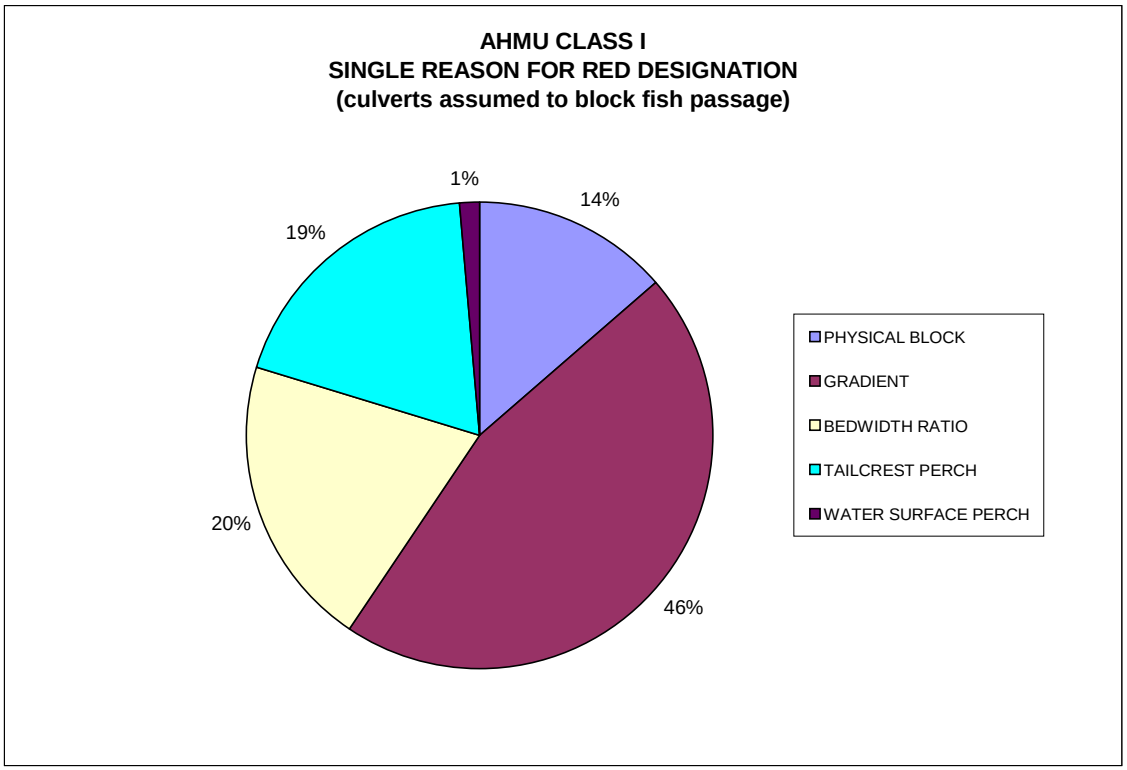


Figure 3. Anadromous fish streams: single reason for RED designation



RED CATEGORY CULVERTS ACROSS RESIDENT FISH STREAMS

Of the 531 Class II culverts in the RED category, 385 (73%) exhibited multiple causes of assumed blockage to fish passage: 120 culverts had two causes, 210 culverts had three, 53 culverts had four and 3 culverts had five. Of the 145 culverts (27%) blocked by a single factor, unacceptably steep gradient (65%) was the most frequent cause. Of the 95 culverts with gradient as the sole problem, 19 culverts had gradients less than 2% and 76 culverts had gradients between 2 culverts and 17%. Further analysis with FishXing of the nineteen records with a gradient less than 2 % may be warranted to confirm the criteria used in the Fish Passage Evaluation Chart. The following graphs display the frequency and reasons for assumed blockage to resident fish.

Figure 4. Resident Fish Streams: number of reasons for RED designation

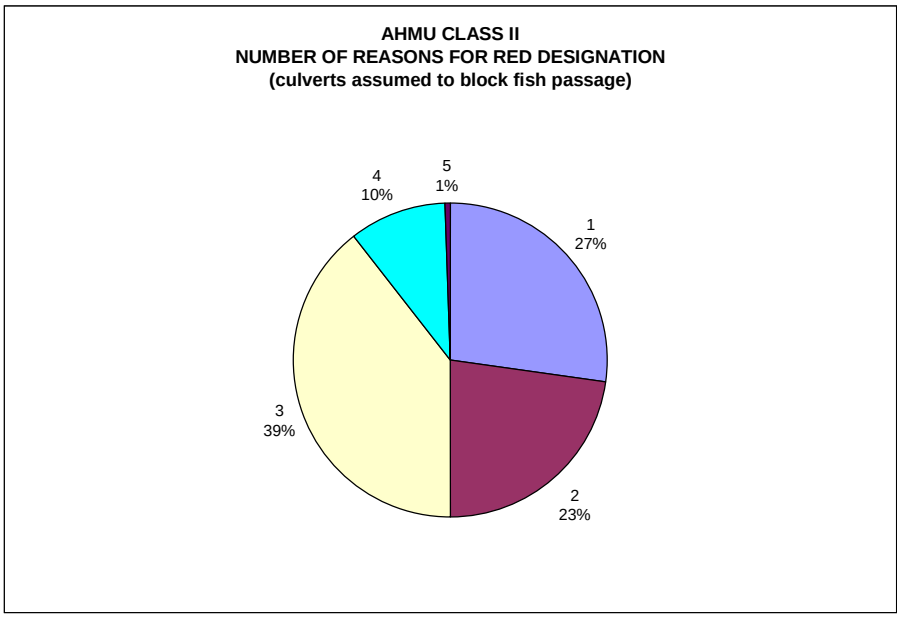
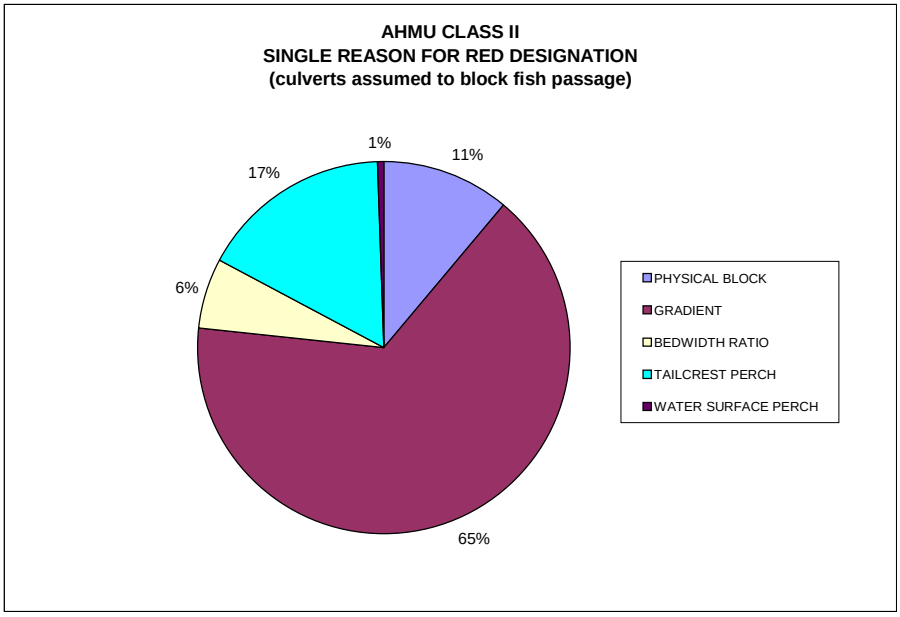


Figure 5. Resident fish streams: Single reason for RED designation



GREY CATEGORY

Of the 6 anadromous stream culverts in the GREY category, 3 culverts were due to a single criteria. Of the 55 resident fish stream culverts in the GREY category, 24 were due to a single criteria, with gradient being the most common (12 records).

GREEN CATEGORY

There were 83 culverts in the GREEN category, which were assumed adequate for fish passage. Forty-seven were on anadromous fish streams and 36 were on resident fish streams. The structure types included:

- 1 Structural Plate Pipe Arch
- 2 Corrugated Metal Arch - (open bottom)
- 70 Corrugated Metal Pipe (round)
- 10 Corrugated Metal Pipe Arch (squash pipe)

The diameter of round corrugated metal pipes assumed adequate for fish passage at the sites surveyed varied from 18” to 120”, with the following frequency:

- 6 18"
- 10 24"
- 21 36"
- 18 48"
- 8 60"
- 4 72"
- 2 96"
- 1 120"

Of the 47 anadromous fish culverts assumed to be adequate for fish passage, approximately one-third were verified to have been re-installations in more recent years, usually associated with the replacement of old log stringer bridges.

PERCHED CULVERTS

Tailcrest (See Glossary) was used to evaluate culvert perch height since it is independent of changes in streamflow. Water surface elevation at the tailcrest was also evaluated, but this measurement is dependent upon flow stage at the time of the survey. Forty-two culverts were recorded as having no "true" tailcrest. For these culverts, the measurement was taken at a distance three times the culvert diameter downstream of the culvert outlet. None of these culverts were put in the RED category solely because of the tailcrest perch; all exhibited multiple problems including excessive gradient, blockage, and bedwidth ratio or water surface elevation perch.

Perch height represented a restriction or a total block to efficient fish passage for 100 culverts on anadromous fish streams and 374 culverts on resident fish streams. For anadromous fish streams with a tailcest perch, 22 had a perch greater than 2 feet, 29 between 1 and 2 feet and 49 between 4 inches and 1 foot. For resident fish streams with a tailcrest perch, 108 had a perch greater than 2 feet, 134 between 1-2 feet and 132 between 4 inches and 1 foot.

BLOCKED CULVERTS

Blockages in culverts can be caused by excessive bedload, road fill material falling into culvert, woody debris or beaver activity. Of the126 culverts which recorded any degree of blockage and which recorded a "Failure Mechanism" or cause of the blockage, sediment accumulation (19), woody debris (14), beaver (14), mechanical failure (12) and road fill material (12) were the most frequently noted causes. There were 24 culverts on Class I streams with a blockage of 10% or more and 77 culverts on Class II streams with a blockage of 10% or more. Where these were minor or easily correctable, RCS crews removed the blockage during this project and noted this as action taken in the database. Culverts are often designed to accumulate bedload within the culvert to facilitate fish passage. This bedload deposition (if less than 30% of the area) was not considered a blockage. The data elements "Bedload Coverage" and "Culvert Bedload Type" were intended for culverts, which were designed to retain bedload, such as a depressed invert culvert.

STRUCTURE TYPE

Culverts in the RED category were sorted by the type and size of the structure. On anadromous fish streams, 126 (70%) of the culverts in the RED category were round corrugated metal pipes with diameters of 48" or less. These may be the most cost-effective culverts to replace or retrofit. It is unlikely that the 18" and 24" culverts were designed for fish passage. Most of the culverts less than 48" are on streams which currently are not in either the FS' GIS streams cover or ADF&G's Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes. This may indicate that inadequate field reconnaissance and fish verification was conducted prior to the design of the road and culverts. Another reason may have been the FS' previous policy of allowing the blockage of resident fish based upon their benefit cost analysis of individual stream crossing sites.

On resident fish streams, there are 426 (80%) of the culverts in the RED category that were round corrugated metal pipes with diameters of 48" or less. Again, many of these may be relatively easy to retrofit or repair. Some, however, are on steep gradients or beneath very deep fills and will consequently be quite expensive to restore efficient fish passage.

Table 3. - RED category anadromous fish stream culverts by type and size.

		Size (width)					
STRUCTURE TYPE	**Number**	**18"**	**24"**	**36"**	**48"**	**60"**	**> 60"**
Structural Plate Arch	2						2
Corrugated Metal Pipe - round	152	17	22	50	33	18	16
Multiple CMP	4			1	3		
CMP (squash pipe)	17			1	1	2	14
Multiple CMP (squash pipe)	4						4

Table 4. - RED category resident fish stream culverts by type and size.

		Size (width)					
STRUCTURE TYPE	**Number**	**18"**	**24"**	**36"**	**48"**	**60"**	**> 60"**
Structural Plate Arch	3						3
Corrugated Metal Pipe -round	479	60	120	147	99	32	21
Multiple CMP	26	1			15		
CMP (squash pipe)	21			1	3	4	13
Plastic Pipe	8	3	3	2			
Corrugated Metal Pipe - baffled	2					1	1
Corrugated Metal Arch - open	1						

There does not appear to be any difference in the size of round corrugated metal pipes between the RED and GREEN categories. Eighty percent of culverts in the RED category were 48" or less compared to 78 percent of the culverts in the GREEN category.

Bridges generally are believed to pass fish efficiently with relatively few exceptions. However, stream width above bridges was not recorded, and no detailed analysis of bridges has been completed since bridges have not been shown to limit fish migration.

SPECIAL SITE CONDITIONS

This data field identifies any conditions that predispose the stream crossing structure or road to causing future problems for fish habitat. The field also identifies the consequences of the problem. "Special Site Conditions" were noted on 57 anadromous fish stream culverts. Beaver activity (BV) was recorded 20 times, Other (OT) 8 times and the remaining 29 records noted factors such as "stream routed into ditch", "structural integrity of the road", "unstable woody debris upstream", "active bedload upstream" or "sediment transport potential into a fish stream". The category "Other" frequently included comments concerning the inability of the culvert to pass fish. There were 113 records of resident fish stream culverts with a "Special Site Condition" noted. Beaver activity (BV) was noted 45 times and the remainder of the comments were distributed similarly to those for the anadromous fish stream culverts. In addition, there were six anadromous fish stream culverts with a designated "Priority" as "E" (emergency) and seventeen as "C" (critical). For resident fish stream culverts, there was a total 24 "C" (critical) designations.

ACTION TAKEN

This data field is a way to record road maintenance accomplishments at the time of the survey. Action Taken was recorded for 9 anadromous fish stream culverts. Crews hand cleaned (HCC) 3 culverts and removed organic Blockages from six others.

A wider variety of corrective actions were recorded for resident fish stream culverts, with a total of 20. Organic blockages were removed from 9 culverts7 were hand cleaned, road fill material was removed from seven culverts, woody debris was removed from six, and beaver debris was removed from one.

ACTION REQUIRED

This data field identifies the degree of corrective action required to correct a problem noted during the survey. Action required was recorded for 55 anadromous fish stream culverts. The extent of action varied from "Moderate" (intensive hand labor can correct) to "Extensive" (use of heavy equipment is needed). Resident fish stream culverts had action required recorded for 140 culverts. However, there were many culverts in the RED or GREY category with this field left blank. In these cases, other data recorded allows an evaluation of the degree of action required. It can be assumed that any corrective action necessary to restore fish passage would at least be classified as "Moderate".

UPSTREAM HABITAT

The data element "HAB" (Fish Habitat) documents whether fish habitat was present immediately upstream or downstream of the stream crossing structure. Stream reaches with gradients greater than 25% were normally not considered fish habitat, consistent with the regulations regarding presumed barriers to fish that implement the Alaska Forest Resources and Practices Act. In streams with gradients less than 25%, the width, quantity and quality of pools, natural barriers, stream stability and proximity to known fish habitat were considered in addition to sampling for fish (which was recorded in a separate field).

There were very few culverts in the RED Category for which fish habitat was not recorded upstream. Of the 179 anadromous fish stream culverts in the RED Category, only 3 indicated that habitat was not present upstream, and upstream gradients appeared to verify this as 159 (90%) had upstream gradients of 10% or less.

Of the 622 resident fish stream culverts in the RED category, only 9 had gradients in excess of 25% and 308 had upstream gradients of 10% or less.

The total length, quantity, type and quality of upstream fish habitat above culverts assumed to be inadequate for fish passage were not specifically measured under this project. However, an estimation of fish habitat upstream may be possible by looking at contours that indicate where stream gradient likely exceeds 25%. The FS has begun field assessments of the fish habitat upstream of RED category culverts.

CULVERT BEDLOAD COVERAGE

Culvert bedload coverage refers to the percent of the culvert's length that is covered with bedload. Retention of bedload within culverts it is extremely important, since this increases the "roughness" and reduces the velocity of water flowing through the culvert. Culverts are often designed to accumulate bedload to facilitate fish passage; thus bedload deposition is not considered a blockage if it is less than 30% of the culvert height. Well-designed culverts are sized and buried to ensure both that bedload will be retained and that the remaining useable diameter of the culvert will handle flood flows and efficiently

pass fish during the stream flow conditions when they would naturally be attempting to migrate through the culvert.

Only 24 anadromous fish stream culverts had 90% or more bedload coverage. All were in the RED category for a variety of other reasons.

- 10 due to blockage designation
- 8 due to gradient
- 8 due to perch (tailcrest)
- 7 due to culvert/bedwidth ratio

As with anadromous fish stream culverts, all 55 resident fish stream culverts with 90% or more bedload coverage were in the RED Category for a variety of reasons.

- 21 due to blockage designation
- 28 due to gradient
- 20 due to perch (tailcrest)
- 9 due to culvert/bedwidth ratio

Several reasons may account for the failure of culverts to retain bedload: 1) improper bedding (burial) during installation; 2) installation at too steep a gradient; 3) water often flows under and not through the culvert when culverts are not properly bedded, resulting in a potential low-flow barrier to fish passage; and 4) the substrate that was intended to cover the bottom of the culvert was not engineered, and natural substrate was used as backfill.

AGE OF THE STRUCTURE

Identification of the year that the road was constructed or the culvert installed was not possible due to varying degrees of records on each Ranger District. In addition, some culverts have been replaced one or more times with no record of when the replacement occurred. Data collection on newly designed and installed culverts (after the effective date of TLMP, May 23, 1997) is incomplete. Of the 47 Class I culverts in the Green category, one third were re-installations in more recent years primarily due to replacement of log stringer bridges.

LOG AND WOODEN CULVERTS

All but one log and wooden culvert evaluated in the assessment of fish passage on verified fish streams were located on Prince of Wales Island. Two log culverts and two wooden culverts were located on anadromous fish streams. These records were missing measurements necessary to evaluate fish passage; however, field notes indicate that half of the stream flow was passing through the road fill rather than the log culvert at one site. No other problems were noted with these culverts. Eight wooden culverts and five log culverts were located on resident fish streams. A few problems were noted at these sites:

- hydraulic flows exceeded capacity;
- stream routed into ditch;
- debris blockage; and

- culvert perch.

On five sites, the only upstream habitat was in the roadside ditch line. the Resident fish stream structures lacked necessary measurements needed to evaluate fish passage. This data should be collected in follow-up field efforts in 2000-2001.

BRIDGES

Bridges typically do not impede fish passage. A total of 189 bridges were identified in the RCS database. Insufficient information was collected to make an accurate evaluation as it was assumed all bridges were efficiently passing fish. Measurements were not taken because detailed information on bridges and major structures exists in engineering databases on each District. Upstream bedwidth and distance between abutments would need to be collected to conclusively determine if there are any fish passage concerns related to bridges.. Erosion of abutments, fill slopes and ditches adjacent to approaches may also become a problem for maintaining fish habitat even if there are no fish passage concerns.

DISPLACEMENT OF SPAWNING HABITAT FROM CULVERT LOCATION

Culverts typically should not be installed in stream locations containing spawning habitat. An estimation of the amount of habitat potentially displaced by culverts was made by querying the RCS data for the channel types present both upstream and downstream of the culvert. Floodplain channels are low gradient (< 2%) channels where alluvial deposition is prevalent and contain the highest percentage and highest quality of spawning habitat. Of 273 culverts on anadromous fish streams, only 5 were located on floodplain channels as the FS typically installed a bridge across floodplain channels in order to maintain anadromous fish spawning habitat. Of 622 culverts on resident fish streams, only 2 were located on floodplain channels. Moderate gradient/mixed control (MM) channels have gradients from 2 - 6% and are sediment transport oriented. They are second to floodplain channels in the potential of containing suitable spawning habitat. There were 123 culverts on anadromous fish streams and 198 culverts on resident fish streams located on MM channels. While MM channels often contain suitable spawning gravel, they are highly variable and it can not be assumed that every culvert installation may have displaced spawning habitat.

WATER QUALITY

High quality fish habitat is dependent upon maintenance of water quality. Sediment can have a detrimental effect upon fish habitat by reducing gravel permeability and entrapping alevins or fry. It also can affect channel shape, sinuosity and the relative balance between pools and riffles. The following section identifies RCS data elements that are associated with sediment sources and structures intended to control the movement of sediment. The proximity of a sediment source to a live stream gives an indication of the relative risk of the sediment reaching the stream.

Corrective action to minimize degradation of water quality may include:

- Seeding cut and fill-slopes
- Correcting inlet and outlet erosion with the placement of rip rap (large rock)
- Maintenance of ditches and catch basins
- Constructing water bars at surface erosion locations
- Removing blockages from drainage structures

DITCH EROSION AND DITCH PLUGGING

The purpose of a ditch is to transport precipitation that has fallen directly on the road surface and subsurface flow upslope of the road to a natural stream or drainage point before it has a chance to concentrate and erode the road prism. The ditch must allow the water to achieve sufficient velocity to transport sediment but not so much velocity that ditch erosion becomes a problem. Cross drains (small culverts, usually 18" in diameter) must be installed frequently enough to avoid accumulation of water and the buildup of velocities sufficient to cause erosion of the ditch or the area below the outlet of the cross drain. Failure to maintain both the ditch and the cross drain can lead to more serious problems with structural integrity of the road prism and present an even greater risk to water quality.

Two descriptive parameters in the RCS are designed to describe the condition of ditches: ditch erosion location (DE) and ditch plugging event (DP). Ditch plugging was identified at 1434 locations and ditch erosion at 64. Most of these locations identified a failure mechanism, which led to the problem. Table 3 lists the failure mechanism and the number of times it was recorded.

Table 5 - Failure mechanism for ditch erosion (DE) and ditch plugging (DP)

FAILURE MECHANISM	DE	DP
BLOCKED DITCH		10
CULVERT TOO SHORT(usually due to road widening)		11
CUT-SLOPE SLUMPING OR SLIDING INTO CULVERT		4
CUT-SLOPE SLUMPING OR SLIDING INTO DITCH		133
HYDRAULIC FLOWS EXCEEDED CULVERT CAPACITY	26	
FILL SLUMP OR SLIDE		5
MISSING OR INADEQUATE DITCH (blasting required)		25
MISSING OR INADEQUATE DITCH (diggable material)		341
NONE NOTED	14	743
OVERSTEEPENED SLOPES		2
OTHER	6	2
ROAD FILL (pushed off road by grader)	1	37
NATURAL STREAM NOW N DITCH	12	2
SEDIMENT ACCUMULATION IN CULVERT	1	
SEDIMENT ACCUMULATION IN DITCH	4	64
WOODY DEBRIS IN CULVERT		2
WOODY DEBRIS IN DITCH		64

DITCH RELIEF CULVERTS

A total of 13,834 ditch relief culverts (cross drains) were recorded in the RCS database, with 2171 (16%) having a blockage of 10% or more. Varying degrees of maintenance was performed on 299 of the culverts. The following table summarizes the number and types of maintenance done:

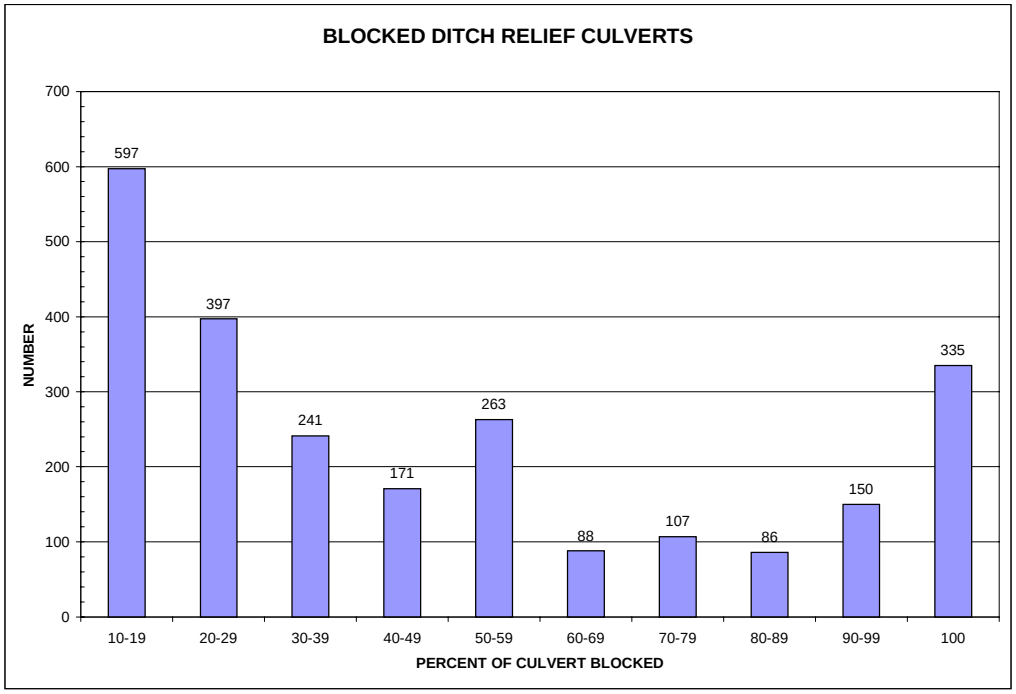
Table 6. - Maintenance activity at ditch relief culverts

MAINTENANCE ACTIVITY	NUMBER
Sediment removed from culvert (SED)	15
Fill material removed from culvert (RFL)	99
Organic blockage removed from culvert (ORG)	68
Catch basin cleaned (BSN)	13
Bedload deposition removed from culvert (BDL)	18
Hand cleaned culvert (HCC) *	86

* Hand cleaned culvert was only used in 1998 and was replaced with more specific codes

The following graph displays the number of blocked ditch relief culverts grouped by percent blocked:

Figure 6- Number of blocked ditch relief culverts by percent blocked



CUT-SLOPE AND FILL-SLOPE EROSION

New road construction creates cut-slopes (uphill) and fill-slopes (downhill) along the road, which can generate large amounts of sediment if not properly stabilized with seeding. Even if seeded immediately, slumps or slides can expose highly erodible soils, which may potentially present a risk to water quality and fish habitat.

Cut-slope erosion was recorded at 1501 locations and fill-slope erosion at 240 locations. The data element "Failure Mechanism" was intended to cover a wide variety of road and culvert features. Therefore, not every failure mechanism is appropriate to be used for all data elements.

Table 7. – Cut-slope (CE) and fill-slope (FE) erosion causes

FAILURE MECHANISM	CE	FE
BLOCKED DITCH	3	1
BEAVER ACTIVITY		1
CULVERT TOO SHORT	27	3
CUT-SLOPE SLUMPING INTO CULVERT	39	
CUT-SLOPE SLUMPING INTO DITCH	305	
FILL SLUMP OR SLIDE	8	103
MISSING OR INADEQUATE DITCH (blasting required)		2
MISSING OR INADEQUATE DITCH (diggable material)	1	2
MATERIAL INADEQUATE FOR DESIGN	2	2
NO FAILURE MECHANISM NOTED	736	99
OVER-STEEPENED SLOPES	343	17
OTHER	6	
ROAD FILL (pushed off road by grader)		1
ROAD GRADE NEEDS CROWNING/SHAPING	1	
SIDE CAST MATERIAL CRACKING OFF ROADWAY		4
SEDIMENT ACCUMULATION IN CULVERT	2	
SEDIMENT ACCUMULATION IN DITCH	22	1
SUBSIDENCE	3	1
WOODY DEBRIS IN CULVERT		1
WOODY DEBRIS IN DITCH	3	
WEATHERING OR CORROSION		2

Over-steepened slopes and cut-slope slumping or sliding into the ditch were most frequently associated with cut-slope erosion. Fill slump or slide was most frequently associated with fill- slope erosion.

ROAD SURFACE EROSION

The descriptive parameter "Surface Erosion" (SE), which identifies erosion of the road surface, was recorded at 675 locations. "Water Running Across Road" (WR) was noted 422 times. The failure mechanism attributed most was "Missing or Inadequate Ditch" (MDD) where there was diggable material. Blasting would be required to reconstruct the ditch at only 14 of these problem sites. Field crews noted that waterbars were needed or not functioning properly in many cases. Since waterbar problems occurred so frequently, we recommend adding a code for waterbar to "Failure Mechanism" for future surveys. Appendix E contains a listing of the failure mechanism and frequency of occurrence.

CATCH BASINS

Catch basins trap sediment that would otherwise be transported down the ditch line during high flows. Through time, they tend to fill with sediment, and require periodic

cleaning. The data element "Catch Basin" records the conditions present at the time of the survey. If the catch basin was cleaned at the time of the survey, this activity was recorded under the data element Action Taken. The data elements "Action Required" and "Priority" provide additional information regarding needed maintenance. The following table displays the condition of the catch basins surveyed along with the frequency of the condition:

Table 8. - Condition of catch basins

CATCH BASINS			
CODE	**DESCRIPTION**	**NUMBER**	**PERCENT**
N	No Catch Basin and none needed	646	5
I	Catch Basin intact and functioning	7906	66
B	Building or rebuilding of catch basin required	730	6
M	Cleaning of catch basin required	2767	23
TOTAL		12049	100

Catch basins were intact and functioning at 66% of the culverts, required cleaning at 23%, needed building or rebuilding at 6% and catch basin were not needed at 5%.

DITCH BLOCK

The purpose of a ditch block is to divert surface water from the ditch into a cross drain or ditch relief culvert.

5176 of the total 6276 recorded ditch blocks were intact and functioning. Establishment of a new ditch block was identified in 746 instances, and maintenance of ditch block required was recorded 334 times. The code N (No ditch block and none needed) was never recorded.

CULVERT INLET EROSION

Culvert inlet erosion can be caused by an undersized culvert, poor alignment, culvert blockage, inadequate armoring, or improper road fill material. This can result in the degradation of downstream fish habitat, creation of fish passage barrier with a perched inlet or road failure.

Table 9. - Culvert inlet erosion

CODE	DESCRIPTION	NUMBER	PERCENT
F	Fill Slope erosion protection needed (rip rap or other)	215	31
I	Inlet conditions improvements needed (flare inlet, etc)	252	36
B	Bank protection needed at upstream banks (rip rap)	157	23
O	Other (specify in notes)	45	6
Y	Yes (obsolete code)	24	4
Total		693	100

Over half (369) of the "Inlet Erosion" locations were on stream crossings. 45 anadromous fish stream culverts and 86 resident fish stream culverts exhibited inlet erosion. The remainder of the inlet erosion was associated with ditch relief culverts.

Corrective action should be a priority at these sites and are listed in Appendix E by District, Road Number and Milepost.

CULVERT OUTLET EROSION

Culvert outlet erosion can be caused by an undersized culvert, poor alignment, inadequate armoring, or improper road fill material. This can result in the degradation of downstream fish habitat, creation of fish passage barrier with a perched outlet or road failure.

Table 10. - Culvert outlet erosion

CODE	DESCRIPTION	NUMBER	PERCENT
F	Fill Slope erosion protection needed (rip rap or other)	351	55
D	Energy dissipater or outlet pool needed	46	7
B	Bank protection needed at upstream banks (rip rap)	108	17
O	Other (specify in notes)	109	17
Y	Yes (obsolete code)	25	4
Total		639	100

Over half (329) of the "Outlet Erosion" problems were at stream crossings. 35 anadromous fish stream culverts and 101 resident fish stream culverts had outlet erosion. The remaining problems were associated with ditch relief culverts.

Corrective action should be a priority at these sites and are listed in Appendix E by District, Road Number and Milepost.

LOG AND WOODEN CULVERTS

A total of 123 log and 81 wooden culverts were used on non-fish streams and as ditch relief culverts. Log and wooden culverts were used on 42 ditch relief culverts and 162

water quality streams. All but 6 of the structures were located on Prince of Wales Island. 41 log culvert (33%) and 53 wooden culverts (65%) exhibited a variety of problems and failures such as collapse, rotting, blockage, and where replacement with a corrugated metal pipe was recommended. Replacement of these structures should be made a priority due to the high failure rate.

FAILURE MECHANISM FOR ROAD CROSS SECTIONAL FEATURES

The descriptive parameters were queried for the failure mechanism that led to each problem. For "Cut-slope Erosion", over half of the records noted a failure mechanism. "Over-Steepened Slopes" (OS) accounted for 26% of the failures and "Cut-slope Slumping or Sliding Into The Ditch" (CSD) created 21% of the failures.

For "Fill-slope Erosion", over 60% of the records noted a failure mechanism, with "Fill Slump or Slide" (FS) occurring 44% of the time.

For "Surface Erosion", 70% of the records noted a failure mechanism with "Missing or Inadequate Ditch - Diggable Material" (MDD) occurring 28% of the time a mechanism was noted. "Sediment Accumulation In Ditch" (SDD), "Sediment Accumulation in Culvert" (SDC) and "Road Grade Needs Crowning/Shaping" (RG) were also frequently noted for a cumulative total of 17% of the time when a failure mechanism was noted.

For Water Running Across Road, 90% of the records noted a failure mechanism with "Missing or Inadequate Ditch - Diggable Material" (MDD) being the most frequent, occurring 34% of the time a mechanism was noted. "Road Grade Needs Crowning/Shaping" (RG) was the second most frequent failure mechanism, occurring in 14% of the records.

"Ditch Plugging" was recorded as the "Descriptive Parameter" at 1199 sites with failure mechanisms noted for 60% of the records. "Missing or Inadequate Ditch - Diggable Material" (MDD) was the most frequent, occurring at 28% of the sites.

QUARRY FEATURES

The database contains 1148 quarry features, most of which just identify the location. There were 46 "Cut-Slope Erosion", 33 "Quarry Erosion" and 40 "Water Running Across Quarry", locations identified. The failure mechanism most commonly associated with "Cutslope and Quarry Erosion" was "Over-Steepened Slopes". Spatial analysis in GIS (ArcView) is recommended to further evaluate the proximity of these erosion locations to waterbodies and fish habitat.

BMP EFFECTIVENESS

Best Management Practices (BMPs) are "methods, measures or practices to prevent or reduce water pollution, including but not limited to, structural and nonstructural controls, operation and maintenance procedures, other requirements and scheduling and distribution of activities. Usually BMPs are applied as a system of practices rather than a single practice. BMPs are selected on a basis of site-specific conditions that reflect natural background conditions and political, social, economic, and technical feasibility" (Chapter 2, EPA Water Quality Standards Handbook).

To comply with State water quality standards, the FS applies BMPs that are "consistent" with the Alaska Forest Resources and Practices Act (AS 41.17) and applicable State water quality regulations. In recognition of the importance of BMPs, they are identified as one portion of the "Forest Service Alaska Region Water Quality Management Plan," as described in the USDA Forest Service/Alaska Department of Environmental Conservation Memorandum Of Agreement (1992). (TLMP, 1997)

Analysis of RCS data indicates that several BMPs are not being fully implemented during the maintenance phases on FS roads. Primarily these problems are associated with road maintenance. Of particular concern is BMP 14.7,14.8, 14.9, 14.12, 14.17 and 14.20. The RCS found 2171 (16%) ditch relief culverts with a blockage of 10% or more. 2767 sediment catch basins required cleaning, and an additional 730 catch basins needed to be built or rebuilt. Cut-slope and fill-slope erosion was noted at 1539 locations. Inlet and outlet erosion was noted at 1332 culverts, over half of which were stream crossings.

Locations in close proximity to streams and those with inadequate ditch blocks present the greatest risk to water quality. The large number of fish crossing culverts in the RED category (179 Class I and 351 Class II) are also of concern in the implementation of BMP 14.17.

The following is a list of BMPs relating to road construction with a discussion of the RCS data elements associated with each.

BMP'S RELATING TO ROAD CONSTRUCTION

BMP 14.3 Design of Transportation Facilities
Objective: To incorporate site specific soil and water resource protection measures into the design of roads and trails.

BMP 14.5 Road and Trail Erosion Control Plan
Objective: Develop Erosion Control plans for road or trail projects to minimize or mitigate erosion, sedimentation, and resulting water quality degradation prior to the initiation of construction and maintenance activities. Ensure compliance through contract administration and timely implementation of erosion control measures.

BMP 14.7 Measures to Minimize Mass Failures
Objective: To minimize the chance and extent of road-related mass failures, including landslides and embankment slumps.

The data elements "Cut-slope and Fill-slope Erosion" identify sites where preventive actions may have failed to minimize erosion from mass failures. "Failure Mechanism" also provided valuable information in identifying the cause of the failure.

BMP 14.12 Control of Excavation and Sidecast Material
Objective: To implement measures to reduce sedimentation from unconsolidated excavated and sidecast material caused by road construction, reconstruction, or some other maintenance activities.

Cut and fill slope erosion and inlet and outlet erosion are associated with this BMP

BMP 14.17 Bridge and Culvert Design and Installation
14.17 **Objective: To minimize adverse impacts on water quality, streamcourses, and fisheries resources from the installation of bridges, culverts or other stream crossings.**

All data elements and measurements associated with culverts and fish presence provide information useful in evaluation of this BMP.

BMP 14.18 Development of Gravel Sources and Quarries
Objective: To minimize sediment from borrow pits, gravel sources, and quarries, and to limit channel disturbance from gravel sources permitted for development within flood plains.

The "Descriptive Parameter" Quarry Erosion or Surface Erosion associated with the "Quarry Feature" provides information related to this BMP.

BMP 14.8 Measures to Minimize Surface Erosion
Objective: To minimize the erosion from cutslopes, fillslopes, and the road surface and consequently reduce the risk of sediment production.

BMP 14.9 Drainage Control to Minimize Erosion and Sedimentation
Objective: To minimize the erosive effects of concentrated water flows from transportation facilities and the resulting degradation of water quality through proper design, and construction of drainage control systems.

The data elements "Blockage", "Ditch Block" and "Failure Mechanism" and "Inlet and Outlet Erosion" provided information relating to BMP 14.9.

BMP 14.20 Road Maintenance
Objective: To maintain all roads in a manner which provides for soil and water resource protection by minimizing rutting, road prism failures, side-casting and blockage of drainage facilities.

This analysis identified several areas where corrective action is recommended.

- Ditch erosion and ditch plugging locations
- Ditch blocks and catch basins requiring maintenance activities
- Blocked ditch relief culverts
- Cut-slope and fill-slope erosion locations
- Road surface erosion locations
- Culvert inlet and outlet erosion

In addition the data element "Action Taken" identified locations where corrective action was taken.

BMP 14.22 Access and Travel Management
Objective: To control access and manage road use to reduce the risk of erosion and sedimentation from road surface disturbance especially during the higher risk periods associated with high runoff and spring thaw conditions.

The data element "Access and Travel Management" (ATM) identifies the feature that blocks, closes or influences travel on the road. This analysis did not evaluate road access; however, the information exists in the database and is available for future queries should they be needed. Information related to chronic sedimentation, recurring maintenance problems and fish passage issues will assist in determining the costs related to keeping specific roads open.

DISCUSSION

ACCOMPLISHMENTS

The Road Condition Survey (RCS) protocol has served as an excellent tool to identify and prioritize fish passage and water quality problems associated with roads and drainage structures. A key factor in the success of the protocol is that it combines biological and engineering elements into a single database for use by both disciplines. Many culverts have been identified which are assumed to be restricting movement of fish and require corrective action. The FS has been using the RCS data to select restoration work through a program known as Choosing by Advantage. This has resulted in an additional $500,000 in road maintenance funds for the Tongass for each of the past two years. It will also serve as an excellent tool to track corrective action and maintenance over time.

Fish verification information collected during the course of the surveys will improve the accuracy of the FS' GIS streams cover and the Alaska Department of Fish and Game's "Atlas to the Catalog of Waters Important For Spawning, Rearing or Migration of Anadromous Fishes".

DATA LIMITATIONS

The database used for this analysis represents 2153 miles of permanent roads, or 60% of the total of 3594 miles of permanent roads on the Tongass National Forest. While this project was initially designed to sample proportionally across all districts, logistical practicability resulted in more effort occurring on certain Ranger Districts in the first three years. This change from a random sample approach to a census was possible due to the FS' commitment to complete the Road Condition Survey of permanent roads of the Tongass National Forest in the near future. They expect to complete it by 2002.

There was fairly proportionate data collection on the Ketchikan and Stikine Areas, which have approximately 69% of the system roads on the Tongass National Forest. The Chatham Area data represents 27 % of the system roads in that Area. Appendix E contains a summary of road miles by Ranger District.

There is insufficient information at this time to estimate the quantity or quality of habitat upstream of culverts that may be impacting fish passage (GREY) or are assumed not to be adequate for fish passage (RED). This type of information is key to the prioritization of projects to restore fish habitat and passage across the Tongass.

Some spatial analyses that were intended to be conducted using the FS' GIS system were not possible prior to the end of this project because the routed roads coverage had not been completed by the FS.

As noted earlier, 35% of the structures on Class I (anadromous fish) and Class II (resident fish) streams require additional field work to complete the measurements required in the revised protocol. This is a very high priority, since fish passage for these structures cannot be analyzed until the data set is completed. This data is expected to be collected by the FS over the next year.

PROGRAMATIC RECOMMENDATIONS

Despite the substantial knowledge about juvenile fish movement and passage, more knowledge is needed in some specific areas. Assessment of juvenile coho swimming capability through various types of culverts in natural field conditions is necessary to verify the assumptions used in mathematical predictions during culvert design. Some culvert design assumptions are based upon studies of species not native to the Tongass.

Additional information is needed on the migration timing of juvenile fish to determine if the State of Alaska's Q2-2 day duration flow is an appropriate standard. More field research is needed on the biological implications of a more frequent or longer delay in fish migration through a culvert. Additional regional data is needed on the migratory habits of fish in high gradient, headwater streams and of salmonid fry as they emerge from their redds in the spring and their movements during the summer.

Eighty-one percent of all culverts in the RED category are 48 inches or less in diameter. Most of these are on streams that are not in the FS' GIS streams or the ADF&G's Atlas to the Catalog of Waters Important For Spawning, Rearing or Migration of Anadromous Fishes". This suggests that streams can easily be incorrectly classified as non-fish streams in the absence of adequate field sampling data by qualified staff at the appropriate times of year for the expected species. In addition, the FS has recently increased their commitment to provide fish passage on resident fish streams compared to the past (see Introduction).

While this three-year project is complete, much additional work is needed to fully complete the Road Condition Survey, restore efficient fish and implement protocols for other aspects of fish passage and non-point source pollution control on the Tongass National Forest. The following list includes recommended follow-up work directly related to this project and completion of the Road Condition Survey:

- Complete road condition survey of permanent and temporary roads;
- Collect additional measurements needed to complete analysis of fish passage for RED and GREY culverts with verified fish presence and evaluate the structures (see Appendix E which identifies these culverts by Road Number and Milepost);
- Conduct upstream fish habitat assessments in the field to document quantity and quality of habitat above culverts assumed not to be adequate for fish passage (RED category);
- Prioritize corrective action for culverts in the RED category and seek additional road maintenance funds to ensure problems are corrected in a timely manner;

- Conduct additional GIS spatial analyses to determine the proximity of documented road erosion features to streams and drainage structures that are isolated due to road closures;
- Prioritize work to correct blocked culverts on non-fish streams and ditch and erosion problems contributing to nonpoint source pollution;
- Use the RCS data to update the FS' GIS streams coverage and ADF&G's Catalog of Waters Important for Spawning, Rearing and Migration of Anadromous Fishes. Where data is inadequate to add specific stream segments to the Catalog, verify fish presence in the field;
- Provide each ADF&G Area Office and each FS Ranger District with an Arcview database of the results of the Road Condition Survey and train field staff how to query for road and culvert features;
- Update the Road Condition Survey database annually, or when additional information is available;
- Verify in the field that fish passage is restricted or totally blocked at a random sample of culverts assumed not to be adequate for fish passage by documenting movement of various age juveniles and adults through culverts at different levels of stream flow; and
- Use the results of this project to improve the design criteria for stream crossings intended to provide efficient fish passage.

SITE-SPECIFIC RECOMMENDATIONS

Analysis of the RCS data has identified culverts assumed to not be adequate for fish passage, thereby restricting the natural movement of fish. This project also identified numerous sites where corrective action is needed to allow cross drains and ditches to function properly. Appendix E contains a list of culverts in the RED category, which require corrective action to restore fish passage. Also included in Appendix E are tables listing structures requiring maintenance activities to correct blockages, clean catch basins, correct inlet and outlet erosion and those needing additional measurements to evaluate fish passage (i.e., GREY category).

On anadromous fish streams there are 123 round corrugated metal pipes (69%), 48" or less in diameter in the RED category. On resident fish streams there are 453 round corrugated metal pipes (85%), 48" or less in diameter, in the RED category. These culverts may be the most cost effective to correct due to their size.

CONCLUSION

We are uncertain how long older stream crossing structures that are assumed to be adequate for fish passage today will continue to ensure safe passage. It is important to keep good records on all stream crossing structures to track their success or failure to provide efficient fish passage. These records can also document the total cost of a stream crossing structure over its life, including installation, maintenance and replacement. The "functional" life of a structure with respect to efficient fish passage is likely shorter than the period over which it continues to perform hydraulically. This may not be apparent to

the casual observer, or even to all biologists and engineers, since rather small increases in flow velocity, partial blockages and perching of the culvert may prevent passage by juvenile or adult fish at high or low flows. The best way to ensure long-term fish passage is to design and install the structure properly and then monitor its condition regularly in order to achieve required maintenance in a timely manner. Even with an adequate design at the time of installation, unanticipated changes in watershed hydrology, stream course locations and other natural or man-caused events may dramatically change the ability of the structure to provide efficient fish passage.

GLOSSARY

AHMU. Aquatic Habitat Management Unit.

Anadromous fish. Fish which mature and spend much of their adult life in the ocean, returning to inland waters to spawn. Salmon and steelhead are examples.

Anadromous Fisheries Habitat Assessment. An assessment conducted in 1994 within the Tongass National Forest (published in 1995) to study the effectiveness of current procedures for protecting anadromous fish habitat and to determine the need for any additional protection.

Baffle. Wood, concrete or metal mounted in a series on the floor and/or wall of a culvert to increase boundary roughness and thereby reduce the average water velocity in a culvert or to retain bedload within the culvert.

Bankfull width. The width of the wetted channel when the water surface is at the same elevation as the active floodplain.

Bedload. The part of sediment transport not in suspension consisting of coarse material moving on or near the channel bed.

Bed Roughness. Irregularity of streambed material (i.e. gravel, cobbles) that contributes resistance to streamflow. Commonly measured as Manning's roughness coefficient.

Best Management Practices (BMPs). Land management methods, measures or practices selected by an agency to meet its non-point source control needs. BMPs include, but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters. BMPs are selected on the basis of site-specific conditions that reflect natural background conditions and political, social, economic, and technical feasibility. BMPs are found in Forest Service Handbook 2509.22.

Classified road. A road constructed or maintained for long-term highway vehicle use.

Cross drain. A culvert which transports water from a ditch to the down-slope side of the road.

Culvert. A conduit or passageway under a road, trail, or other obstruction. A culvert differs from a bridge in that it is usually constructed entirely below the elevation of the traveled way.

Ditch Relief. A cross drain culvert, which transports water from a ditch to the down-slope side of the road.

Ditch Block. An obstruction in a ditch which blocks the movement of surface waters in a ditch and diverts it into a cross drain or ditch relief culvert.

Fish Passage. The ability of both adult and juvenile fish to move both up and down stream.

GIS. Geographic Information System.

Invert. The lowest point of the internal cross section of culvert or pipe arch.

Large Woody Debris (LWD). Any piece of relatively stable woody material, having a diameter of four inches or greater and a length greater than three feet, that intrudes into a stream channel. Formerly called large organic debris.

Ordinary high water mark. The mark along the bank or shore up to which the presence and action of the nontidal water are common and usual, and so long continued in all ordinary years, as to leave a natural line impressed on the bank or shore and indicated by erosion, shelving, changes in soil characteristics, destruction of terrestrial vegetation, or other distinctive physical characteristics. (Consult 11 AAC 53.900 — Alaska Code.)

Palustrine Channel. Very low gradient (< 1%) streams associated with low relief landforms and wetland drainage networks. Water movement is slow and sediment transport is low. These channel types typically act as sediment traps and storage areas for fine organic and inorganic sediments. Beaver activity is often associated with these channels.

Perching. The tendency to develop a falls or cascade at the outfall of a culvert due to erosion of the stream channel downstream of the drainage structure.

Pipe. A culvert that is circular (round) in cross section.

Pipe Arch. A pipe that has been factory-deformed from a circular shape such that the width (or span) is larger than the vertical dimension (or rise).

Resident fish. Fish that are not migratory and complete their entire life cycle in fresh water.

Road Maintenance Level. Defines the level of service provided by, and maintenance required for, a specific road, consistent with road management objectives and maintenance criteria (FSH 7709.58, section 12.3).
Maintenance Level 1. Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period is one year or longer. Basic custodial maintenance is performed.
Maintenance Level 2. Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration.

Maintenance Level 3. Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities.
Maintenance Level 4. Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds.
Maintenance Level 5. Assigned to roads that provide a high degree of user comfort and convenience. Normally, roads are double-lane and paved, or aggregate surfaced with dust abatement.

Roadbed. The graded portion of a road between the intersection of subgrade and side slopes, excluding that portion of the ditch below subgrade.

Scour. Localized erosion caused by flowing water.

Stream class. A means to categorize stream channels based on their fish production values. There are four stream classes on the Tongass National Forest. They are:

> Class I. Streams and lakes with anadromous or adfluvial fish habitat; or high quality resident fish waters listed in Appendix 68.1, Region 10 Aquatic Habitat Management Handbook (FSH 2609.24), June 1986; or habitat above fish migration barriers known to be reasonable enhancement opportunities for anadromous fish.
>
> Class II. Streams and lakes with resident fish populations and generally steep (6-15 percent) gradient (can also include streams from 0-5 percent gradient) where no anadromous fish occur, and otherwise not meeting Class I criteria. These populations have limited fisheries values and generally occur upstream of migration barriers or have other habitat features that preclude anadromous fish use.
>
> Class III. Perennial and intermittent streams with no fish populations but which have sufficient flow or transport sufficient sediment and debris to have an immediate influence on downstream water quality or fish habitat capability. These streams generally have bankfull widths greater than 5 feet and are highly incised into the surrounding hillslope.
>
> Class IV. Intermittent, ephemeral, and small perennial channels with insufficient flow or sediment transport capabilities to have an immediate influence on downstream water quality or fish habitat capability. These streams generally are shallowly incised into the surrounding hillslope.
>
> Non-streams. Rills and other watercourses, generally intermittent and less that 1 foot in bankfull width, little or no incision into the surrounding hillslope, and with little or no evidence of scour.

Substrate. Mineral or organic material that forms the bed of the stream.

System Roads. (Classified) are permanent or Classified roads on the Tongass National Forest. System roads in Region 10 are designed with consideration for resource protection, legal obligations, total cost and the importance of the road. As a general rule, the USFS, Region 10 Best Management Practices (BMPs) recommend that bridge crossings for system roads be designed to pass not less than a 50-year to a 75-year flood. Culverts for Class I, II, and III streams are recommended to be designed to pass not less than a 25-year to a 50-year flood. The American Fisheries Society (Furniss et al. 1991) recommends a 100-year flood as the minimum for bridges and large culverts and a minimum 50-year flood for other drainage structures. Best Management Practices guidelines allow a greater risk of degradation to fish habitat than do standards designed specifically for fish habitat protection.

Tailcrest. A deposition of bedload or larger substrate downstream of the culvert, which controls the water level inside the culvert.

Temporary roads. (Unclassified) are roads which are anticipated to be utilized only for the duration of timber sale activities and are not designed to as high of an engineering standard as are system roads. Because of the temporary nature of these roads (often intended to be used for less than one year) investments in stream crossings structures and road surfacing are much less than are similar investments in system roads. These temporary roads may create greater short-term risks to fish habitat than do system roads. They may also create greater long-term risks when cumulative effects are considered or roads are not properly closed out after timber harvest has been completed.

Unclassified road. A road that is not constructed maintained, or intended for the long-term highway vehicle use, such as roads built for temporary access and other remnants of short-term-use roads associated with fire suppression; timber harvest; and oil, gas or mineral activities; as well as travel-ways resulting from off-road vehicle use.

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LITERATURE CITED

American Iron and Steel Institute. 1994. Handbook of Steel Drainage and Highway Construction Products. Fifth Edition. 518 p.

Furniss, M. J., T. D. Roelofs and C. S. Yee. 1991. Road Construction and Maintenance, *from* Influences of Forest and Rangeland Management on Salmonid Fishes and Their Habitats, American Fisheries Society Special Publication 19:297-323.

Gubernick, Robert A. USDA Forest Service, Stikine Area. Personal communication with Bill Hanson, December 1999.

Kahler, T. H. and T. P Quinn. 1998. Juvenile and Resident Salmonid Movement and Passage Through Culverts. Fisheries Research Institute, School of Fisheries, University of Washington.

Murphy, M. L., K. V. Koski, J. Heifitz (and others). 1984. Role of large organic debris as winter habitat for juvenile salmonids in Alaska streams. *In* Proceedings, 64th annual conference of the Western Association of Fish and Wildlife Agencies, July 16-19, 1984, Victoria, BC. pp. 251-262.

Peterson, N. P., and L. M. Reid. 1984. Wall-base channels: their evolution, distribution, and use by juvenile coho salmon in the Clearwater River, Washington. *In* Proceedings of the Olympic Wild Fish Conference, Port Angeles, WA, 23-25 March 1983. *Edited by* J. M. Walton and D. B. Houston.

USDA Forest Service, 1977, Southeast Alaska Area Guide. 280 p.

USDA Forest Service, 1979. Roadway Drainage Guide for Installing Culverts to Accommodate Fish. Alaska Region Report Number 42.

USDA Forest Service, 1979. Tongass Land Management Plan - Final Environmental Impact Statement, Part 1, Alaska Region, Series No. R10-57.

USDA Forest Service. 1983. Alaska Regional Guide. Alaska Region, Juneau, Alaska. Alaska Region Report Number 126.

USDA Forest Service, 1986. Aquatic Habitat Management Handbook. Region 10, FSH 2609.24.

USDA Forest Service, 1990. Fish Passage Through Culverts. Report No.FHWA-FL-90-006.

USDA Forest Service. 1995. Anadromous Fish Habitat Assessment Report to Congress. Pacific Northwest Research Station and Region 10. R10-MB-279.

FOREST SERVICE HANDBOOK
Juneau, Alaska

FSH 7709.58-99-2
TRANSPORTATION SYSTEM MAINTENANCE HANDBOOK

INTERIM DIRECTIVE: 7709.58-99-2

EFFECTIVE DATE: July 2, 1999

EXPIRATION DATE: December 1, 2000

CHAPTER: 10 - MAINTENANCE OF FOREST DEVELOPMENT ROADS

POSTING NOTICE: The last R-10 ID was 7709.58-99-1 to chapter 10.

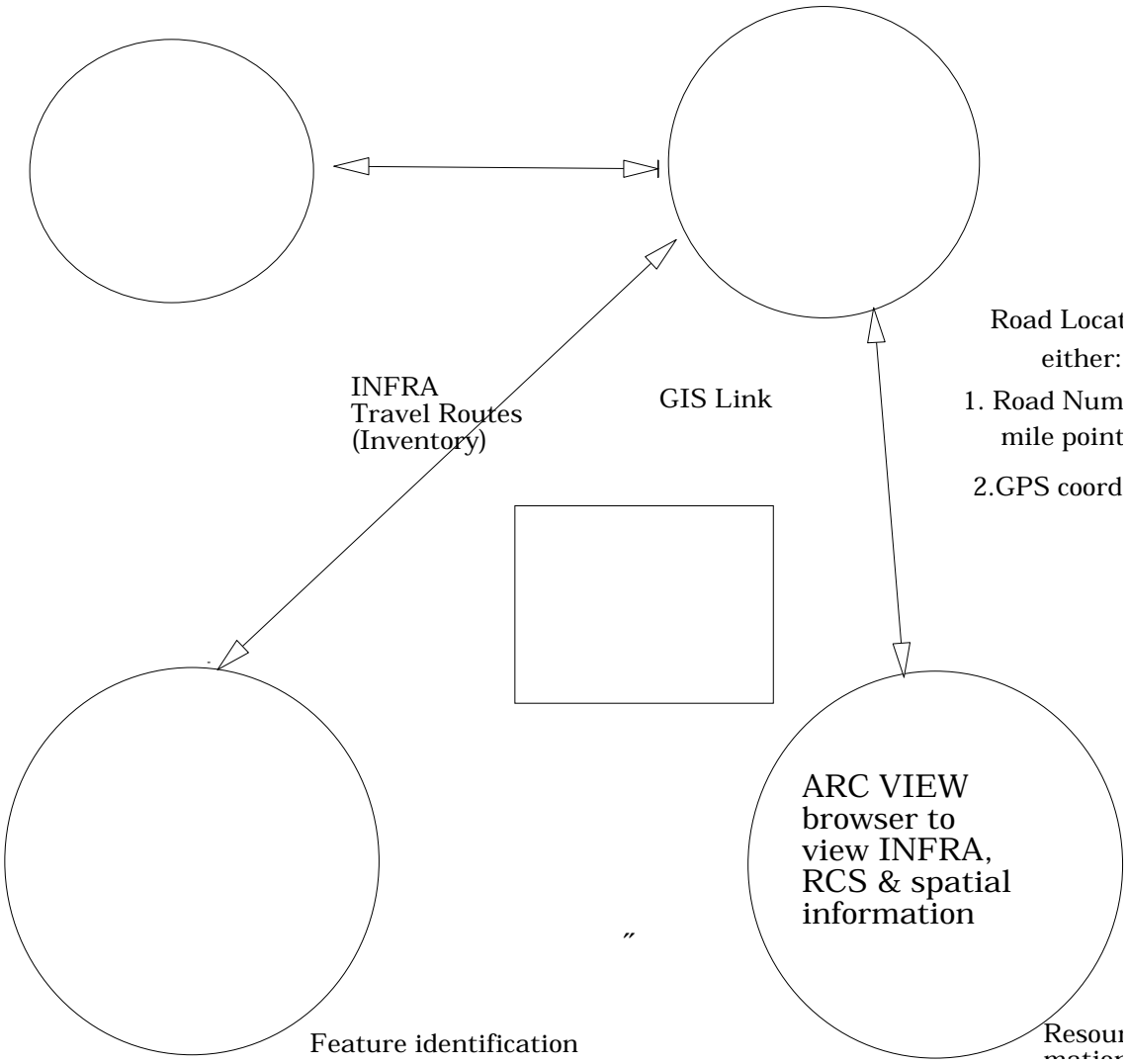
REMOVE: R-10 ID 7709.58-99-1 in its entirety.

This Interim Directive updates the road condition survey protocols to better match interagency processes for fish passage through culverts. The data has been reordered so field crews need only record observations of conditions and measurements taken in the field. Information processing procedures are included including the final formats. The intent to use the road condition data to provide historical information through ArcView interfaces is described.

/s/ James A. Caplan for
RICK D. CABLES
Regional Forester

12.5 - Condition Surveys. Road condition surveys are methods of determining the status and from that information deriving the maintenance needs for roads. Condition surveys provide information for 1) identification of maintenance trends, 2) problems analysis, and 3) priority setting for work scheduling and funding.

The Road Condition Survey data is designed to function within ArcView with full integration of GIS spatial coverages. With the use of geographic information systems (GIS) to assist in integration of inventory, spatial data, and related resource information, road condition surveys and related data can be used in many new and different ways. With GIS you can relate locations, features, and resource information.



1. Road Condition Survey Field Collection of Data (Section 1). Road condition survey field data is anticipated to be tabular formatted information. Each piece of information represents a single transaction, a grab sample, describing the condition of road features as they were observed or measured on a given day, at a given time, through the perception of a person or crew. There is great value in having an ongoing record of these grab samples over time as they can describe changes and trends that are only apparent over time. It is only recent improvements in the performance of computers and decreases in the cost of information storage that allows us to work with the large number of pieces of information that come from condition surveys.

The dates when data was collected and the source of the data can be critically important elements used in the interpretation of the road condition field survey data. Data quality perceptions related to the source of data and the age of the observation are used in making interpretations and decisions.

Accumulation of condition survey information over time does provide potential opportunities for use of statistical analysis and trend analysis. Both of these analytical techniques depend on development of a history of observations that can be aggregated, separated, and compared. The patterns of a series of transactions over time is different than the patterns from traditional inventory data as traditional inventory data only describes the condition as most recently entered.

2. Key Principles for Road Condition Survey Data.

a. The history of data is valuable. The history of the sources of data, the conditions under which it is collected, the season of the year, all allow the identification of trends or variability in information.

b. The source of the information collected and who collected the information and entered it can affect interpretation and generalization of the information. The quality of the information as interpreted varied with the qualifications, training, experience, and situations for the collection of the information. Road log information collected a few years ago will be viewed differently than information gathered next summer.

c. Different people can get different information measuring the same thing at different times. The purpose of protocols is to keep the differences to acceptable limits of variation.

d. Partial information can be frustrating, but partial information is more useful than no information.

e. An approximation is better than no information; especially when there are qualifiers on the reliability or precision of the information. The notable example of this is the use of older road log information.
f. With spatially linked data, knowing a little information allows display and interpretation of a vast amount of related information.

g. Null data, a field with no data entered is interpreted as a data field with no data available. Fields where the data is not applicable should be coded as NA (not applicable) or with similar code to indicate that the element was considered.

h. Interpreting the information may require a combination of data elements. For example, stream locations where one of the variables for presence of fish show that fish have been found is a fish stream. Sites where anadromous species are shown to be present in the data elements will be interpreted as an anadromous fish stream. Streams where fish are found upstream and downstream require fish passage. Stream crossings where fish are found downstream and habitat but not fish occur upstream need to be checked carefully as there is an apparent blockage of fish passage.

i. Data elements may be entered before the road is constructed. For example, fish species identification made in advance of road construction (such as those made during environmental analysis processes) can be entered by coordinates.

j. Field data collection can be separated from analysis, calculation, development of alternatives, prescriptions, and other processes that use the field data. (See the separation of the protocol into sections).

3. Differences in "World View." Working with spatial data such a Geographic Information System (GIS) data is very different than working with tabular data. The differences are subtle in many cases. Working with shared data is a two-way path. As you provide information, information is also received.

Transaction data that is collected while on a visit to a site on a single occurrence is different from the data that is retained in inventories. Inventories represent a view of the most current information available and can be interpreted on the basis of several assumptions. One of the assumptions is that things represented by the inventory are substantially the same today when the data are viewed, as they were when the data was collected and stored. Another assumption is that the information is not expected to change in a meaningful way in the near term.

4. Information Levels and Platforms. Data can be considered as appropriate to the needs for which it is collected and maintained. Each organizational level can

identify the information needed to provide consistency in reporting and describing different features. The choices of where information resides needs to be conditioned

by the nature of the data and uses. INFRA is an inventory structure and maintains only the most current entry or updated input. Road condition survey data design provides a historical view of road condition and actions over time.

a. National Data includes the data elements prescribed by national policy. National data represents the minimum data that will be kept in an inventory system and used for reporting nationally. The national data elements are identified in the Washington Office (WO) manuals and handbooks and will reside in the INFRA data inventory system, an Oracle database.

b. Regional Data includes additional data elements prescribed by regional policy. The data represent data that is found to be useful for addressing issues of a regional nature, and provide consistency between units within a region. Regional data may be stored either in INFRA or in INFO data sets associated with GIS. Examples of regional data include data elements described in regional guides, data elements needed for region-wide Memorandums of Understanding, such as, the Fish Passage SMOU (98MOU-10-011).

c. Forest Data includes additional data elements prescribed by the Forest Supervisor to meet the issues, concerns, and opportunities of the Forest. Forest data is especially needed for Forest Plan revision or implementation. Forest data may be stored in either INFRA data structures or in INFO data sets associated with the Forest GIS coverage.

Examples of forest data include additional information called for in Forest Supervisor executed Memorandums of Understanding, or that identified as needed for Forest Planning.

d. Project Data includes additional data elements needed for project specific works. Most commonly this will be additions to national, regional, and forest data required to address the issues, concerns, and opportunities associated with environmental analysis processes.

5. Data Quality. Data interpretation is affected by the qualifications of the people making observations and recording data. Observations of the presence of fish and the species present is not used the same if the data is collected by a person trained in landscape architecture as it is by a person trained in aquatic biology. The protocols included are intended to provide consistency in data acquisition.

Data will undergo examination for quality by data stewards responsible for the various coverages in GIS and the associated data elements. Data of various quality and sources can be used and aggregated as there are ways to identify the source

and qualifications related to the data collection and storage. External parties will review data based on who made the observation and when they were made (see SMOU 98MOOU-10-011 Addendum 1 for examples).

6. Monitoring as a Part of Road Condition Surveys. Road condition surveys provide an excellent opportunity to monitor data already in GIS. By providing field level transaction information, the information contained on GIS layers can be tested, challenged, revised, and/or further sampled. In general, where there is a data element included in these protocols, they are to record field observations. The field observations are expected to be used to compare to existing information in GIS and to further refine the GIS data set. Care must be taken that large amounts of time are not spent reconfirming stable data. Statistical quality control processes can be used to determine the amount of effort most effective to field check and refine data.

7. Metric vs. Inch-pound Measurement. The Forest Service is implementing metric measurements for road construction. As yet not all features are ready for metric display. These protocols are based on continuing use of inch-pound measurement through FY 1999. It is expected that conversion of all the road conditions survey protocols and data to metric units of measure will occur during the winter of FY 2000

8. Model for Field Data Entry. Field Data entry for the road condition survey is intended to be partial. There is little rationale for filling all fields possible at all mile points possible. Basic information that describes the features can be accumulated iterativ**e**ly through the process.

a. Example 1. Data collection along the road corridor begins at or precedes preliminary design 1 in a time sequence. Fish data is collected, at or near stream crossings. Established data standards during NEPA verification call for verification of species and identification of the collector and date. Site coordinate and road number can enter this information into the road condition survey data. Note that road numbers can be established early in the NEPA process and each unit is responsible for road number assignments.

Hydraulic structures are defined during the design process. During road construction/reconstruction the construction administration staff measures and collects data on the features built into the road. Culvert dimensions, grade, cover, length, etc. are commonly measure and can be entered. Cross section information, turnout information, and other descriptive information about the as-constructed features are entered with the year of construction. As the road is monitored, additional information will be gathered, as there are reasons to collect it.

b. Example 2. Road log data from existing records is available for a road. The road log data was collected with a precision odometer. Data includes mile points and diameter of all culverts, locations of signs, locations of intersections, turnouts, and other physical features.

This data can be utilized in the road condition survey data by entering the data into the format below. For CREW use the name "roadlog". If the date of the road log is available, use it, otherwise use a date appropriate to when the road log work was done. One way to key such data is to use January 1 as the month and day for data imported with indeterminate month and day information. For mass movement of road log data in other electronic formats, reformatting to match import format for spreadsheets can be done.

9. Coding Practices and Conventions. The protocols are extensive and complex. Field testing indicates that crews can be trained and can perform the work. Newly trained employees in a two person crew will accomplish about a mile of survey per workday. With this large an investment, making sure that the information represents field measurements and observations in a consistent manner is important. Some more senior staff have use the protocol to record prescriptions (just saw the things needing to be fixed), but failed to gather the measurements called for in the protocol. The results were an additional trip to get the measurements needed to define the work for contractors. Some of the field prescriptions did not survive the subsequent analysis process, and alternative solutions were implemented.

Culvert Blockage is an item that generated considerable discussion of how best to code information. The crews encounter partially plugged culverts during the survey work. They are trained to take action to fix the problem if it is within the scope of reasonable effort for hand labor. If a culvert which is 60 percent blocked is cleaned to 20 percent blocked, what is entered for culvert blockage? The convention to be used is to record the percent the culvert is blocked when they leave the site, and to record the work done with the percent blocked under Action Taken. The following examples show some possible data entry:

A TAK	% BLOCK
BDL60	20
BDL30	0
BVR100	50

This convention allows the initial and final results to be tracked. Later actions by a road maintenance crew with chainsaws might result in a coding of BVR50 and 0 for the last site.

There has been considerable effort made to define different classes of drainages within the Alaska Region. Definitions have moved as efforts to define lower order drainages consistently have been debated. See Element 29 for the current approach being used.

10. Multiple Line Entry. The normal data entry method is expected to be spreadsheet format. There will be occasions where the descriptors needed cannot fit onto a single row of a spreadsheet. Multiple entries in the form of multiple rows may be used. It is important that the road number, mile post, date, and crew fields be filled in for multiple line entries.

11. Data Collection and Processing. The following are consensus standards and processes for handling road condition survey data. Because data collection is done with partners such as the Alaska Department of Fish and Game, consistency across agencies requires conformance to data standards.

a. Field Data Entry Devices. The expected standard equipment for entry of RCS field information is an HP palmtop model 360 LX or newer. A regional technical approval was written and approved for the purchase of these units. The monochrome screen on the most battery efficient form, with two AA batteries lasting a full work day. The palmtop includes PocketExcel spreadsheet as firmware. A standard data entry template is provided to field crews with the elements in numeric order shown in Section 1. The HP palmtop has a serial connection built into a docking cradle and comes with software to move files to and from a full function personal computer (either laptop or desktop). Compact flash cards are also available for file storage.

b. File Formats. Consensus standards is for files to be saved for each road surveyed. Files are saved as Excel Workbooks.

c. Data Template. Data processing requirements call for the field data to be ordered in columns ordered as listed in the schedule below. While there is nothing to prevent field crews from changing the order of columns, it will introduce additional work and opportunity for errors. The data template is a single sheet Excel Workbook (Office 97 compatible).

d. Field Data Quality Assurance Processes. Field data is reviewed by the crew for errors and omissions at the end of each day. Field crews will download files. The files are transferred to assistant data stewards weekly. The assistant data stewards are responsible for examining the data for consistency and moving it to a desktop personal computer for processing. Notes field is screened for information that indicates immediate action is needed (immediate threat to health, safety, resources, etc.). Assistant data stewards will also work with field crews to resolve questions about coding conventions, select

samples of data to examine for consistency, and review field operations to assure protocol compliance.

e. Data Steward Role. The data stewards for road condition survey information are the same people who have the role and responsibility for quality and consistency for the roads layer in GIS. Data Stewards for FY 1999 include Ken Vaughan (Regional role), Bob Demmert, Rob Aiken, Sam Grimes, and Rich Jacobson. Jim Cariello takes a similar role for the Alaska Department of Fish and Game for road condition survey information. Data stewards will maintain the "corporate" road condition data set for the GIS coverages they are responsible for, and are points of contact for questions about available data and content. Road condition survey data will be updated quarterly by the data stewards after assurance that data standards have been met. CD-ROM formats are the preferred method of sharing road condition survey information.

f. Assistant Data Steward Role. Assistant data stewards work with field crews, gather the data from field crews and prepare the data, process it, and pass it to the data steward for inclusion with the road condition data set. Data is considered as draft or in progress work until passed to the data steward. Jim Cariello also takes an assistant data steward role for the Alaska Department of Fish and Game. Some assistant data stewards for FY 1999 are Dennis Vogan, Glen Cross, John McDonell, Brian Crider, Sam Grimes.

g. Data Migration Process. Road condition survey data starts with an excel spreadsheet and ends with a DBF file. The file format for the ending is one that provides a high level of universality while being directly accessible to ArcView queries on either PC ArcView or IBM server versions. Data migration paths used to date are to:

1. Move the Excel Workbook file from the palmtop to a laptop or desk top computer.

2. After completing data review, transfer the file to an assistant data steward.

3. Open the file in Excel and run the processing Macro (renames sheet 2, copies road number and mile point from sheet 1, formats it with formulas, calculates values, sets column width necessary for matching other formats).

4. *Select All* on sheet 1 and *Save As* selecting the dBase IV file format and using the road number in the file name (Road#.DBF).

5. *Select All* on sheet 2 and *Save As* selecting the dBase IV file format and using the road number in the file format (Road#_CAL.DBF).

6. Using a dBase IV compatible data base program, load the file produced in step 5, and delete all records where there is not other data then the road number and milepost.

7. Transfer the completed files to the data steward.

ROAD CONDITION SURVEY DATA ELEMENTS

SECTION I - Field Collected Data Standards

Information

No.	Element	Abbreviation	Survey
1	Road Number	RTE_NO	Survey
2	Milepost	MP	Survey
3	Road System	SYS	GIS
4	Sampling Crew	CREW	Survey
5	Date	DATE	Survey
6	Feature	FEAT	Survey
7	Descriptive Parameter	PRM	Survey
8	Access and Travel Management	ATM	Survey
9	Sign Condition	SGN_C	Survey
10	Problem Mechanism	FAIL	Survey
11	Photograph	PIC	Survey
12	Height of feature	HGT	Survey
13	Width of feature	WID	Survey
14	Length of feature	LEN	Survey
15	Entrance Type	ENT	Survey
16	Ditch Block	DB	Survey
17	Catch Basin	CB	Survey
18	Inlet Erosion	IE	Survey
19	Outlet Erosion	OE	Survey
20	% Block	BLK	Survey
21	% Structure Damage	SD	Survey
22	Skew Angle	SKEW	Survey
23	Road Grade	RD_G	Survey
24	Spare	Spare	
25	Bedwidth Upstream of Inlet	B_US	Survey
26	Upstream Gradient	U_GD	Survey
27	Downstream Gradient	D_GD	Survey
28	Channel Type	CHT	Survey
29	Verified Streams Class	AHMU	Survey
30	Fish Habitat	HAB	Survey
31	Spare	Spare	
32	Fish Sampling Method	SMP	Survey
33	Silver Salmon Presence	SS	Survey
34	Cutthroat Presence	CT	Survey
35	Dolly Varden Presence	DV	Survey
36	Steelhead Presence	SH	Survey
37	Chum Salmon Presence	CS	Survey

38	King Salmon Presence	KS	Survey

No.	Element	Abbreviation	Survey
39	Pink Salmon Presence	PS	Survey
40	Sockeye Salmon Presence	RS	Survey
41	Sculpin Presence	SC	Survey
42	Stickleback Presence	SB	Survey
43	Spare	Spare	
44	Height of Instrument	HI	Survey
45	RR Top of Culvert at Inlet	TC_I	Survey
46	Culvert Opening at Inlet	CO_I	Survey
47	Culvert Bedload Coverage	BLD_C	Survey
48	Culvert Bedload Type	BLD_T	Survey
49	Upstream Substrate Type	U_SB	Survey
50	RR Top of Culvert at Outlet	TC_O	Survey
51	Culvert Opening at Outlet	CO_O	Survey
52	Pool Depth 6" Downstream of Outlet	PD	Survey
53	RR Water Surface Elevation	WSE	Survey
54	RR Tailcrest	TC	Survey
55	RR Ordinary High Water Mark at Outlet	OHW_O	Survey
56	Bed Width at Tailcrest	B_TC	Survey
57	RR Ordinary High Water Width at Tailcrest	OHW_W	Survey
58	Spare	Spare	
59	Special Site Condition	SSC	Survey
60	Action Taken	A_TAK	Survey[1]
61	Action Required	A_REQ	Survey
62	Priority	PRI	Survey
63	Problem Corrected	COR	Survey
64	Notes	NOTES	Survey

[1] It is anticipated that field crews doing road maintenance work will be using the protocol and this field to record work tasks accomplished.

SECTION II - Analysis Parameters
do not publish Sections II and III since they are not correct
Information

No.	Element	Abbreviation	Survey
1	Road Number	RTE_NO	Survey
2	Milepost	MP	Survey
3	Year Constructed	YRCON	Office
4	Year Road Closed	YRCLO	Office

5	Value Comparison Unit	VCU	GIS
6	Watershed Minor No.	WATSHD	GIS
7	Hill Slope Position	HILL_P	Office
8	Area	AREA	Generated
9	Culvert Cover at Inlet	I_EL	Generated
10	Culvert Cover at Outlet	O_EL	Generated
11	Percent Ordinary High Water	H20_STG	Generated
12	2 Year, 2 Day Delay	VELOCITY	Generated
13	Perch Height at Inlet	PRCH_IN	Generated
14	Perch Height at Outlet - Flow Independent	PRCH_O_I	Generated
15	Perch Height at Outlet - Flow Dependent	PRCH_O_D	Generated
16	Bedload Depth at Inlet	BDLD_I	Generated
17	Bedload Depth at Outlet	BDLD_O	Generated
18	Outlet Pool Tailcrest Depth	OP_TC	Generated
19	Culvert Gradient	CUL_G	Generated
20	Sign Type	SGN_TYP	Office

SECTION III - Associated Survey Parameters

Information

No.	Element	Abbreviation	Survey
1	Road Number	RTE_NO	Survey
2	Milepost	MP	Survey
3	Fish Habitat Suitability	HABS	Field
4	Up Stream Habitat Reach	HABL	Field

ROAD CONDITION SURVEY ELEMENT DEFINITIONS

SECTION I - Minimum Field Data Standards

Element 1: RTE_NO (ROAD#)	**Rev. 5/99**
Road Number	**National Data Element (FSH)**

1. Instructions

Obtain forest road number from GIS plot. Enter numeric value into palmtop. Specified forest roads have 2 to 7 digits.

Note: Numbering Non-System Roads -- Use an alphabetic character in the road number for non-system (unclassified) road that are surveyed. The following example is the process developed in Ketchikan and uses the Ketchikan (R-6) road numbering schema.

The designation for non-system roads will consist of the parent Specified road number with the addition of the mile post (to the nearest 0.01 miles) and an orientating direction code (R for right, L for left, ST for straight ahead) attached to the end of FDR number. For example, a non-system road intersecting FDR 3030000 on the right at mile post 2.25 would have the designation 3030000_2.25R. Additional roads encountered off this non-system road will be designated by the addition of a progressive letter code at the end of the existing non-system road designator. For example, the first road off of 3030000_2.25R would be 3030000_2.25RA with the next being 3030000_2.25RB. The mileposts and direction of these alpha designated roads are recorded in the RCS for 3030000_2.25R. The road number of those alpha designated non-system road should be recorded in the remarks column where the parameter spur right or left (RS/LS/ST) is recorded.

2. Valid Values (codes)

System Roads to 7 digits, numeric. Non-System Roads not to exceed 20 digits, alphanumeric.

Element 2: MP	**Rev. 5/99**
Milepost	**Regional Data Element**

1. Instructions

A value which identifies the location of a feature along the road. The value is cumulative for each road and begins at its origin. Each road origin is 0.000 MP. When a precision odometer such as the DM Surveyor is used all features of interest are measured by aligning the drivers eye with the feature. Culverts that are not

perpendicular to the road prism are measured at their location in the center of the road prism. If an alternative measuring device (e.g. hip chain) is required (undriveable road) measure to at least the same precision (0.000 miles, 5.28 ft.) Record the milepost in 0.000 mile units only. The beginning of a road is considered the edge of the adjoining road prism. If there is not an adjoining road then it begins at the road # sign.

It is recommended to mark the mile post inside on the downstream end of each culvert with the paint pen. Mark mileposts on bridges preferably on the middle of the structure on the downstream side. Recommended colors are a blue paint pen to mark structures in streams were fish have been verified, a green paint pen on structures in streams believed to be fish habitat, and a red paint pen on all other structures.

2. Valid Values (codes)

00.000 through 999.999

3. Units

Miles

4. Accuracy/Precision

~+/-0.002 miles/mile, 0.000 mile

Element 3: SYS	**Forest Data Field**	**Rev. 5/99**
Road System	**Defined for Each Ranger District**	

1. Instructions

Enter road system code. A road system is defined as a series of interconnected roads. Each unit has defined a set of codes that are convenient as a local data set. Local data stewards have the defined codes. Those listed below are for the Petersburg and Wrangell Ranger Districts.

2. Valid Values (codes)

Code	Description
TB	Thomas Bay
MT	Mitkof
TK	Tonka
PB	Portage Bay
RB	Rowan Bay
KK	Kake

WG Wrangell

2. Valid Values (codes) (continued)

ZA Zarembo
ET Etolin
FR Frosty
RY Rynda

Element 4: CREW	**Rev. 5/99**
Sampling Crew	**Regional Data Field (locally defined)**

1. Instructions

Enter first initial and last name for both the lead engineering and fisheries specialists collecting data. Individual names should be no longer than 8 characters total length and correspond to their e-mail user ID. List the engineering specialist first and separate the two with an underscore between the individual names. Examples of typical data entries are:

dbosell_slevesqu dvogan_gcross

Element 5: DATE	**Rev. 5/99**
Date	**Regional Data Field**

1. Instructions

Enter the date in the format shown below. Note that dates are important and approximate dates are better than no date.

2. Valid Values (codes)

(six digit numeric display)

3. Units

Not applicable

4. Accuracy/Precision

No errors, approximations are acceptable

5. Example

060396 **Note** that while spreadsheets do store dates internally as a unique day number with many different display formats, exported data needs to be formatted for date calculations with 4 digits for the year.

Element 6: FEAT	**Rev. 5/99**
Feature Type	**Regional Data Field**

1. Instructions

All data entries must contain a Feature value and other data elements in the spreadsheet row must relate to it. If more than one drainage structure Feature is associated with the same stream, attach a numeric postscript to the Feature Code (i.e., each culvert in a double installation of corrugated metal pipes would be entered with a unique milepost and a Feature Code of "CP2"). If Feature Code "MI" is used to record a prescription, also record a separate entry which includes the necessary codes to describe the physical problem the prescription is meant to remedy.

2. Valid Values (codes)

Code	Definition
CP	Corrugated metal pipe
CPB	Corrugated metal pipe with baffles
PA	Corrugated metal pipe arch (squash pipe)
PAB	Corrugated metal pipe arch (squash pipe) with baffles
CO	Corrugated metal arch - open bottom
PP	Corrugated plastic pipe
AR	Structural plate pipe arch - (closed bottom, multi-plate)
AO	Structural plate arch - (open bottom, multi-plate)
PB	Long term permanent bridge
MB	Modular bridge
LB	Log stringer bridge
LC	Log culvert
WC	Wooden culvert
RM	Removed structure
MI	Site where structure is needed in future
AB	Abutments are present, though the bridge is not
WB	Water bar or similar device to divert water off the road
TO	Turnout
JH	J-hole, also called a turnaround
SI	Sign
BC	Blocking or closure device
SY	Sort yard
QY	Quarry
XS	X-section
SM	Surface material

LT	Log transfer Facility
DF	Dock and float
FD	Ford

2. <u>Valid Values (codes)</u> (continued)

RP	Ramp
IS	Intersection
LD	Landing
GR	Guardrail
OT	Other (specify in notes)

<u>Element 7:</u> PRM	**Rev. 5/99**
Descriptive Parameter	**Regional Data Field**

1. <u>Instructions</u>

Enter the parameter associated with the feature (FEAT) that is being described. The PRM field provides additional information about a feature or situation associated with a feature.

2. Valid Values (codes)

Code	Definition
DR	Ditch relief or Cross Drain
NS	TLMP non-stream
SC	Stream crossing
CE	Cut-slope erosion location
FE	Fill slope erosion location
QE	Quarry Erosion
SE	Surface erosion location
SL	Landslide (from above the road)
WR	Water running across, or standing on, a surface (road, quarry, etc.)
SF	Stress fracture parallel to roadway
HO	Hole in road surface
CH	Chuck holes are predominate at this section
WD	Washboard predominates at this section
RT	Road rutting predominates at this section
AC	Alligator cracking in the pavement (fill in length and width fields)
RH	Rough
RD	Rolling dip is present at this section
BR	Berm on Road
DV	Ditch stable and functioning well (vegetated)
DE	Ditch erosion location
DP	Ditch plugging evident
BB	Brush encroachment (slapping vehicle) begins

BE	Brush encroachment (slapping vehicle) ends
CL	Clearing brush or blowdown
DS	Bridge Deck run-off sediment
SA	Stream abutment erosion
EC	Stream encroachment
LS	Spur road located to the left
RS	Spur road located to the right
ST	Spur straight ahead
DW	Driveway
(2-7 digits)	Intersecting specified road (enter road number in parameter field)
ER	End of Road
(Signs)	Record message on all vertical signs (mp9, 3030000, etc.)
PR	Pit-run shot rock surface predominates at this section
SR	Select aggregate surfacing predominates at this section
PV	Paving of roadway
RWL	Retaining wall left
RWR	Retaining wall right
NO	None listed above
OT	Other (specify in notes)

Element 8: ATM (CLOD)	**Rev. 5/99**
Access and Travel Management	**Regional Data Field**

1. Instructions

This field is intended to be used with a Feature (FEAT) entry indicating an access or travel management object or device. Describe the feature that blocks, closes or influences travel on the road. Road log databases are a convenient source of historical information. Multiple lines may be used.

2. Valid Values (codes)

Code	Definition
N	Traffic not restricted
GTC	Gated and gate closed
GTO	Gated and gate open
TT	Mound/Pit blocking car and truck traffic
TTD	Mound/Pit and evidence of use by car or truck traffic
VEG	Organic closure
PB	Pulled bridge
PBD	Pulled bridge and evidence of use by car or truck traffic
PC	Pulled culvert
PCD	Pulled culvert and evidence of use by car or truck traffic
SLD	Slide blocking the road to some or all traffic
WO	Wash out

BD	Blowdown timber
COMV	Closure order posted for motorized vehicles
COSE	Closure order posted for seasonal use
COWT	Closure order posted allowing winter vehicle use
TRIB	Tributary to a road closed by another device. Place road number and milepost of closure (if known) of closed road by another device in remarks column. If tributary road is closed by it's own device, add an additional line item for it.
TRAV	Roadway impassable by non-listed criteria, this includes obliterated (eg., rock pulled) stored, decommissioned, and roads closed according to FPA, etc.

Element 9: SGN_CON	**Rev. 5/99**
Sign condition	**Regional Data Field**

1. Instructions

Record the condition of forest road signs. If the sign is a vertical route marker or milepost marker, also record the sign message (eg. 3030000 or mp9) in the Parameter column (Element 7). For all other signs, a photograph is required to record sign message and type and must be recorded in the Photograph column (Element 11). Record type of sign in notes (eg. Warning, directional, information, regulatory).

2. Valid Values (codes)

Code	Definition
I	Intact and undamaged
D	Damaged but serviceable. Replacement not required. Specify damage in notes.
R	Replacement of sign is required. Specify reason for replacement in notes.
N	Sign needed. Recommend placement of sign at this milepost. Specify type of sign in notes.

Element 10: FAIL	**Rev. 5/99**
Problem mechanism	**Regional Data Field**

1. Instructions

Record the dominant mechanism which caused (is causing) the improper function of this feature. The failure should be associated with the feature (FEAT) identified at this site. Attempt to determine the primary or initial mechanism by which the problem occurred.

2. Valid Values (codes)

Code	Definition
N	No Failure
WDC	Woody debris in culvert
WDD	Woody debris in ditch
RF	Road Fill (pushed off road by grader)
RG	Road grade needs crowning/shaping
SDC	Sediment accumulation in culvert
SDD	Sediment accumulation in ditch
FS	Fill slump or slide
MDB	Missing or inadequate ditch (blasting required to create ditch)
MDD	Missing or inadequate ditch (diggable material)
CSC	Cut-slope slumping or sliding into culvert (single event)
CSD	Cut-slope slumping or sliding into ditch (single event)
EC	Hydraulic flows exceeded capacity
DF	Debris flow
MP	Mechanical damage or joints parting
CP	Piping of water through the fill (along pipe, through voids, etc.)
KT	Karst topography is cause of failure
BV	Beaver activity
OS	Oversteepened slopes
MT	Material inadequate for designed use (sand in ¾:1 cutbank, 6" minus fill material at culvert outlet, etc.).
CS	Culvert is too short
AL	Culvert is poorly aligned
IB	Improper installation
SS	Subsidence
SC	Side Cast Material cracking off roadway
LD	Lip distortion at inlets
SD	Stream in ditch
WX	Weathering or corrosion
VN	Vandalism
BD	Blocked Ditch (obsolete code, use more specific codes above)
OT	Other (specify in notes)

More than one classification is permitted with separation by an underscore.

Element 11: PIC (PHOTO)	**Rev. 5/99**
Photograph	**Field Crew and Office Alert Flag**

1. Instructions

Record if a photograph or digital still was taken of feature. Photos may be hot-linked in ARCVIEW for features. The following photographs are required: all fish, mounted signs, all features identified as Critical and Emergency priorities (Element 62), Special Site Conditions that affect fish, view of Tailcrest cross section (see Element 54) looking upstream to the culvert outlet; and all signs other than vertical route and milepost markers.

2. Valid Values (codes)

Code	Description
Y	Photograph taken
N	Photograph not taken

Element 12: HIGH	**Rev. 5/99**
Height of depth of feature	**Regional Data Field**

1. Instructions

This measurement is used to measure height, or depth dependent upon the feature (FEAT) being measured. For culverts this is the vertical distance from bottom to top (measure with rod or steel tape (used in conjunction with (Width). For culverts with significant bedload, enter 999 to code it as immeasurable. Waterbars are measured from bottom of waterbar to roadway elevation at road centerline, signs are measured from top to ground. Use this field to record the depth of significant surface erosion so that volumes may be calculated (in conjunction with width and length).

2. Valid Values (codes)
12 through 999

3. Units

Inches for culverts
Feet otherwise

4. Accuracy/Precision

Culverts 1 inch, Erosion 0.1 feet

Element 13: WIDTH	**Rev. 5/99**
Width	**Regional Data Field**

1. Instructions

The horizontal dimension of features (FEAT) such as culverts and erosion. For erosion this is the dimension that is perpendicular to the roadway.

2. Valid Values (codes)

1 through 999

3. Units

Inches for culverts
Feet for erosion

4. Accuracy/Precision

Culverts 1-inch
Erosion 1-foot

Element 14: LENG	**Rev. 5/99**
Length of Feature	**Regional Data Field**

1. Instructions

Record the length of the feature. For erosion, length is the dimension that is parallel to the roadway use in conjunction with WIDTH to obtain area and in conjunction with the element HIGH to obtain volume if desired. For beveled and mitered pipes, measure the length on top of the pipe. Put additive length of bevels in notes (eg. For 8' upstream bevel and 12' downstream bevel, record "20' bevel length" in notes). This element is also used to record culvert length.

The culvert length measurement is the slope distance from the inlet of the culvert to the outlet of the culvert. Record the measurement to the (even feet) nearest foot. See the "Typical Stream Profile" drawing.

2. Valid Values (codes)

1 to 100,000

3. Units

Feet

4. Accuracy/Precision

+/-1'

Element 15: EN_T	**Rev. 5/99**
Entrance Type	**Regional Data Field**

1. Instructions

Record the appropriate entrance type.

2. Valid Values (codes)

Code	Description
PRO	Projecting
STB	Step beveled
MIT	Mitered (includes compound beveled, etc.)
FLU	Flush in headwall
FLA	Flared Inlet

Element 16: DB	**Rev. 5/99**
Ditch Block	**Regional Data Field**

1. Instructions

Determine if ditch block is required and needs building. Most cross drains require a catch basin with associated ditch block.

2. Valid Values (codes)

Code	Definition
N	No ditch block and none needed
I	Ditch block intact and functioning
B	Building of ditch block required
M	Maintenance of ditch block required

Element 17: CB	**Rev. 5/99**
Catch Basin	**Regional Data Field**

1. Instructions

Determine if catch basin requires cleaning or building. Most cross drains require a catch basin with associated ditch block.

2. Valid Values (codes)

Code	Definition
N	No Catch basin and none needed
I	Catch basin intact and functioning
B	Building or rebuilding of a catch basin required
M	Cleaning of catch basin required

Element 18: IE	**Rev. 5/99**
Inlet Erosion	**Regional Data Field**

1. Instructions

Determine if inlet erosion is present and the action required to alleviate erosion. Use notes to clarify the situation as necessary.

2. Valid Values (codes)

Code	Definition
N	No inlet erosion
F	Fill Slope erosion protection needed (rip rap or other)
I	Inlet conditions improvement needed (flare inlet, etc..)
B	Bank protection needed at upstream banks (rip rap or other)
O	Other (specify in notes)

More than one classification is permitted with separation by an underscore.

Element 19: OE	**Rev. 5/99**
Outlet Erosion	**Regional Data Field**

1. Instructions

Determine if outlet erosion is present and action required to alleviate erosion. Use notes to clarify and expound if necessary.

2. Valid Values (codes)

Code	Definition
N	No outlet erosion
F	Fill slope protection needed (rip rap or other)
D	Energy dissipater or outlet pool needed
B	Bank protection needed at downstream banks (rip rap or other)
O	Other (specify in notes)

More than one classification is permitted with separation by an underscore.

Element 20: BLK (%_BLK)	**Rev. 5/99**
% Block	**Regional Data Field**

1. Instructions

Determine the amount (percent of culvert area) of blockage within, or immediately at the inlet or outlet of the culvert. Culverts are often designed to accumulate bedload to facilitate fish passage, this bedload deposition (if less than 30% of area) should not be considered a blockage. Bedload depths will be recorded on verified fish stream conditions as you observe at time viewed under CO_I and CO_O.

2. Valid Values (codes)

0 through 100

3. Unit

Percent

4. Accuracy/Precision

+/- 5 percent

Element 21: SD (%_SD)	**Rev. 5/99**
Structure Damage	**Regional Data Field**

1. Instructions

This field is used to identify if there is damage to the hydrologic structure or device (culvert, etc.) being inspected. Estimate the total percent cross sectional area of the damage if the barrel is dented or crushed to reduce cross section area. Record decrease in original inlet area. This applies to structural damage at the inlet, outlet, or interior sections of the pipe. Enter a 999 code if there is other structural damage such as a joint separation.

2. Valid Values (codes)

5 through 100, or 999 if other structural damage such a joint damage.

3. Units

Percent

4. Accuracy/Precision

+/- 5%

Element 22: SKEW	**Rev. 5/99**
Skew Angle	**Regional Data Field**

1. Instructions

Use compass azimuths of the road and culvert to calculate the downslope angle from perpendicular where the culvert crosses the road prism. A culvert installed perpendicular to the road prism has 0 degrees skew angle.

2. Valid Values (codes)

0 to 75

3. Units

Degrees

4. Accuracy/Precision

+/- 5 degrees

Element 23: RD_G	**Rev. 5/99**
Road Grade	**Regional Data Field**

1. Instructions

Record the percent slope on the steepest side of the road for the X-section Feature (FEAT). Take the average grade for crests and sags. Use downslope grade where erosion potential is present. Road grade measurement convention is to measure the grade over a 100-foot section. Grade is taken from a point 50' before the Feature to 50' past the feature (the 50 foot rule). Generally road grade will be most important at steep sections or in highly erosive materials.

2. Valid Values (codes)

0 to 25

3. Units

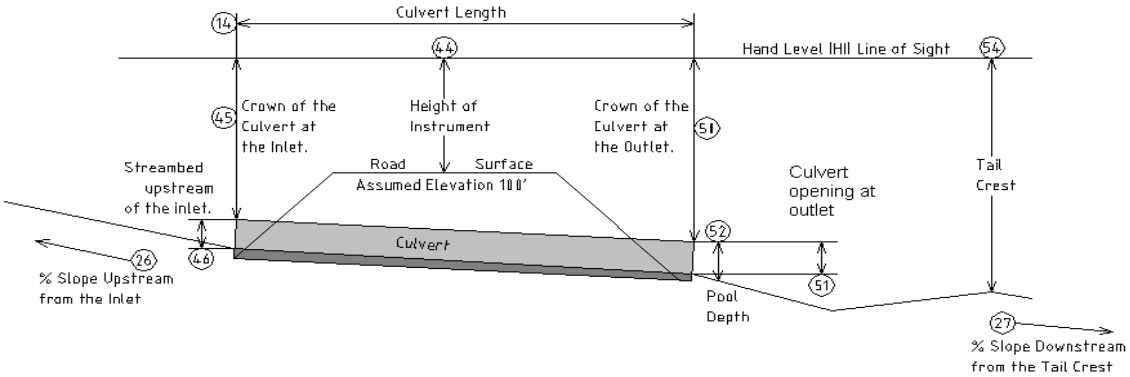
Percent

4. Accuracy/Precision

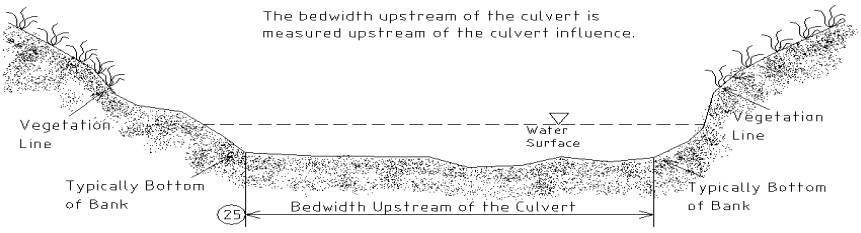
+/- 2%

Element 24: Spare (blank field in data entry spreadsheet) Rev. 5/99

Stream Crossing Measurements -- Elements 25-30 are applicable to all stream crossings



Typical Stream Profile and Road Cross-Section



Typical Upstream Cross-Section

Element 25: B_US	**Rev. 5/99**
Bedwidth Upstream of Inlet	**Regional Data Field**

1. Instructions

The Bedwidth Upstream of the Inlet measurement is the horizontal distance from the bottom-of-bank to the bottom-of-bank measured at an average representative cross section far enough upstream to be out of the area of influence of the culvert inlet. The location will vary depending on the characteristics of the stream channel. If two channels merge at an inlet, substitute downstream width, or combine the two upstream channels. Note what was recorded in the notes. Record the measurement to the nearest 0.1 feet. See the "Typical Upstream Cross-Section" drawing.

2. Valid Values (codes)

0.1 through 99.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/nearest 0.1 foot

Element 26: U_GD	**Rev. 5/99**
Upstream Gradient	**Regional Data Field**

1. Instructions

The grade is the natural gradient of the stream outside of culvert or construction influence. The Upstream gradient of the stream is measured in percent(%) from the inlet. Record the measurement to the nearest 0.5%. See the "Typical Stream Profile" drawing. Grades are commonly measured with a clinometer. If gradient is greater than 30%, record measurement to the nearest 5%.

2. Valid Values (codes)

0.0 through 200

3. Units

Percent gradient

4. Accuracy/Precision

+/- 1%/ 0.5%

Element 27: D_GD	**Rev. 5/99**
Downstream Gradient	**Regional Data Field**

1. Instructions

The downstream gradient of the stream measured in percent(%) from the tailcrest. If a defined tailcrest is not located, take the measurement approximately 3 times the culvert outlet opening downstream. See the "Typical Stream Profile" drawing. Record the measurement to the nearest 0.5%. Grades are normally measured with a clinometer. If gradient is greater than 30%, record measurement to the nearest 5%.

2. Valid Values (codes)

0.0 through 200

3. Units

Percent gradient

4. Accuracy/Precision

+/- 0.5%

Element 28: CT	**Rev. 5/99**
Channel Type	**Regional Data Field**

1. Instructions

Record Stream Process Group for the channel upstream of the road crossing. Use the Channel Type Users Guide for reference. Identify only streams greater than 1 meter width. Identification to the Channel Type level is optional.

2. Valid Values (codes)

Code	Definition
ES	Esturine Process Group
PA	Palustrine Process Group
FP	Flood Plain Process Group
GO	Glacial Outwash Process Group
AF	Alluvial Fan Process Group

LC	Large Contained Process Group
MM	Moderate Mixed Control Process Group
MC	Moderate Gradient Contained Process Group
HC	High Gradient Contained Process Group
N	Not typeable by field crew

Element 29: AHMU	**Rev. 5/99**
Verified Stream Class	**Regional Data Field**

1. Instructions

Record AHMU stream class observed. Road condition survey work is to provide more intensive information for streams with fish, ie. Code 1 and Code 2 drainages.

2. Valid Values (codes)

Code	Definition
1	Stream Class I
2	Stream Class II
3	Stream Class III
4	Stream IV
5	TLMP non-stream (Waterway)
N	Not classified

Element 30: HAB	**Rev. 5/99**
Fish Habitat	**Regional Data Field**

1. Instructions

Determine if there is fish habitat immediately downstream or immediately upstream or both upstream and downstream of the structure. The standard for minimum habitat reach is 100 feet of stream reach. Stream reaches with gradients greater than 25% will normally not be considered fish habitat. In streams with gradients less than 25% consider the width of the stream, quantity and quality of pools, stream stability, number and height of natural barriers, and the proximity to known fish habitat. While the presence of fish is considered a positive proof of use of fish habitat, the absence of fish can not be taken as the opposite.

2. Valid Values (codes)

Code	Definition
U	Upstream
D	Downstream
B	Both upstream and downstream

N No habitat present

Element 31: Spare (blank field in data entry spreadsheet)	**Rev. 5/99**

Streams which are fish bearing or potentially fish bearing -- If the code for Element 30 is U, D, or B, collection of the following information is appropriate.

Element 32: SMP	**Rev. 5/99**
Fish Sampling Method	**Regional Data Field**

1. Instructions

Sampling method refers to the method used to verify fish presence. Sample all streams identified as having fish habitat both up and downstream. Use electroshocker as primary means of sampling. Electroshock downstream the greater of either 5 pools or 100 feet. Electroshock upstream the greater of either 5 pools or 100 feet. Use minnow traps where electroshocking is not efficient (palustrine channels) soak minnow traps a minimum of 30 minutes. Sample only during periods when flow allows efficient sampling (low to moderate flows). Generally, sample from May 15 to September 30. Release all fish unharmed to location captured.

2. Valid Values (codes)

Code	Definition
ES	Electroshocker used to verify fish presence
MT	Minnow trap used to verify fish presence
VS	Vision used to verify fish presence
DN	Dip net or other net
OT	Verified from other sources (define in notes)

Element 33: SS	**Rev. 5/99**
Silver Salmon Presence	**Regional Data Field**

1. Instructions

Electroshock stream to verify. Use minnow traps where electroshocking is not efficient (palustrine channels). Dip nets can also be used. Sample only during periods when flow allows efficient sampling (low to moderate flows). If adults are present record in notes.

2. Valid Values (codes)

Code	Definition
N	Coho presence not verified
U	Coho presence verified upstream of culvert
D	Coho presence verified downstream of culvert
B	Coho presence verified both downstream and upstream of culvert

Element 34: CT	**Rev. 5/99**
Cutthroat Presence	**Regional Data Field**

1. Instructions

Electroshock stream to verify. Use minnow traps where electroshocking is not efficient (palustrine channels). Dip nets may be used. Sample only during periods when flow allows efficient sampling (low to moderate flows).

2. Valid Values (codes)

Code	Definition
N	Cutthroat presence not verified
U	Cutthroat presence verified upstream of culvert
D	Cutthroat presence verified downstream of culvert
B	Cutthroat presence verified both downstream and upstream of culvert

Element 35: DV	**Rev. 5/99**
Dolly Varden Presence	**Regional Data Field**

1. Instructions

Electroshock stream to verify presence of Dolly Varden. Use minnow traps where electroshocking is not efficient (palustrine channels). Dip nets may be used. Sample only during periods when flow allows efficient sampling (low to moderate flows).

2. Valid Values (codes)

Code	Definition
N	Dolly Varden presence not verified
U	Dolly Varden presence verified upstream of culvert
D	Dolly Varden presence verified downstream of culvert
B	Dolly Varden presence verified both downstream and upstream of culvert

Element 36: SH	**Rev. 5/99**
Steelhead Presence	**Regional Data Field**

1. Instructions

Electroshock discouraged on steelhead streams. Trap or net stream to verify presence of steelhead. Sample only during periods when flow allows efficient sampling (low to moderate flows). If adults are present, record in notes.

2. Valid Values (codes)

Code	Definition
N	Steelhead presence not verified
U	Steelhead presence verified upstream of culvert
D	Steelhead presence verified downstream of culvert
B	Steelhead presence verified both downstream and upstream of culvert

Element 37: CS	**Rev. 5/99**
Chum Salmon Presence	**Regional Data Field**

1. Instructions

Note the presence of adult chum salmon. Record presence as either upstream, downstream or both.

2. Valid Values (codes)

Code	Definition
N	Chum presence not verified
U	Chum presence verified upstream of culvert
D	Chum presence verified downstream of culvert
B	Chum presence verified both downstream and upstream of culvert

Element 38: KS	**Rev. 5/99**
King Salmon Presence	**Regional Data Field**

1. Instructions

If king presence cannot be verified by ocular sampling, dip netting, etc. then electroshock stream to verify. Use minnow traps where electroshocking is not efficient (palustrine channels). Sample only during periods when flow allows efficient sampling (low to moderate flows). If adults are present record in notes. Record presence as either upstream, downstream, or both.

2. Valid Values (codes)

Code	Definition
N	King presence not verified
U	King presence verified upstream of culvert
D	King presence verified downstream of culvert
B	King presence verified both downstream and upstream of culvert

Element 39: PS	**Rev. 5/99**
Pink Salmon Presence	**Regional Data Field**

1. Instructions

Note the presence of adult pink salmon. Record presence as either upstream, downstream, or both.

2. Valid Values

Code	Definition
N	Pink presence not verified
U	Pink presence verified upstream of culvert
D	Pink presence verified downstream of culvert
B	Pink presence verified both downstream and upstream of culvert

Element 40: RS	**Rev. 5/99**
Sockeye Salmon Presence	**Regional Data Field**

1. Instructions

If sockeye presence cannot be verified by ocular sampling or dip netting, then electroshock stream to verify. Use minnow traps where electroshocking is not efficient (palustrine channels). Sample only during periods when flow allows efficient sampling (low to moderate flows). Also not presence of adult sockeye. Record presence as either upstream, downstream, or both.

2. Valid Values (codes)

Code	Definition
N	Sockeye presence not verified
U	Sockeye presence verified upstream of culvert
D	Sockeye presence verified downstream of culvert
B	Sockeye presence verified both downstream and upstream of culvert

Element 41: SC	**Rev. 5/99**
Sculpin Presence	**Regional Data Field**

1. Instructions

Electroshock stream or dip net to verify. Use minnow traps where electroshocking is not efficient (palustrine channels). Sample only during periods when flow allows efficient sampling (low to moderate flows).

2. Valid Values (codes)

Code	Definition
N	Sculpin presence not verified
U	Sculpin presence verified upstream of culvert
D	Sculpin presence verified downstream of culvert
B	Sculpin presence verified both downstream and upstream of culvert

Element 42: SB	**Rev. 5/99**
Stickleback Presence	**Regional Data Field**

1. Instructions

Electroshock stream or dip net to verify. Use minnow traps where electroshocking is not efficient (palustrine channels). Stickleback are most likely to be found in palustrine like channels. Sample only during periods when flow allows efficient sampling (low to moderate flows).

2. Valid Values (codes)

Code	Definition
N	Stickleback presence not verified
U	Stickleback presence verified upstream of culvert
D	Stickleback presence verified downstream of culvert
B	Stickleback presence verified both downstream and upstream of culvert

Element 43: Spare (blank field in data entry spreadsheet)	**Rev. 5/99**

Fish Stream Cross Section Information -- Information especially needed for all fish stream crossings.

Element 44: HI	**Rev. 5/99**
Height of Instrument	**Regional Data Field**

1. Instructions

Height of Instrument (HI) is the vertical distance between the level line of sight and the roadway established by a hand level on a staff at the centerline of the road. The length of the staff will be the recorded measurement. It is recommended that the hand level used be equipped with 2x magnification on the bubble and 5x on the sighting window.

2. Valid Values (codes)

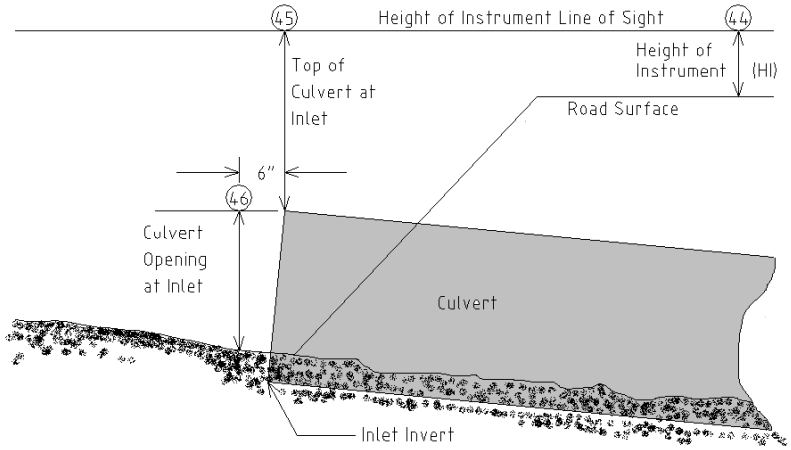
3.0 through 5.95

3. Units

Feet

4. Accuracy/Precision

+/- 0.05 feet/nearest 0.05 foot



Typical Inlet Detail

Element 45: TC_I	**Rev. 5/99**
Top of Culvert at Inlet	**Regional Data Field**

1. Instructions

The top of culvert at the inlet is measured as the vertical distance between the HI line of sight and the highest point on the top of the culvert. See Typical Inlet Detail. This measurement is used in determining the gradient of the culvert, a critical factor in computing flow velocity. Therefore, the accuracy goal is to take this measurement to the nearest 0.05 feet.

2. Valid Values (codes)

0.00 through 99.95

3. Units

Feet

4. Accuracy/Precision

+/- 0.05 feet/nearest 0.05 foot

Element 46: CO_I	**Rev. 5/99**
Culvert Opening at Inlet	**Regional Data Field**

1. Instructions

The streambed (opening) at the inlet measurement is the vertical distance measured from the top of the culvert to the streambed 6" upstream of the inlet using a rod or tape. See the Typical Inlet Detail.

2. Valid Values (codes)

0.1 through 99

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/nearest 0.1 foot

Element 47: BLD_C (%_BDLD)	**Rev. 5/99**
Culvert Bedload Coverage	**Regional Data Field**

1. Instruction

Culvert bedload coverage refers to the percent of the culverts length which is covered with bedload.

2. Valid Values (codes)

0 through 100

3. Units

Percent

4. Accuracy/Precision

+/- 10% nearest 10%

Element 48: BLD_T	**Rev. 5/99**
Culvert Bedload Type	**Regional Data Field**

1. Instructions

Culvert bedload refers to the dominant class of substrate particle size within the culvert. Estimate the dominant substrate particle size class.

2. Valid Values (codes)

Size limits are based on the Unified Soil Classification Use of Sand codes (FS MS CS) is optional. Use of S to include all sands is acceptable. More than one classification is permitted with separation by an underscore.

FS Fine Sand	0.08mm to 0.4mm (optional)
MS Medium Sand	0.4mm to 2.0mm (optional)
CS Coarse Sand	2.0mm to 5.0mm (optional)
S Sands	<5mm
FG Fine Gravel	5mm - 20mm
CG Coarse Gravel	20mm-80mm
SC Small Cobble	80mm - 120mm
LC Large Cobble	120mm-250mm
BO Boulder	250mm-1000mm
B	Bedrock for boulders greater than 1 meter

O	Organic materials, fine woody debris

Element 49: US_SB	**Rev. 5/99**
Upstream Substrate Type	**Regional Data Field**

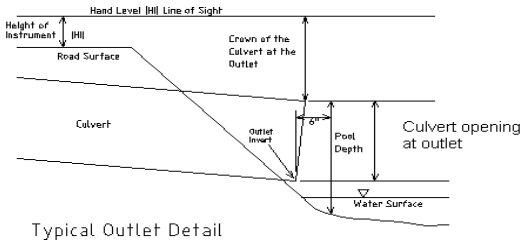
1. Instructions

Classify the stream substrate located upstream of the culvert by identifying the dominate particle size.

2. Valid Values (codes)

Size limits are based on the Unified Soil Classification.
Use of Sand codes (FS,S,CS) is optional. Use of S to include all sands is acceptable.
More than one classification is permitted with separation by an underscore.

FS Fine Sand	0.08mm to 0.4mm (optional)
MS Medium Sand	0.4mm to 2.0mm (optional)
CS Coarse Sand	2.0mm to 5.0mm (optional)
S Sands	<5mm
FG Fine Gravel	5mm - 20mm
CG Coarse Gravel	20mm-80mm
SC Small Cobble	80mm - 120mm
LC Large Cobble	120mm-250mm
BO Boulder	250mm-1000mm
B	Bedrock for boulders greater than 1 meter
O	Organics, fine woody debris



Typical Outlet Detail

Element 50: TC_O	**Rev. 5/99**
Top of Culvert at Outlet	**Regional Data Field**

1. Instructions

The top of the culvert at the outlet is measured as the vertical distance between the HI line of sight and the highest point on the top of the culvert. See Typical Outlet Detail. This measurement is used in determining the gradient of the culvert, a critical factor in computing flow velocity. Therefore, the accuracy goal is to take this measurement to the nearest 0.05 feet.

2. Valid Values (codes)

0.0 through 99.95

3. Units

Feet

4. Accuracy/Precision

+/- 0.05 feet/nearest 0.05 foot

Element 51: CO_O	**Rev. 5/99**
Culvert Opening at Outlet	**Regional Data Field**

1. Instructions

Measure the distance from the top of the culvert to a point at the average depth of the bedload in the culvert or the bottom of the culvert (which ever is less) with a rod or tape. See Typical Outlet Cross Section.

2. Valid Values (codes)

0.1 through 99.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/nearest 0.1 foot

Element 52: PD **Rev. 5/99**
Outlet Pool Depth **Regional Data Field**

1. Instructions

Measure the vertical distance from the top of the culvert outlet and the stream bottom. Make the measurement at a distance of 6 inches from the culvert.

2. Valid Values (codes)

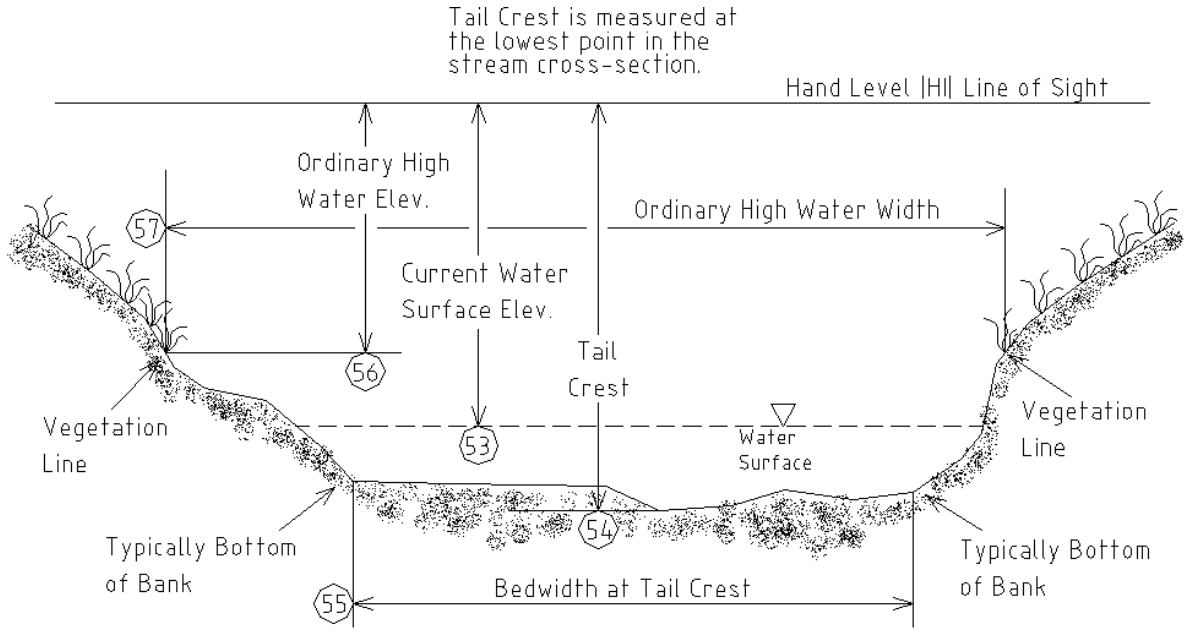
0.1 through 99.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/nearest 0.1 foot



Typical Tail Crest Cross-Section

Element 53: WSE	**Rev. 5/99**
Water Surface Elevation	**Regional Data Field**

1. Instructions

The water surface elevation is the vertical distance between the HI line of sight and the water surface of the stream at the tailcrest. See the "Typical Tailcrest Cross-Section" drawing.

2. Valid Values (codes)

0.0 through 99

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/nearest 0.1 foot

Element 54: TC	**Rev. 5/99**
Tailcrest	**Regional Data Field**

1. Instructions

The tailcrest is the vertical distance between the HI line of sight and the lowest point of the streambed at the tailcrest cross section. The tailcrest location is at the downstream end of the plunge pool or scour hole at the outlet. When installed control structures are present (i.e. log or rock weirs), the measurement is taken at the lowest point of the control structure. The location will vary between culvert, but is not expected to be more than 3 times the culvert height down stream. If there is not a pool or scour hole at the outlet, enter the observation in Notes. See the "Typical Stream Profile" and "Typical Outlet Detail" drawings.

2. Valid Values (codes)

0.0 through 99.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/nearest 0.1 foot

Element 55: B_TC	**Rev. 5/99**
Bed Width at Tailcrest	**Regional Data Field**

1. Instructions

The bed width at tailcrest measurement is the horizontal distance from the bottom-of-bank to the bottom-of-bank at the tailcrest cross section. See the "Typical Tailcrest Cross-Section" drawing. If there is not and identifiable tailcrest, take the measurement at approximately 3 times the culvert height downstream of the outlet.

2. Valid Values (codes)

0.1 through 99.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/0.1 feet

Element 56: OHW_O	**Rev. 5/99**
Ordinary High Water Mark Downstream	**Regional Data Field**

1. Instructions

The ordinary high water mark downstream measurement is the vertical distance between the HI line of sight and the vegetation line on one side of the channel at the tailcrest cross section. The ordinary high water mark is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. See the "Typical Tail Crest Cross-Section" drawing. If a defined tailcrest is not located, take the measurement approximately 3 times the culvert height downstream of the outlet.

2. Valid Values (codes)

0.1 through 99.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/nearest 0.1 foot

Element 57: OHW_W	**Rev. 5/99**
Ordinary High Water Width Downstream	**Regional Data Field**

1. Instructions

The ordinary high water width downstream measurement is the horizontal distance between the ordinary high water mark on one side of the stream and the ordinary high water mark on the other side of the stream measured at the tailcrest cross section. Make the measurement as closely **as** possible to a right angle from the stream flow. See the "Typical Tailcrest Cross-Section" drawing. If there is no defined tailcrest, make the measurement approximately 3 times the culvert height downstream of the outlet.

2. Valid Values (codes)

0.1 through 99.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/0.1 feet

Element 58: Spare	**Rev. 5/99**

Element 59: SSC (CNSQ)	**Rev. 5/99**
Special Site Condition	**Regional Data Field**

1. Instructions

a. Potential Problems

Identify any conditions that predispose future problems or failure to perform as designated. Identify situations that can cause problems in the foreseeable future, such as, beaver, unstable upstream debris, loose slash in a unit, etc.

b. Consequences

Record special site conditions of a road condition problem recorded in parameter (PRM). If there is more than one potential problem, list additional consequence code on additional entry lines.

2. Valid Values (codes)

Code	Definition
BVU	Beaver activity upstream of drainage structure
BVD	Beaver activity downstream of drainage structure
BVB	Beaver activity both upstream and downstream of drainage structure
WDR	Unstable woody debris upstream of drainage structure
BDL	Active bedload upstream of drainage structure
SF	Produces an unsafe condition or potentially unsafe condition
FH	Apparent sediment transport potential into fish stream
WQ	Sediment transport results in degradation of water quality
SI	Effects the structural integrity of the road
OT	Other (specify in notes)
N	No significant special site condition
SD	Stream or watercourse routed into ditch (diversion)
DR	Stream or watercourse routed onto road surface (diversion)

Element 60: A_TAK	**Rev. 5/99**
Action Taken	**Regional Data Field**

1. Introduction

This data field has been identified as a method to record road maintenance accomplishments. Minor corrective work should be done and documented immediately. Record the action taken and type of problem that was corrected. Use

the method prescribed in the "Coding Practices and Conventions" section at the beginning of this document to record culvert blockage existing before action was taken(eg., BDL60, BVR100, etc.). Supplement the information with details using the notes as needed to document work done. Note that the road maintenance work accomplishments may not be in the same spreadsheet data collected for condition surveys.

2. Valid Values (codes)

Code	Definition
N	No problem corrected
BVR	Beaver debris removed from culvert
RFL	Fill material removed from culvert
BDL	Bedload deposition removed from culvert
ORG	Organic blockage removed from culvert
SED	Sediment removed from culvert
DCH	Ditch cleaned
BSN	Catch basin cleaned
DBL	Ditch block repaired
SDG	Seeding
DIP	Rolling dip created
CRP	Culvert replaced
CIN	Culvert installed (new installation)
CHK	Field checked as part of on-going road maintenance.
RBD	Road Bladed (and rolled)
WBA	Water Bar added
OWA	Outlet Weir added
SIR	Sign Installed or Replaced
LTF	LTF serviced
GAT	Gate repaired or replaced
ADD	Additional work needed
HCC	Hand cleaned culvert (Obsolete code, use more specific codes above)
OTH	Other (specify in notes)

More than one classification is permitted with separation by an underscore.

Element 61: A_REQ	**Rev. 5/99**
Action Required	**Regional Data Field**

1. Instructions

Determine if and what kind of action is required to correct problem. Accompany all action required problems with notes for further explanation. If critical problem is encountered and can be corrected with hand labor then survey crew will act on it immediately and record the action in the A_TAK field.

2. Valid Values (codes)

Code	Definition
N	No action required
L	Light - light hand labor can correct
M	Moderate - intensive hand labor can correct
H	Minimal use of heavy equipment is required to correct problem
X	Extensive user of heavy equipment needed

Element 62: PRI	**Rev. 5/99**
Priority	**Regional Data Field**

1. Instructions

Evaluate based on special site condition. If critical problem is encountered and can be corrected with hand labor then survey crew will act on it immediately and record the action in the A_TAK field.

Emergency Need**.** An urgent maintenance need that may result in injury, illness, or loss of life, natural resource, or property; and must be satisfied immediately. Emergency needs generally require a declaration of emergency or disaster, or a finding by a line officer that an emergency exists.

Critical Need. A requirement that addresses a serious threat to public health or safety, a natural resource, or the ability to carry out the mission of the organization.

Non-critical Need. A requirement that addresses potential risk to public or employee safety or health, compliance with codes, standards, regulations, etc., or needs that address potential adverse consequences to natural resources or mission accomplishment.

2. Valid Values (codes)

Code	Definition
E	Emergency
C	Critical
N	Non-critical

Element 63: COR	**Rev. 5/99**
Problem Corrected	**Regional Data Field**

1. Instructions

This element is intended to show that previously recorded problems have been corrected, either through actions taken or natural means. For example, assume the following scenario: a cross-sectional feature with a parameter of cutslope erosion was previously recorded; when updating the survey it can be seen that the problem has been eliminated through successful establishment of grass. The original data cannot be flagged in the field as corrected since it resides in the office as a database file.

The solution is to update the entry on the field copy with new survey date and crew, and the action taken of 'CHK' (see Element 60). Enter 'Y' in the Problem Corrected column. This will flag the entry as one which the data steward will need to correlate with a problem recorded in the original data. The data steward will then update the Problem Corrected element of the original entry in the database to 'Y'. The intent is to retain all the historical data, but flag it so that it can be screened out before querying for existing problems.

2. Valid Values (codes)

Code	Definition
Y	Yes
N	No

Element 64: NOTES	**Rev. 5/99**
Notes Taken	**Regional Data Field**

1. Instructions

The valid values (codes) listed above for the previous 63 Elements are intended to be very descriptive of common road condition events. If further detail is needed, enter notes directly into the spreadsheet in the row corresponding to milepost. In order to allow efficient and consistent querying of the information in this survey, do not rely solely on the Notes column to record events for which other elements have been designed.

ROAD CONDITION SURVEY ELEMENT DEFINITIONS

SECTION II - Analysis Parameters

Sec. 2 - Element 1: RTE_NO (ROAD#)	**Rev. 5/99**
Road Number	**National Data Element (FSH)**

1. Instructions

Repeated from Section 1

2. Valid Values (codes)

System Roads to 7 digits, numeric. Non-System Roads not to exceed 20 digits, alphanumeric.

Sec. 2 - Element 2: MP	**Rev. 5/99**
Milepost	**Regional Data Element**

1. Instructions

Repeated from Section 1 as

2. Valid Values (codes)

00.000 through 999.999

3. Units

Miles

4. Accuracy/Precision

~+/-0.002 miles/mile, 0.000 mile

Sec. 2 - Element 3: YRCON	**Rev. 5/99**
Year Road Constructed	**Regional Data Field**

1. Instructions

If known, obtain the year the road was constructed from the contract records. The construction administration personnel should populate the data. Estimate to nearest five years if actual data are not available.

2. Valid values (codes)

1900 - current year

Sec. 2 - Element 4: YRCLO	**Rev. 5/99**
Year Road Closed	**Regional Data Field**

1. Instructions

Obtain the year a feature was installed to block or close the road. Engineering records are the common source for this information. Treat the date entry as a separate transaction with the closure method. If subsequent changes are made, additional transactions will indicate the differences. For vegetative closures identify the point in time when the discouraged uses are no longer able to traverse the route.

2. Valid Values (codes)

1900-current year

3. Units:

Not applicable

4. Accuracy/Precision

+/- one year

Sec. 2 - Element 5: VCU	**Rev. 5/99**
Value Comparison Unit	**Forest Data Field for Tongass NF**

1. Instruction

VCU is roughly equivalent to watershed. Obtain value from GIS. This can be entered into the database in the office.

2. Valid Values (codes)

100 through 599 (not all inclusive)

Sec. 2 - Element 6: WATSHD	**Rev. 5/99**
Watershed Minor Number	**GIS data - Optional Field**

1. Instructions

Record watershed minor number. In some cases where the road is close to the shoreline, there may not be a watershed number. Obtain value from GIS. This can be entered into database in the office.

2. Valid Values (codes)

4 digit, numeric

Sec. 2 - Element 7: HILL_P	**Rev. 5/99**
Hill Slope Position	**Regional GIS Data or Field Data**

1. Instructions

Use topographic maps and the GIS slope class layer to determine the hill slope position for selected road segment, or identify the position if collecting field data to monitor GIS results. Best done by field crew based on characteristics.

2. Valid Values (codes)

Code	Description
VB	Valley Bottom
FS	Foot Slope
MS	Mid-Slope
SS	Shoulder Slope
RT	Ridge Top

Sec. 2 - Element 8: AREA	**Rev. 5/99**
Area	**Optional Forest Data Field**

1. Instructions

The area of erosion, defined by Length and Width.

2. Valid Values (codes)

10 to 100,000

3. Units

Feet

4. Accuracy/Precision

+/- 10 feet^2

Sec. 2 - Element 9: I_EL	**Rev. 5/99**
Culvert Cover at Inlet	**Regional Data Field**

1. Instructions

Look for culverts where the cover is less than one foot or more than 10 feet. Skip all others.

2. Valid Values (codes)

0.0 through 99

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/0.1 feet

Sec. 2 - Element 10: O_EL	**Rev. 5/99**
Culvert cover at outlet	**Regional Data Field**

1. Instructions

Look for culverts where the covers are less than 1 foot or more than 10 feet. Skip all others.

2. Valid Values (codes)

0.0 through 99

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/0.1 feet

Sec. 2 - Element 11: H2O_STG	**Rev. 5/99**
Percent Ordinary High Water	**Optional Forest Data Field**

1. Instruction

2. Valid Values (codes)

0 through 100

3. Units

Percent

4. Accuracy/Precision

+/- 10%/nearest 10%

Sec. 2 - Element 12: VELOCITY	**Rev. 5/99**
2 Year, 2 Day Flow	**Optional Field (Stikine Field Evaluation)**

1. Instructions

The velocity of the water within the culvert is obtained by using a velocity board, meter or timing a floating object over a measured distance. Attempt to measure at a point located 1/3 the culvert length from the inlet.

2. Valid Values (code)

0.0 through 9.9

3. Units

Feet/sec

4. Accuracy/Precision

+/-0.1 feet/sec nearest 0.1 foot/sec

Sec. 2 - Element 13: PRCH_IN	**Rev. 5/99**
Perch Height at Inlet	**Regional Data Field**

1. Instructions

Perched Height is the vertical distance between the bottom of the culvert to the top of the water at the inlet end of the culvert.

2. Valid Values (codes)

0.0 through 9.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/ 0.1 feet

Sec. 2 - Element 14: PRCH_O_I	**Rev. 5/99**
Perch Height at Outlet - Flow Independent	**Regional Data Field**

1. Instructions

Perched Height is the vertical distance between the bottom of the culvert to the top of the water at the outlet end of the culvert.

2. Valid Values (codes)

0.0 through 9.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/0.1 feet

Sec. 2 - Element 15: PRCH_O_D	**Rev. 5/99**
Perch Height at Outlet - Flow Dependent	**Regional Data Field**

1. Instructions

Perched Height is the vertical distance between the bottom of the culvert to the top of the water at the outlet end of the culvert.

2. Valid Values (codes)

0.0 through 9.9

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/0.1 feet

Sec. 2 - Element 16: BDLD_I	**Rev. 5/99**
Bedload Depth at Inlet	**Regional Data Field**

1. Instruction

Culvert bedload depth refers to the depth of the bedload inside the culvert at the inlet. For bottomless arches specify depth above or below the top of the footing (use negative number for amount below).

2. Valid Values (codes)

0.0 through 9.0 (negative if below footing on bottomless arches)

3. Units

Feet

4. Accuracy/Precision

+/- 0.05 feet/nearest 0.1 foot

Sec. 2 - Element 17: BDLD_O	**Rev. 5/99**
Bedload Depth at Outlet	**Regional Data Field**

1. Instruction

Culvert bedload depth refers to the depth of the bedload inside the culvert at the oultet. For bottomless arches specify depth above or below the top of the footing (use negative number for amount below).

2. Valid Values (codes)

0.0 through 9.0 (negative if below footing on bottomless arches)

3. Units

Feet

4. Accuracy/Precision

+/- 0.05 feet/nearest 0.1 foot

Sec. 2 - Element 18: OP_TC	**Rev. 5/99**
Outlet Pool Tailcrest Depth	**Regional Data Field**

1. Instructions

2. Valid Values (codes)

0.0 through 99

3. Units

Feet

4. Accuracy/Precision

+/- 0.1 feet/0.1 feet

Sec. 2 - Element 19: CUL_G	**Rev. 5/99**
Culvert Gradient	**Regional Data Field**

1. Instructions

Culvert Gradient refers to the gradient at which the culvert is laid.

2. Valid Values (codes)

0 through 99

3. Units

Percent Gradient

4. Accuracy/Precision

+/- 1%

Sec. 2 - Element 20: SGN_TYP	**Rev. 5/99**
Sign Type	**Regional Data Field**

1. Instructions

Record the code for type of forest road sign using standard Forest Service sign codes. If milepost sign, simply enter milepost on sign as code in spreadsheet (e.g., milepost 9, record and mp9).

2. Valid Values (codes)

See Sign Appendix for sign codes.

ROAD CONDITION SURVEY ELEMENT DEFINITIONS

SECTION III - Associated Survey Parameters

Sec. 3 - Element 1: RTE_NO (ROAD#)	**Rev. 5/99**
Road Number	**National Data Element (FSH)**

1. Instructions

Repeated from Section 1

2. Valid Values (codes)

System Roads to 7 digits, numeric. Non-System Roads not to exceed 20 digits, alphanumeric.

Sec. 3 - Element 2: MP	**Rev. 5/99**
Milepost	**Regional Data Element**

1. Instructions

Repeated from Section 1 as

2. Valid Values (codes)

00.000 through 999.999

3. Units

Miles

4. Accuracy/Precision

~+/-0.002 miles/mile, 0.000 mile

Sec. 3 - Element 3: HABS	**Rev. 5/99**
Fish Habitat Suitability	**Regional Data Field**

1. Instructions

Determine the kind of fish habitat immediately downstream or immediately upstream or both upstream and downstream of the structure. The standard for minimum habitat reach is 100 feet of stream reach. While the presence of fish is considered a positive proff of use of fish habitat, the absence of fish can not be taken as the opposite. Multiple line coding may be needed in some situations.

2. Valid Values (codes)

First Character
A Habitat suitable for anadromous fish is present (code in species fields)
R Habitat suitable for resident fish is present (code in species fields)
N Habitat is not suitable for resident or anadromous fish

Second Character
S Spawning habitat
R Rearing habitat
O Overwintering habitat

EXAMPLES OF X-SECTION FEATURES

- Fillslope erosion
- Cutslope erosion
- Surface erosion
- Cracks in road prism
- Washout
- Ditch problems

Appendix B-1 Fillslope erosion above a fish stream, seed was applied.

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	XS	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	FE	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	MT	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT		45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	8	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	20	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	3	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	FH
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	SDG
28	Channel Type	CT		61	Action Required	A_REQ	L
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	N
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1

Crack in road

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	XS	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SF	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	SC	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT		45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID		46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	3	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	SI
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	N
28	Channel Type	CT		61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	C
30	Fish Habitat	HAB		63	Problem Corrected	COR	N
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1

Cutslope erosion next to a fish stream

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	XS	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	CE	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	OS	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT		45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	10	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	60	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	2	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	FH
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	N
28	Channel Type	CT		61	Action Required	A_REQ	L
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	C
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1

Road washout due to culvert plugged by woody debris

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	XS	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SE	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM	WO	40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	WDC	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	1.5	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	3	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	20	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G		56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	SI
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	N
28	Channel Type	CT		61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	N
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1

Slide across road

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	BC	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM		39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM	SLD	40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	FS	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	5	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	30	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	50	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK	100	53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	3	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	N
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	N
28	Channel Type	CT		61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	N
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1

Catch basin intact and functioning.

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	DR	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	N	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	18	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	18	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN		47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB	N	49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB	I	50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE	N	51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE	N	52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G		56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	
28	Channel Type	CT		61	Action Required	A_REQ	
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Stream diverted down ditch and across road due to plugged culvert.

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	XS	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	FE	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	SD	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	0.5	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	15	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	20	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	0	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	DR
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	N
28	Channel Type	CT		61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	C
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1 Water running down a spur road, no fish streams nearby.

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	XS	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	WR	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	EC	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	0.9	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	4	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	60	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	12	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	DR
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	N
28	Channel Type	CT		61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	N
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1

Cutslope slumping into culvert

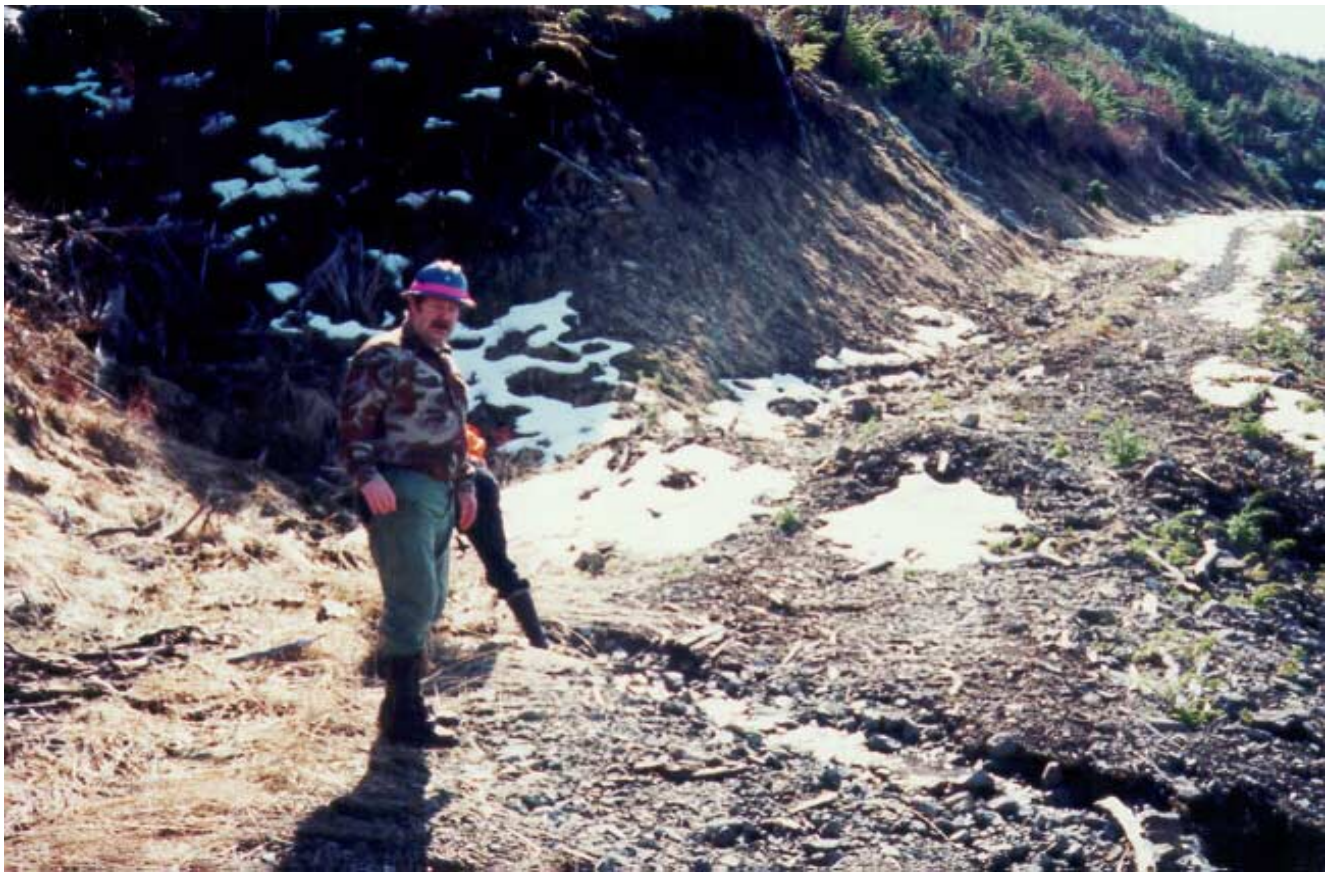
No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	DR	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	CSC	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	18	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	18	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK	0	53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G		56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	BSN30
28	Channel Type	CT		61	Action Required	A_REQ	N
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1

Stream diversion down ditch

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	XS	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	DE	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	SDC	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT		45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID		46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	100	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	18	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	SD
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	N
28	Channel Type	CT		61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	C
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1 Surface erosion in association with inadequate water bar



No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	XS	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SE	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	EC	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT		45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	10	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	20	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	10	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	DR
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	ADD
28	Channel Type	CT		61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	C
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

Appendix B-1

Ditch erosion

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	XS	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	DE	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	SD	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT		45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	4	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	200	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT		48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	15	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	WQ
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	N
28	Channel Type	CT		61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	C
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

EXAMPLES OF CULVERT PROBLEMS

- Inlet erosion
- Outlet erosion
- Blockage
- Structural Damage
- Perched Culvert

Road prism failure caused by undercut footing on an open bottom arch.

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	BT
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	BT
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CO	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	ST	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT		45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID		46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN		47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	PRO	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE	F	52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD	999	54	RR Tailcrest	TC	
22	Skew Angle	SKEW	3	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	2	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	1	59	Special Site Condition	SSC	SI
27	Downstream Gradient	D_GD	1	60	Action Taken	A_TAK	N
28	Channel Type	CT	FP	61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU	1	62	Priority	PRI	C
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

Inlet scour has eroded road fill material.

1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	BT
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	BT
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	AR2	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	MT	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	48	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	72	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	PRO	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE	F	51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE	N	52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW	0	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	0	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	25	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	2	59	Special Site Condition	SSC	SI
27	Downstream Gradient	D_GD	1	60	Action Taken	A_TAK	N
28	Channel Type	CT	FP	61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU	1	62	Priority	PRI	N
30	Fish Habitat	HAB	B	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

Beaver dam 15 feet above culvert inlet

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	BT
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	BT
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CO	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	BV	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	37	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	72	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	38	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	PRO	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW		55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G		56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	12	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	1	59	Special Site Condition	SSC	BVU
27	Downstream Gradient	D_GD	1	60	Action Taken	A_TAK	N
28	Channel Type	CT	FP	61	Action Required	A_REQ	N
29	Verified Aquatic Habitat Class	AHMU	1	62	Priority	PRI	
30	Fish Habitat	HAB	U	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	MT	64	Notes	NOTES	

Appendix B-1 Inlet erosion has caused fillslope material to block culvert inlet.

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	BT
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	FS	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	60	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	60	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	PRO	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE	F	51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE	N	52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK	40	53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW	3	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	2	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	12	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	5	59	Special Site Condition	SSC	BDL
27	Downstream Gradient	D_GD	3	60	Action Taken	A_TAK	N
28	Channel Type	CT	MM	61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU	2	62	Priority	PRI	C
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

Blocked pipe

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	BT
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	BT
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	60	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	OT	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT		45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	60	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	60	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	30	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK	50	53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW	0	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	0	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	15	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	1	59	Special Site Condition	SSC	BDL
27	Downstream Gradient	D_GD	1	60	Action Taken	A_TAK	N
28	Channel Type	CT	AF	61	Action Required	A_REQ	X
29	Verified Aquatic Habitat Class	AHMU	1	62	Priority	PRI	C
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

Open bottom arch footing is failing

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	BT
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CO	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	ST	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	48	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	36	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	28	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	PRO	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD	25	54	RR Tailcrest	TC	
22	Skew Angle	SKEW	2	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	3	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	8	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	3	59	Special Site Condition	SSC	OT
27	Downstream Gradient	D_GD	2	60	Action Taken	A_TAK	N
28	Channel Type	CT	MM	61	Action Required	A_REQ	X
29	Verified Aquatic Habitat Class	AHMU	1	62	Priority	PRI	N
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1 Mass failure upstream caused structure to become blocked

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	BT
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	BT
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	DS
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	SDC	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	?	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	72	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	PRO	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK	80	53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW	2	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	2	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	15	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	1	59	Special Site Condition	SSC	SI/FH
27	Downstream Gradient	D_GD	1	60	Action Taken	A_TAK	N
28	Channel Type	CT	AF	61	Action Required	A_REQ	X
29	Verified Aquatic Habitat Class	AHMU	1	62	Priority	PRI	C
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

Inlet erosion causing road failure

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	DS
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	BT
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	EC	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	60	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	60	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	MIT	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE	F	51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW	0	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	0	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	15	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	4	59	Special Site Condition	SSC	SI
27	Downstream Gradient	D_GD	3	60	Action Taken	A_TAK	N
28	Channel Type	CT	MM	61	Action Required	A_REQ	X
29	Verified Aquatic Habitat Class	AHMU	1	62	Priority	PRI	C
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

Mechanical damage at culvert inlet

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	BT
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	MP	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	60	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	60	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	MIT	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK	20	53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD	20	54	RR Tailcrest	TC	
22	Skew Angle	SKEW	0	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	2	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	12	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	8	59	Special Site Condition	SSC	OT
27	Downstream Gradient	D_GD	6	60	Action Taken	A_TAK	N
28	Channel Type	CT	HC	61	Action Required	A_REQ	H
29	Verified Aquatic Habitat Class	AHMU	2	62	Priority	PRI	C
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

Damaged and perched outlet

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	BT
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	BT
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	MP	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	48	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	48	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	MIT	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD	5	54	RR Tailcrest	TC	
22	Skew Angle	SKEW	3	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	4	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	9	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	3	59	Special Site Condition	SSC	OT
27	Downstream Gradient	D_GD	3	60	Action Taken	A_TAK	N
28	Channel Type	CT	MM	61	Action Required	A_REQ	M
29	Verified Aquatic Habitat Class	AHMU	1	62	Priority	PRI	N
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

Fillslope erosion and perched outlet

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	BT
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL		42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	48	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	48	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	PRO	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE	N	51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE	F	52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW	0	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	2	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	8	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	5	59	Special Site Condition	SSC	FH
27	Downstream Gradient	D_GD	3	60	Action Taken	A_TAK	N
28	Channel Type	CT	MM	61	Action Required	A_REQ	M
29	Verified Aquatic Habitat Class	AHMU	2	62	Priority	PRI	N
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

Perched outlet

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	BT
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	BT
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	SC	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	IB	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	48	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	48	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	30	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	PRO	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD		54	RR Tailcrest	TC	
22	Skew Angle	SKEW	0	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	0	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US	8	57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD	3	59	Special Site Condition	SSC	OT
27	Downstream Gradient	D_GD	3	60	Action Taken	A_TAK	N
28	Channel Type	CT	MM	61	Action Required	A_REQ	M
29	Verified Aquatic Habitat Class	AHMU	1	62	Priority	PRI	N
30	Fish Habitat	HAB	BT	63	Problem Corrected	COR	
32	Fish Sampling Method	SMP	ES	64	Notes	NOTES	

Appendix B-1

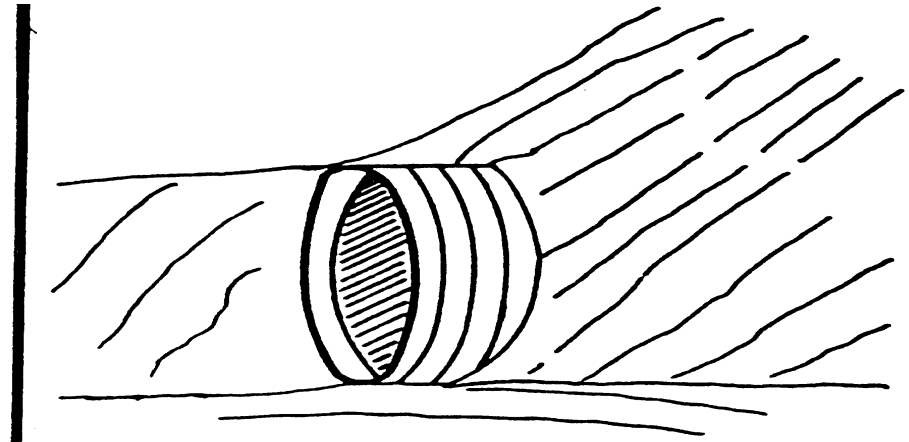
Crushed inlet on cross drain

No.	Element	Abbrev.	Code	No.	Element	Abbrev.	Code
1	Road Number	RTE_NO	XXXXX	33	Silver Salmon Presence	SS	
2	Milepost	MP	0.000	34	Cutthrout Presence	CT	
3	Road System	SYS	XX	35	Dolly Varden Presence	DV	
4	Sampling Crew	CREW	XXXXX	36	Steelhead Presence	SH	
5	Date	DATE	XXXXX	37	Chum Salmon Presence	CS	
6	Feature	FEAT	CP	38	King Salmon Presence	KS	
7	Descriptive Parameter	PRM	DR	39	Pink Salmon Presence	PS	
8	Access and Travel Management	ATM		40	Sockeye Salmon Presence	RS	
9	Sign Condition	SGN_C		41	Sculpin Presence	SC	
10	Failure Mechanism	FAIL	MP	42	Stickleback Presence	SB	
11	Photograph	PIC	Y	44	Height of Instrument	HI	
12	Height of feature	HGT	24	45	RR Top of Culvert at Inlet	TC_I	
13	Width of feature	WID	24	46	Culvert Opening at Inlet	CO_I	
14	Length of feature	LEN	28	47	Culvert Bedload Coverage	BLD_C	
15	Entrance Type	ENT	PRO	48	Culvert Bedload Type	BLD_T	
16	Ditch Block	DB		49	Upstream Substrate Type	U_SB	
17	Catch Basin	CB		50	RR Top of Culvert at Outlet	TC_O	
18	Inlet Erosion	IE		51	Culvert Opening at Outlet	CO_O	
19	Outlet Erosion	OE		52	Depth 6" Downstream of Outlet	PD	
20	% Block	BLK		53	RR Water Surface Elevation	WSE	
21	% Structure Damage	SD	100	54	RR Tailcrest	TC	
22	Skew Angle	SKEW	5	55	RR OHW Mark at Outlet	OHW_O	
23	Road Grade	RD_G	5	56	Bed Width at Tailcrest	B_TC	
25	Bedwidth Upstream of Inlet	B_US		57	RR OHW Width at Tailcrest	OHW_W	
26	Upstream Gradient	U_GD		59	Special Site Condition	SSC	SI
27	Downstream Gradient	D_GD		60	Action Taken	A_TAK	N
28	Channel Type	CT		61	Action Required	A_REQ	X
29	Verified Aquatic Habitat Class	AHMU		62	Priority	PRI	C
30	Fish Habitat	HAB		63	Problem Corrected	COR	
32	Fish Sampling Method	SMP		64	Notes	NOTES	

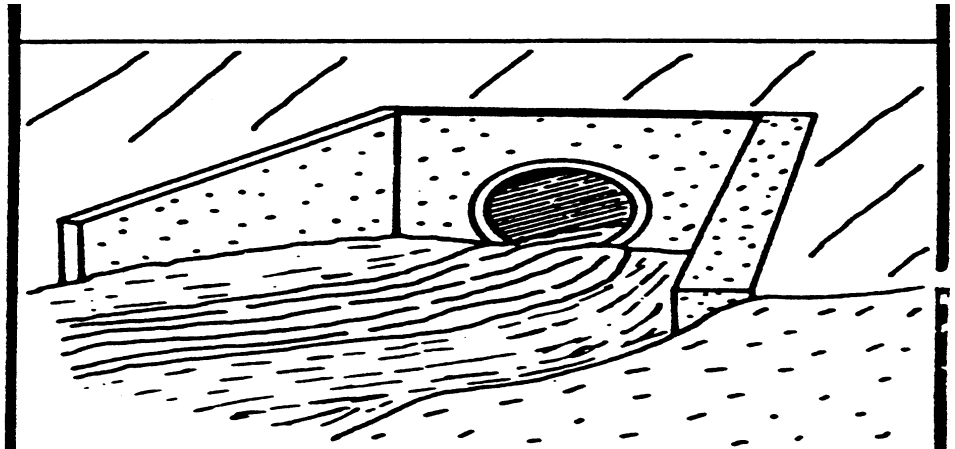
Fish Pipe Measurements

- Height of Instrument
- RR Top of Culvert at Inlet
- Culvert Opening at Inlet
- Culvert Bedload Coverage
- Culvert Bedload Type
- Upstream Substrate Type
- RR Top of Culvert at Outlet
- Culvert Opening at Outlet
- Depth 6" Downstream of Outlet
- RR Water Surface Elevation
- RR Tailcrest
- RR OHW Mark at Outlet
- Bed Width at Tailcrest
- RR OHW Width at Tailcrest

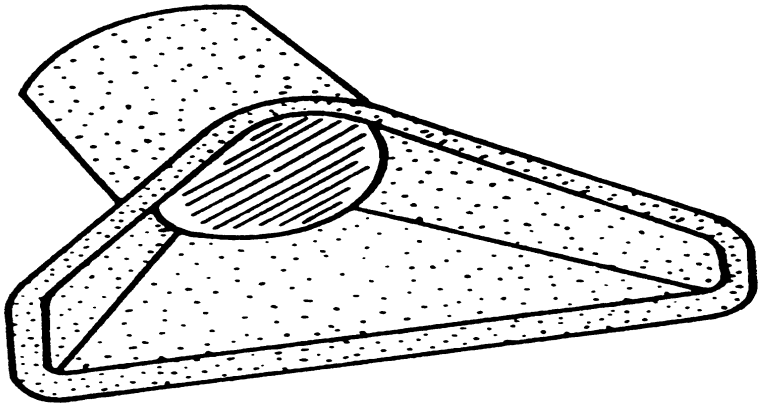
Other Training Info



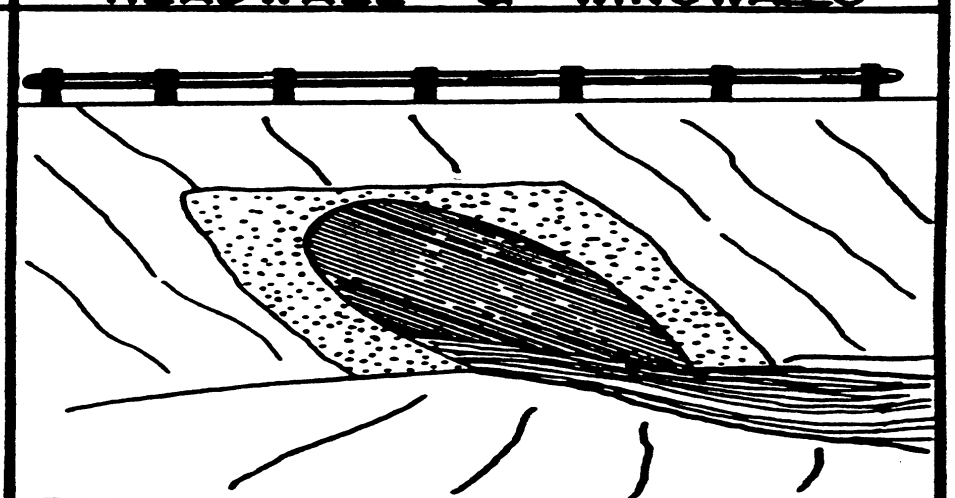
PROJECTING BARREL



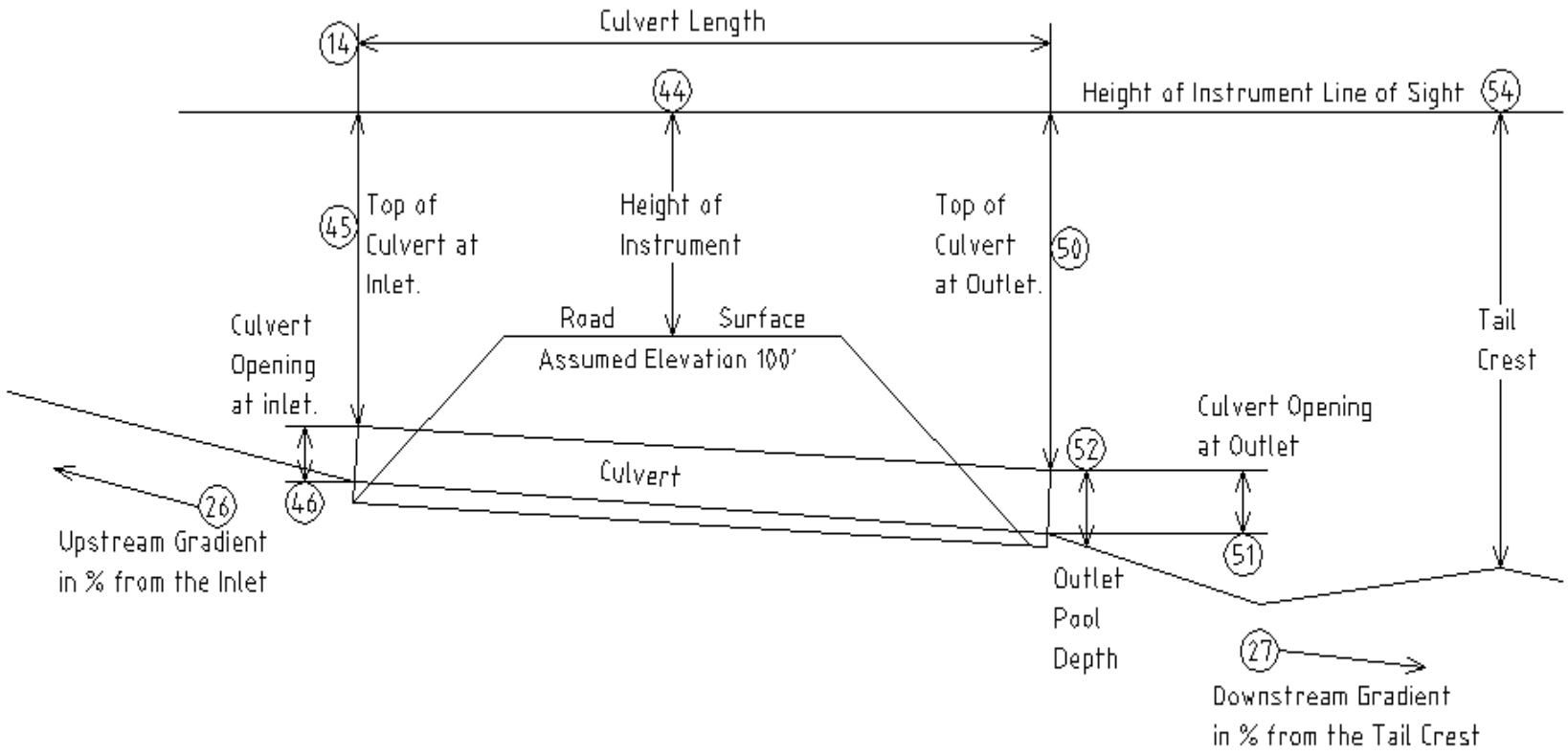
CAST-IN-PLACE CONCRETE HEADWALL & WINGWALLS



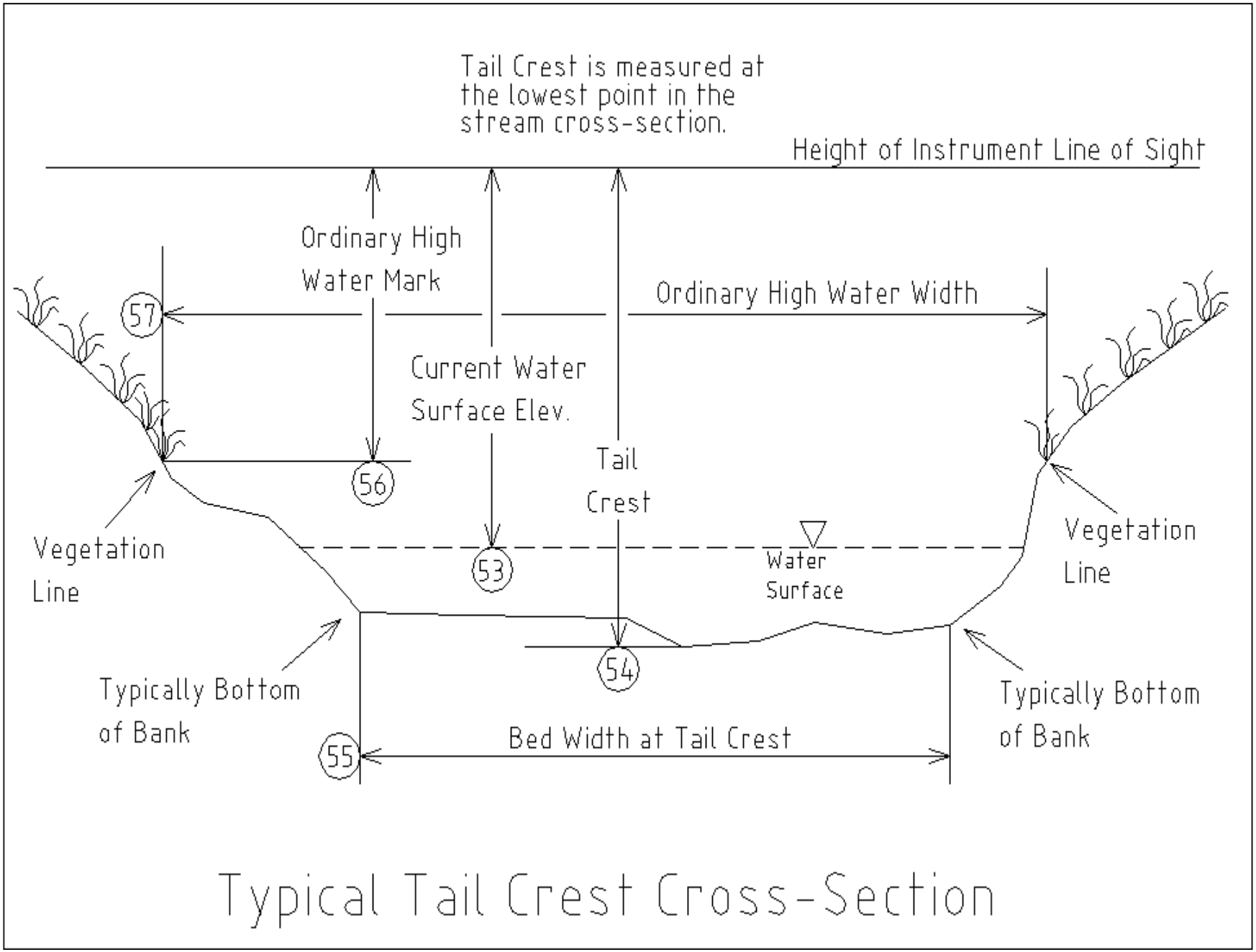
PRECAST END SECTION

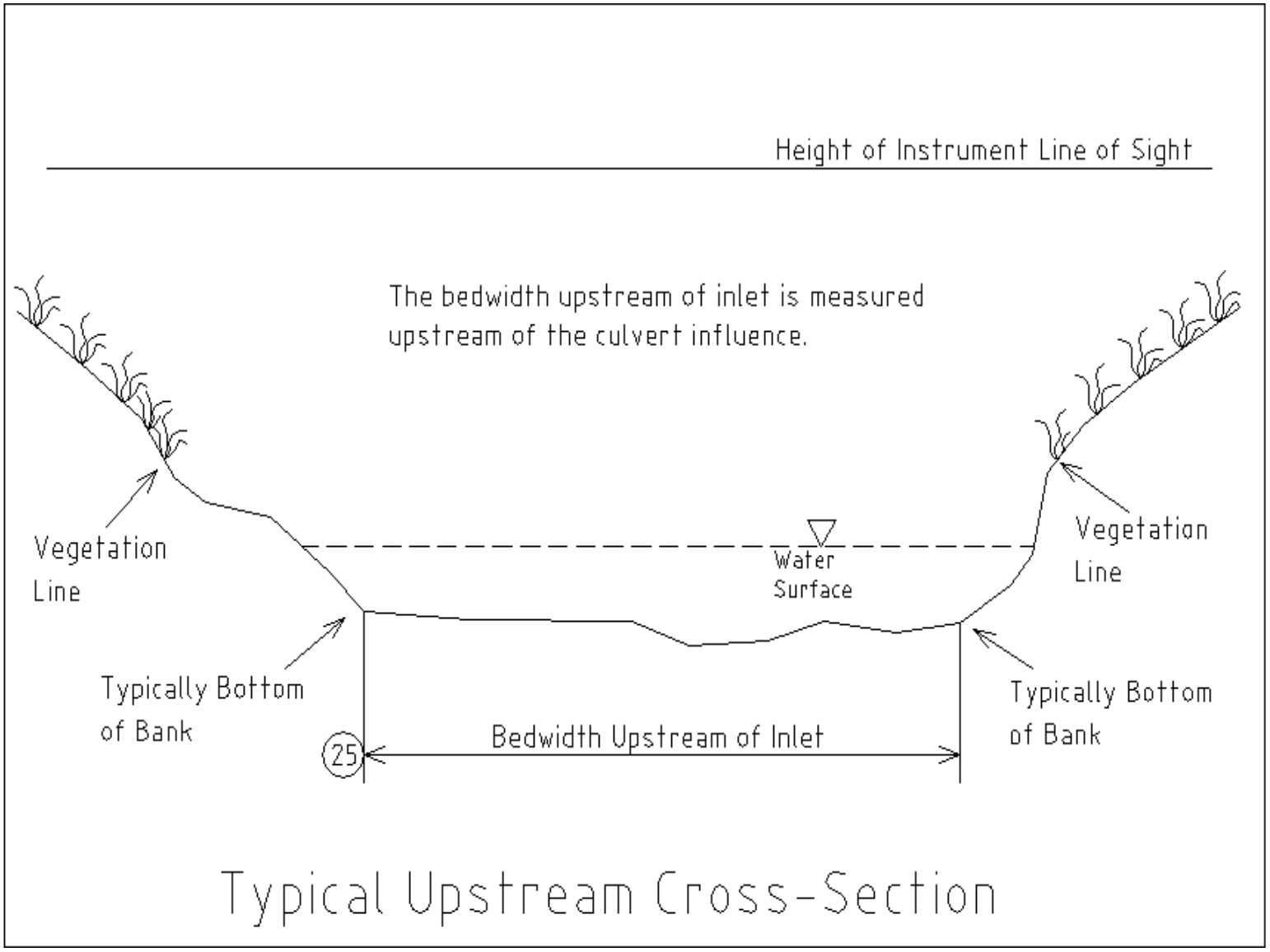


END MITERED TO THE SLOPE



Typical Stream Profile and Road Cross-Section


Tail Crest is measured at the lowest point in the stream cross-section.
Height of Instrument Line of Sight
Ordinary High Water Mark
Ordinary High Water Width
57
Current Water Surface Elev.
56
Tail Crest
Vegetation Line
53
Water Surface
Vegetation Line
54
Typically Bottom of Bank
Typically Bottom of Bank
55
Bed Width at Tail Crest
Typical Tail Crest Cross-Section


Height of Instrument Line of Sight
The bedwidth upstream of inlet is measured upstream of the culvert influence.
Vegetation Line
Water Surface
Vegetation Line
Typically Bottom of Bank
Typically Bottom of Bank
25
Bedwidth Upstream of Inlet
Typical Upstream Cross-Section

APPENDIX C

EQUATIONS USED FOR FISH PASSAGE ANALYSIS

Tailcrest Perch Height :

(Tailcrest) - (Top of Culvert at Outlet) - (Culvert Opening at Outlet)

Water Surface Elevation Perch Height:

(Water surface elevation at tailcrest) - (Top of Culvert at Outlet) - (Culvert Opening at Outlet)

Culvert Gradient:

((Top of Culvert at Outlet - Top of Culvert at Inlet) ÷ Culvert Length) x 100

Bedload Depth at Inlet:

(Culvert Height ÷ 12) - (Culvert Opening at Inlet)

Invert Bedload Percent:

((Bedload Depth at Inlet) ÷ (Culvert Height)) ÷ 12) x 100

Culvert/Bedwidth Ratio:

((Culvert Bedwidth) ÷ 12) ÷ Upstream Bedwidth

APPENDIX D

SAMPLE OF ANALYSIS USING FISH XING

Culvert Report for Unnamed Culvert

Project: GREY PIPES

Culvert Location Information

Road: 6407
Mile Post: 3.176

Comments:
GREEN, check photo, sunken pipe.

Biological Data

Species: Juvenile Cutthroat Trout
Fish Length: 90 mm
Minimum Water Depth: 0.1 ft.
Migration Period: September to October
Prolonged Swimming Speed: 1.5 ft/s
Prolonged Time to Exhaustion: 30 min.
Burst Swimming Speed: 4 ft/s
Burst Time to Exhaustion: 5 s
Jumping Speed: 4 ft/s
Velocity Reduction Factors:

Inlet:	0.80
Barrel:	0.40
Outlet:	0.80

Culvert Installation Data

Culvert Type: 60 X 46 in Pipe-Arch
Construction: CMP (3 X 1 in corr.)
Installation: Sunken
Countersunk Depth: 0.25 ft.
Culvert Length: 44 ft.
Culvert Slope: 1.36%
Culvert Roughness Coefficient: 0.027
Natural Bottom Roughness Coefficient: 0.03
Inlet Invert Elevation: 87.24 ft.
Outlet Invert Elevation: 86.64 ft.
Inlet Headloss Coefficient (Ke): 0.7

Design Flows

Low Passage Flow: 1 cfs
High Passage Flow: 4.5 cfs

Table 1. Uniform Flow Calculations.

Discharge (cfs)	Velocity (ft/s)	Normal Depth (ft)	Critical Depth (ft)	Outlet Velocity (ft/s)	Tailwater Depth (ft)	Pool Depth (ft)	Min Rqd Leap Velocity (ft/s)	Vert Leap Distance (ft)	Comments
0.00	0.00	0.00	0.00	0.00	0.16	0.00			
0.37	0.48	0.10	0.08	0.49	0.23	0.07	0.00	0.00	
1.00	0.69	0.18	0.15	0.99	0.30	0.14	0.00	0.00	LPF
1.22	0.75	0.20	0.17	1.14	0.31	0.15	0.00	0.00	
2.47	0.96	0.30	0.26	1.79	0.39	0.23	0.00	0.00	
4.08	1.15	0.40	0.36	2.43	0.46	0.30	0.00	0.00	
4.50	1.19	0.42	0.38	2.59	0.48	0.32	0.00	0.00	HPF
6.02	1.31	0.50	0.46	3.10	0.53	0.37	0.00	0.00	
8.28	1.46	0.60	0.56	3.73	0.59	0.43	0.00	0.00	

Comment Codes:
- LPF - Low Passage Flow
- HPF - High Passage Flow
- Depth - Insufficient Depth
- Vel - Excessive Velocity
- Leap - Excessive Leap
- Pool - Shallow Leap Pool

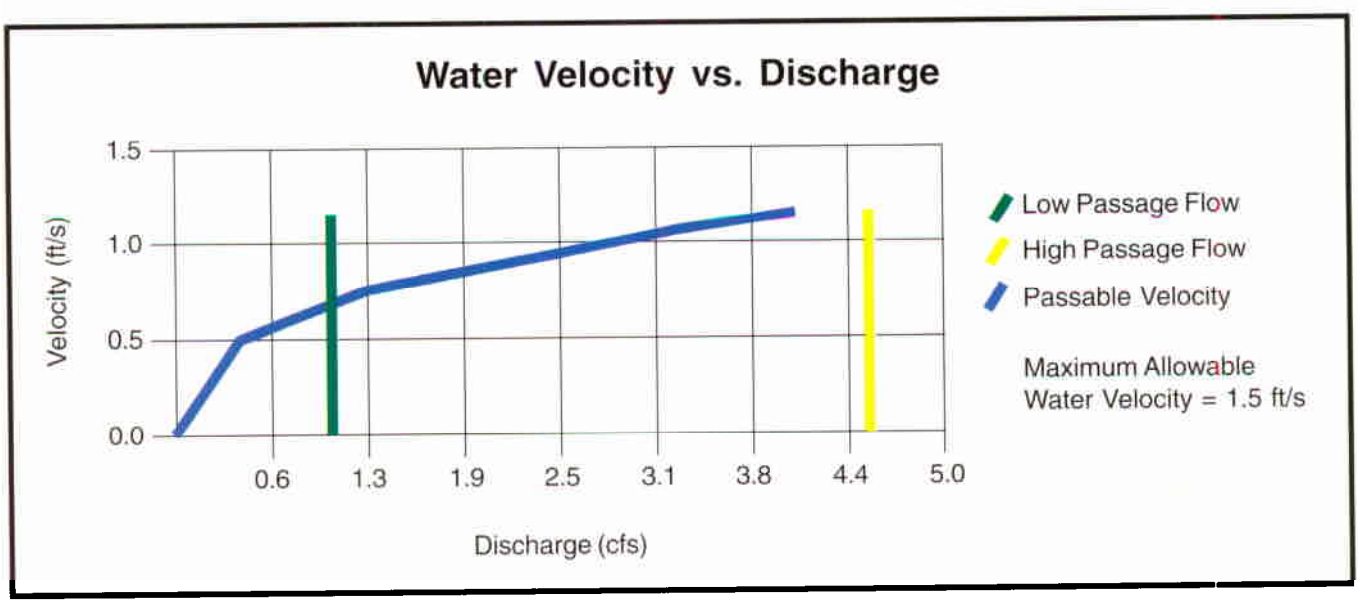


Figure 1. Velocity at Uniform Flow

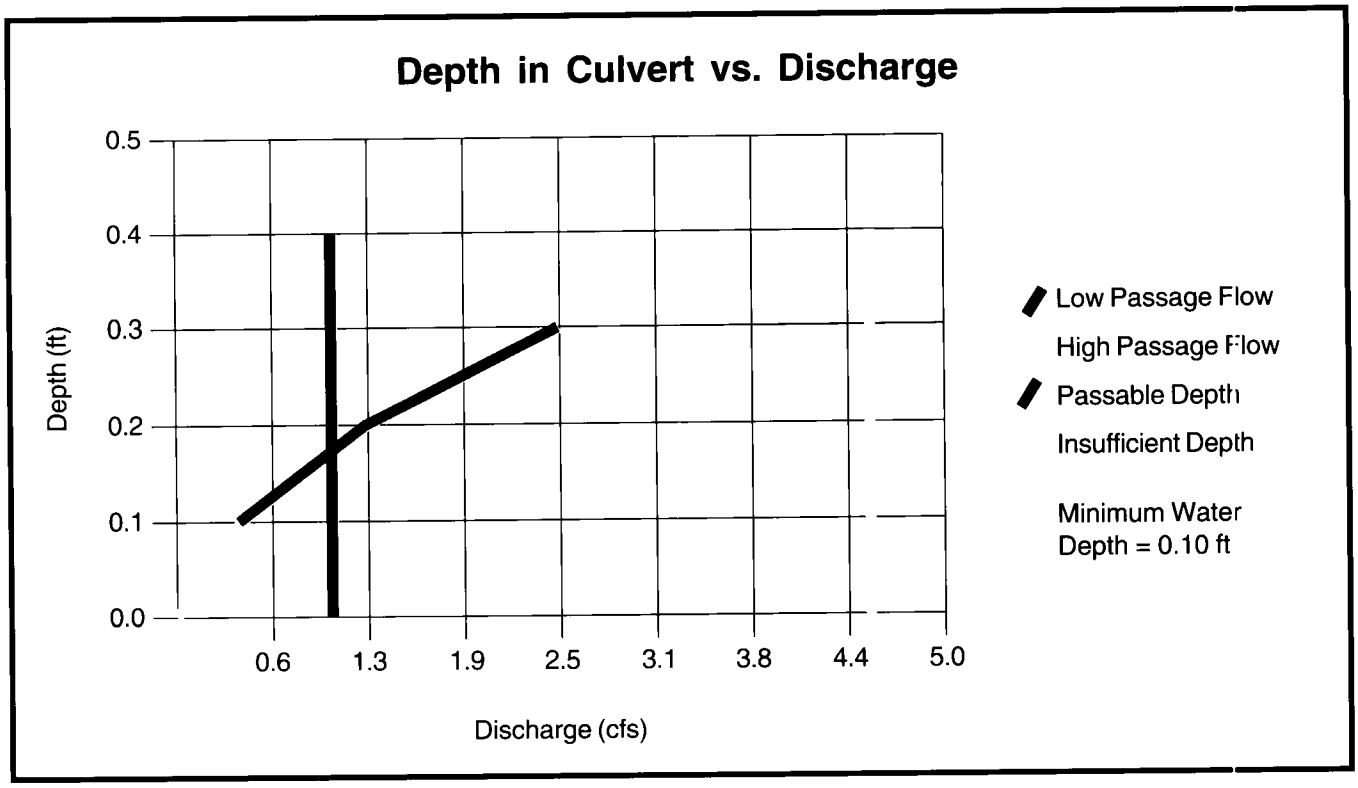


Figure 2. Depth at Uniform Flow

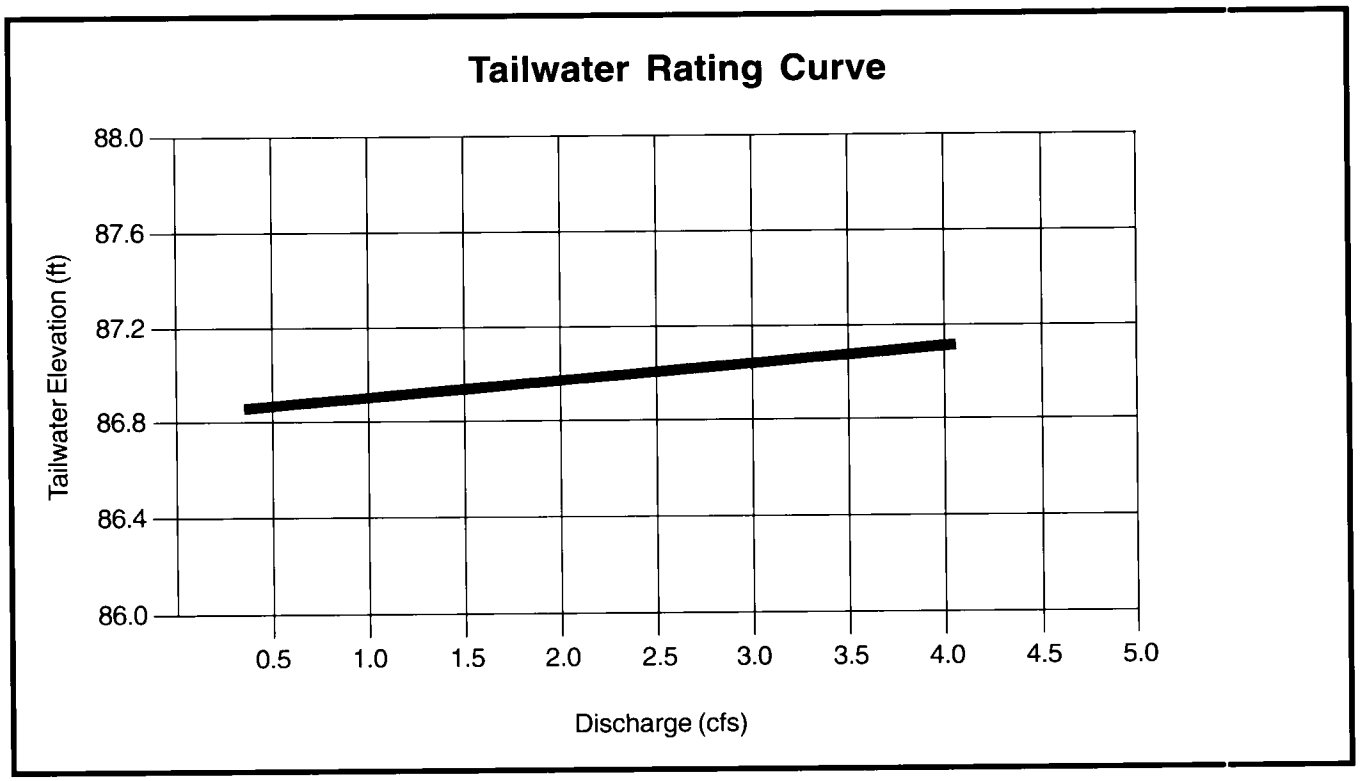


Figure 3. Tailwater Rating Curve at Uniform Flow

Table 2. Gradually Varied Flow Calculations for 1 cfs.

Q = 1.0 cfs				
Dist Down Culvert (ft)	Depth (ft)	Velocity (ft/s)	Curve	Swim Mode
0	0.26	0.00	Inlet	
2	0.18	2.26	Normal	Burst
4	0.18	1.74	Normal	Prolonged
7	0.18	1.74	Normal	Prolonged
10	0.18	1.74	Normal	Prolonged
13	0.18	1.74	Normal	Prolonged
16	0.18	1.74	Normal	Prolonged
19	0.18	1.74	Normal	Prolonged
22	0.18	1.74	Normal	Prolonged
25	0.18	1.74	Normal	Prolonged
28	0.18	1.74	Normal	Prolonged
31	0.18	1.74	Normal	Prolonged
34	0.19	1.63	M1	Prolonged
37	0.21	1.42	M1	Prolonged
40	0.25	1.22	M1	Prolonged
44	0.30	0.99	M1	Prolonged

Table 3. Gradually Varied Flow Specifications for 1 cfs.

	1.0 cfs
Normal Depth (ft)	0.18
Critical Depth (ft)	0.15
Headwater Depth (ft)	0.26
Inlet Velocity (ft/s)	2.26
Tailwater Depth (ft)	0.30
Burst Swim Time (s)	0.91
Prolonged Swim Time (m	0.83
Barrier Code	NONE

Barrier Codes

NONE - No Barrier

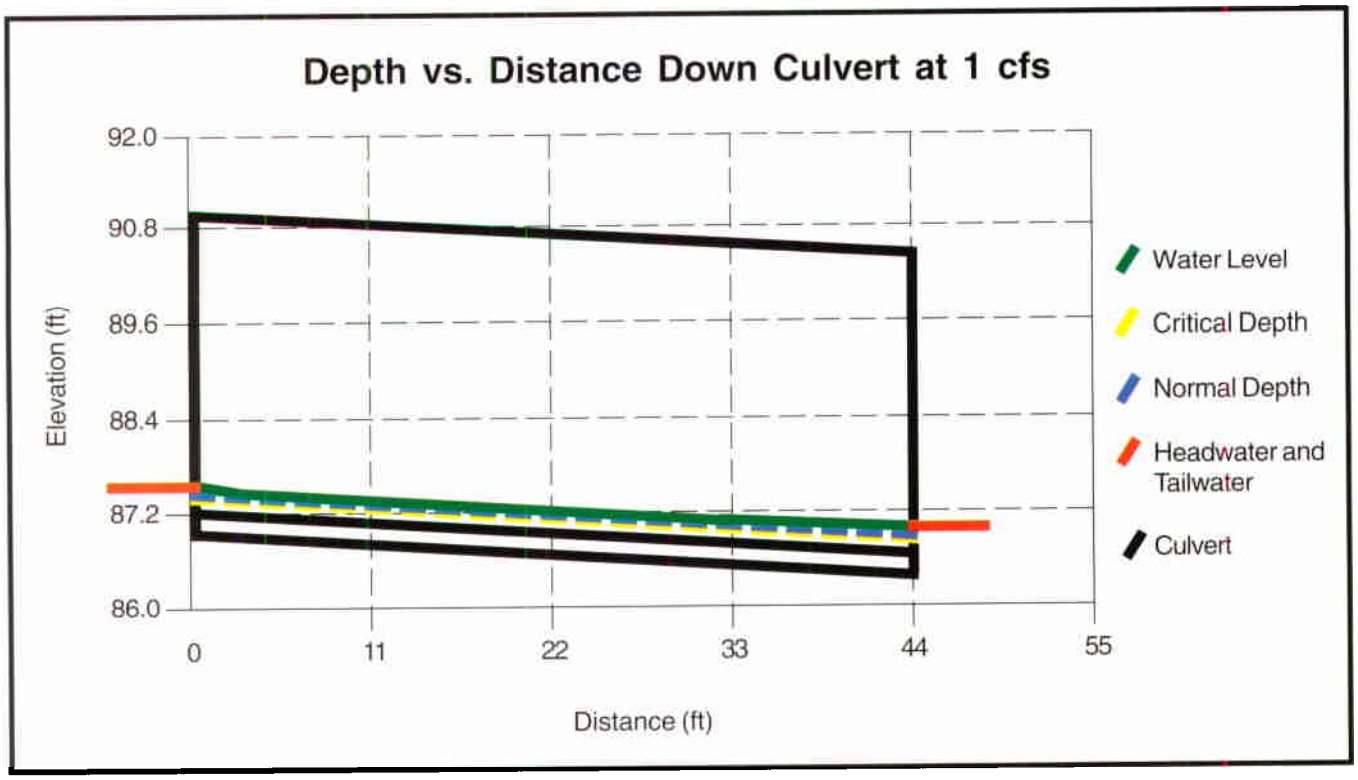


Figure 4. Water Surface Profile at 1 cfs.

Table 4. Gradually Varied Flow Calculations for 2 cfs.

Q = 2.0 cfs				
Dist Down Culvert (ft)	Depth (ft)	Velocity (ft/s)	Curve	Swim Mode
0	0.40	0.00	Inlet	
2	0.27	2.84	M1	Burst
4	0.27	2.18	M1	Prolonged
7	0.27	2.18	M1	Prolonged
10	0.27	2.18	M1	Prolonged
13	0.27	2.18	M1	Prolonged
16	0.27	2.18	M1	Prolonged
19	0.27	2.18	M1	Prolonged
22	0.27	2.18	M1	Prolonged
25	0.27	2.18	M1	Prolonged
28	0.27	2.18	M1	Prolonged
31	0.27	2.18	M1	Prolonged
34	0.28	2.12	M1	Prolonged
37	0.30	1.98	M1	Prolonged
40	0.32	1.79	M1	Prolonged
44	0.37	1.55	M1	Prolonged

Table 5. Gradually Varied Flow Specifications for 2 cfs.

	2.0 cfs
Normal Depth (ft)	0.27
Critical Depth (ft)	0.23
Headwater Depth (ft)	0.40
Inlet Velocity (ft/s)	2.84
Tailwater Depth (ft)	0.37
Burst Swim Time (s)	1.16
Prolonged Swim Time (m)	1.08
Barrier Code	NONE

Barrier Codes
NONE - No Barrier

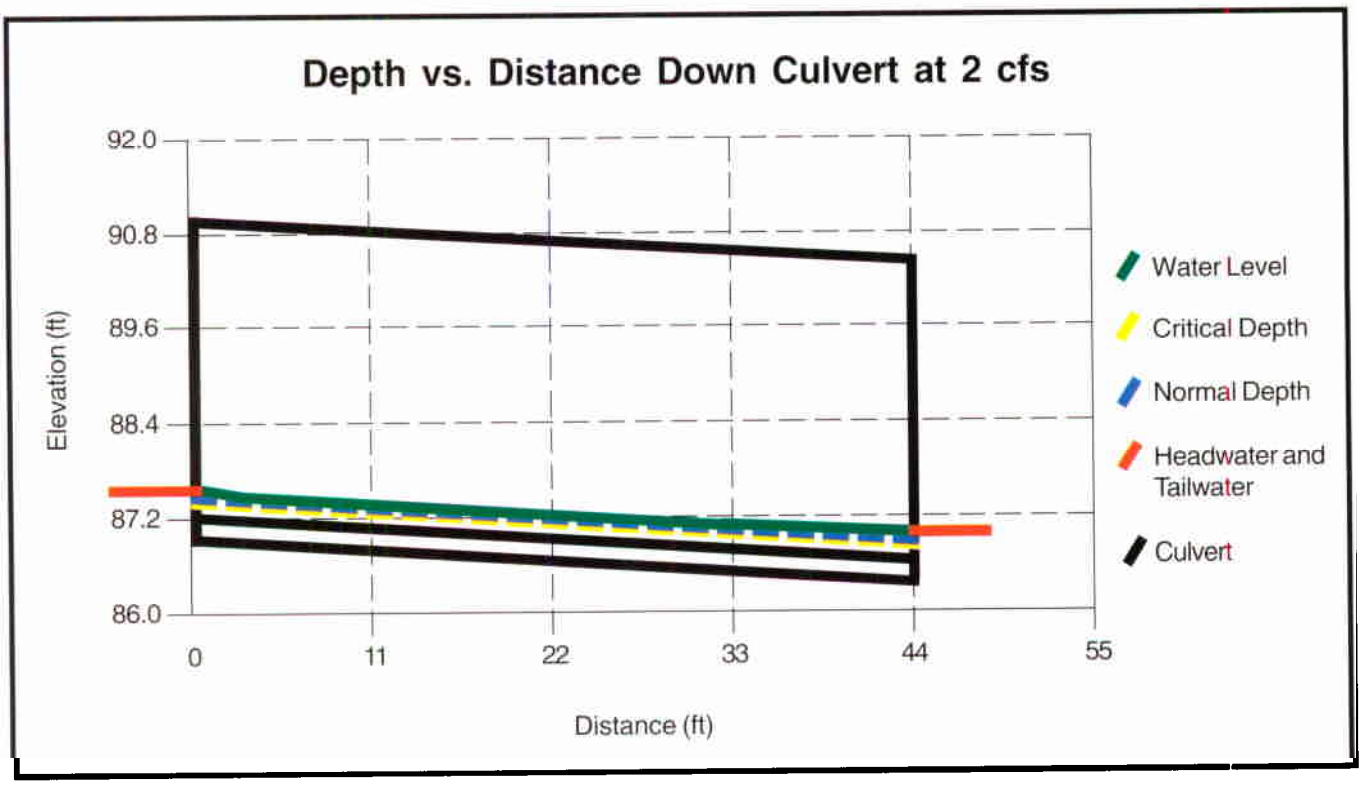


Figure 5. Water Surface Profile at 2 cfs.

Table 6. Gradually Varied Flow Calculations for 4.5 cfs.

Q = 4.5 cfs				
Dist Down Culvert (ft)	Depth (ft)	Velocity (ft/s)	Curve	Swim Mode
0	0.66	0.00	Inlet	
2	0.42	3.87	Normal	Burst
4	0.42	2.97	Normal	Prolonged
7	0.42	2.97	Normal	Prolonged
10	0.42	2.97	Normal	Prolonged
13	0.42	2.97	Normal	Prolonged
16	0.42	2.97	Normal	Prolonged
19	0.42	2.97	Normal	Prolonged
22	0.42	2.97	Normal	Prolonged
25	0.42	2.97	Normal	Prolonged
28	0.42	2.97	Normal	Prolonged
31	0.42	2.97	Normal	Prolonged
34	0.42	2.97	Normal	Prolonged
37	0.43	2.91	Normal	Prolonged
40	0.44	2.81	M1	Prolonged
44	0.48	2.59	M1	Prolonged

Table 7. Gradually Varied Flow Specifications for 4.5 cfs.

	4.5 cfs
Normal Depth (ft)	0.42
Critical Depth (ft)	0.38
Headwater Depth (ft)	0.66
Inlet Velocity (ft/s)	3.87
Tailwater Depth (ft)	0.48
Burst Swim Time (s)	2.21
Prolonged Swim Time (m	2.23
Barrier Code	NONE

Barrier Codes

NONE - No Barrier

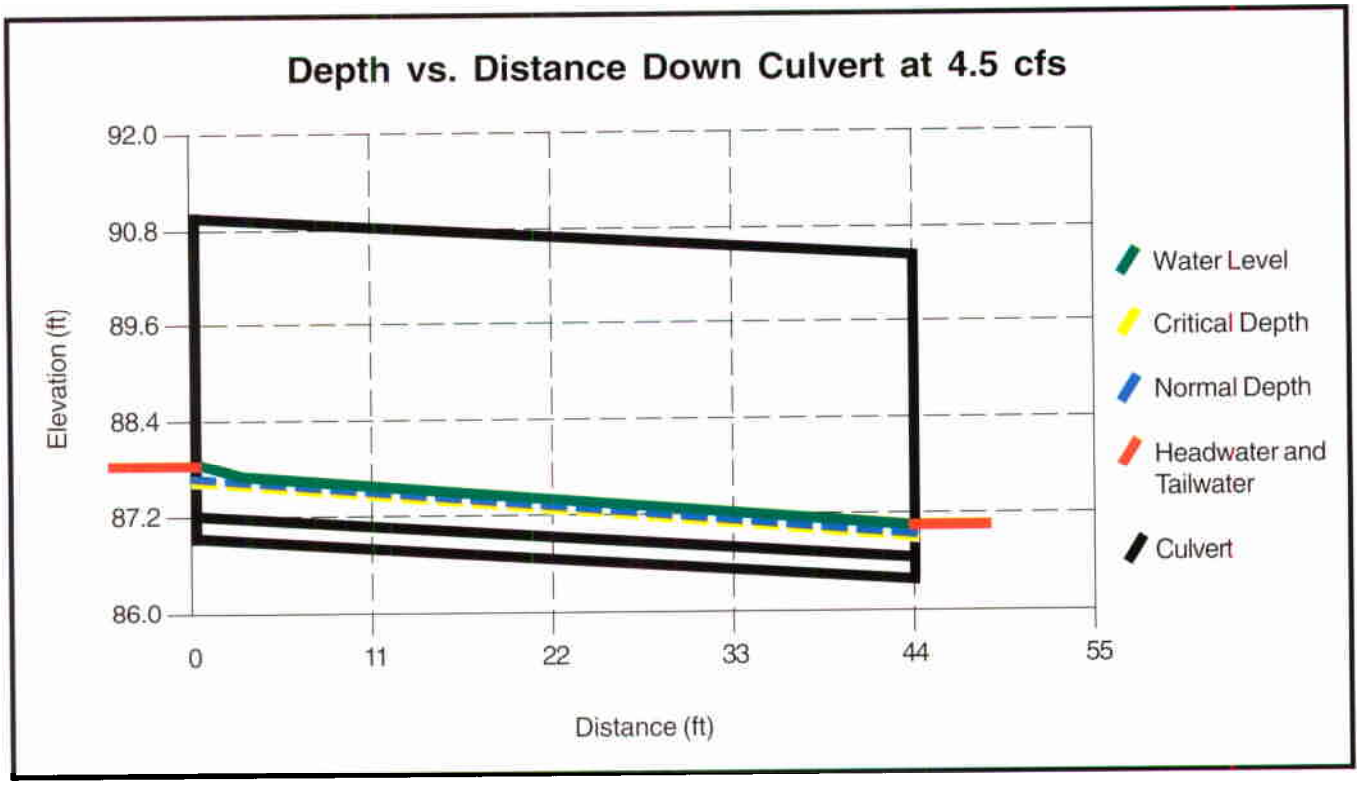


Figure 6. Water Surface Profile at 4.5 cfs.

Tailwater Information

Channel Bottom Slope: 4%
Outlet-Pool Bottom Elevation: 86.8 ft
Manning's Roughness Downstream of Tailwater: 0.045

Table 8. Tailwater Cross Section Data.

Obs. No.	Station (ft)	Elevation (ft)
1	0.00	87.30
2	3.75	86.80
3	7.15	86.80
4	10.90	87.30

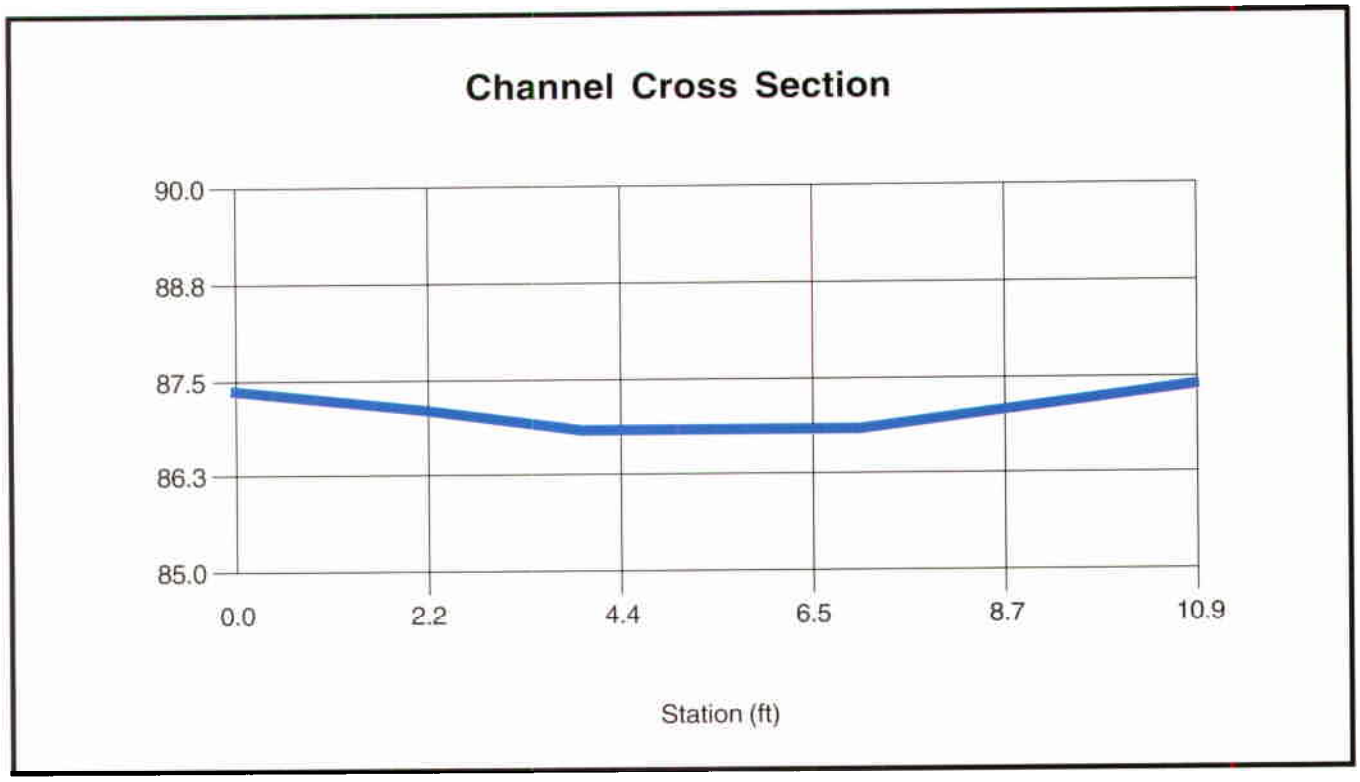


Figure 7. Channel Cross Section at Tailwater Crest.

Table 9. Tailwater Rating Table Information.

Discharge (cfs)	Tailwater Elevation (ft)	Wetted Perimeter (ft)	Cross-Sect. Area (sq. ft)
0.0	86.8	0.00	0.00
0.5	86.9	4.91	0.41
1.8	87.0	6.43	0.98
4.0	87.1	7.94	1.69
7.1	87.2	9.45	2.56
11.2	87.3	10.97	3.57

APPENDIX E

ROAD CONDITION SURVEY DATA

SUMMARY OF FISH STREAM CROSSING STRUCTURE BY DISTRICT

FEATURE	TRD	CRD	KRD	WRD	PRD	SRD	HRD	JRD	YRD	TOTAL
										0
Total Miles of System Road	1381	280	305	312	598	372	254	56	36	3594
Total Miles of System Road Surveyed	1154	173	2	107	522	71	59	35	30	2153
Total Miles of Non-system Road	517	107	51	172	261	124	53	16	0	1301
Total Miles of Non-system Road Surveyed	200	0	0	3	0	0	0	0	0	203
Number of Verified Fish Crossings(including pulled bridges) **[all fish]**	848	95		112	533	68	38	9	13	1716
Number of removed structures(both culverts and bridges) **[removed]**	66	3		1	5	0	0	1		76
Number of bridges **[bridges]**	62	2		16	83	17	6	1	2	189
Number of Verified AHMU 1 & 2 Culverts **[all culverts]**	249	89		95	441	51	32		11	968
AO Structural Plate Arch (open bottom, multi-plate)	1			0	17					18
AR Structural Plate Arch (closed bottom, multi-plate)	3	2		6	3	1				15
AR2 Double Structural Plate Arch (closed bottom, multi-plate)	0									0
AR3 Triple Structural Plate Arch (closed bottom, multi-plate)	0				2					2
CO Corrugated metal arch - open bottom	2			9						11
CP Corrugated metal pipe	645	81		73	338	47	30	6	10	1230
CP2 Double Corrugated metal pipe	0			2	22					24
CP3 Triple Corrugated metal pipe	0				5					5
CPB Corrugated metal pipe (baffled)	8									8
LC Log culvert	2									2
PA Corrugated metal pipe arch (squash pipe)	26			5	48	3	1	1	1	85
PA2 Double Corrugated metal pipe arch (squash pipe)	0				6					6
PP Plastic Pipe	17									17
WC Wooden culvert	4	6								10
Number of Verified Culverts with incomplete measurements **[missing data]**	268	54		56	87	8	1	4	11	489
Number of Verified Class I Culverts with incomplete measurements	79	16		22	17	8		3	11	156
Number of Verified Class II Culverts with incomplete measurements	189	38		34	70	0		1		332
Number of Verified Culverts with complete measurements **[fishpass]**	403	41		39	331	46	31	5	0	896
Number of Verified Class I Culverts with complete measurements **[verahmu1]**	126	9		4	87	35	8	4		273
Number of Green Class I	18	1		1	21	4	1	1		47
Number of Grey Class I	30	4		0	6	4	1	2		47
Number of Red Class I	78	4		3	60	27	6	1		179
Number of Verified Class II Culverts with complete measurements **[verahmu2]**	277	32		35	244	11	22	1		622
Number of Green Class II	19	3		1	13	0	0	0		36
Number of Grey Class II	41	2		0	10	1	0	1		55
Number of Red Class II	217	27		34	221	10	22	0		531
	0									0
Bridges (Class I)	50	2		8	52	12	2	1	2	129
Bridges (Class II)	12	0		8	31	5	4	0	0	60

SUMMARY OF WATER QUALITY RELATED DATA BY DISTRICT

FEATURE	TRD	CRD	KRD	WRD	PRD	SRD	HRD	JRD	YRD	TOTAL
Total Miles of System Road Surevyed	1154	173	2	107	522	71	59	35	30	2153
Cutslope Erosion (number of occurrences)	448	203		198	614	7	13	18		1501
Fillslope Erosion (number of occurrences)	46	61		32	90	2	7	2		240
Surface Erosion (number of occurrences)	225	26		8	375	9	22	10		675
Water Running Across Road (number of occurences)	115	26		146	107	24	1	3		422
Inlet Erosion on (number of occurences)	218	87		249	94	15	25	5		693
Outlet Erosion (number of occurences)	132	203		114	79	21	79	11		639
Ditch Erosion Locations (number of occurences)	21	12		5	20	3	2	1		64
Ditch Plugging Locations (number of occurences)	580	360		162	240	29	11	52		1434
Ditch Relief Culverts (number)	5400	1228		1269	4726	774	271	136	30	13834
Failure Mechanisms Recorded	2565	426		1766	1683	415	165	262		7282
Action Taken	681	161		144	547	42	66	44	3	1688

SUMMARY OF STRUCTURE TYPE BY DISTRICT

	TRD	CRD	KRD	WRD	PRD	SRD	HRD	JRD	YRD	TOTAL
MILES SURVEYED	1154	173	2	107	522	71	59	35	30	**2153**
CULVERT TYPE										**0**
AO	1				19					**20**
AR	5	3		8	5	1				**22**
AR2	0									**0**
AR3	0				2					**2**
CO	2			12	1					**15**
CP	9233	2577		1691	6873	1146	865	317	49	**22751**
CP2	2			2	40		4	2		**50**
CP3	0				15	3				**18**
CPB	13									**13**
LC	93	14			23					**130**
PA	33	9		9	64	9	11	8		**143**
PA2	0				18					**18**
PA3	0				3					**3**
PP	910	29								**939**
WC	34	57		1						**92**
TOTAL	**10326**	**2689**		**1723**	**7063**	**1159**	**880**	**327**	**49**	**24216**
BRIDGES										**0**
PB	43	8		10	32		10	4	1	**108**
MB	36			1	38	8	20		2	**105**
LB	17	4		18	63	37	4	3		**146**
TOTAL	96	12		29	133	45	34	7	3	**359**
FORDS	6									**6**
REMOVED STRUCTURES	267	20		66	226			1	2	**582**
MISSING STRUCTURES	629	272		133	104	66	2		1	**1207**
DITCH RELIEF CULVERTS	5400	1228		1269	4726	774	271	136	30	**13834**

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
PRD	6040	11.336	PA	82	126	42		40	0	20.0	0	0	MM_MM	5.37	7.45	5.4	0	N	O	7.35	7.0	7.4						1	-14.35	-14.35	-0.2	1.4	21.0	53		Y	
TRDS	3030000	14.570	CP	72	72	46	PRO	10	10	8.4	3	3	MM	4.9	8.89	5.2	100	CG	CG	9.18	4.8	4.8	12.8	13.22	22.0	12.2	26.6	1	-0.72	-1.12	0.6	0.8	13.1	72		Y	
TRDS	2050610	0.700	CP	60	60	40	PRO	5		8.3	3	3	MM1	5.0	9.30	4.2	50	LC	LG	9.40	5.0	5.1	14.2	14.40	8.5	13.2	11.2	1	0.00	-0.20	0.2	0.8	16.0	60		Y	
PRD	6407	6.725	CP	36	36	32	PRO	0	0	3.60	2	1	MM_NT	5.55	7.3	2.5	100	CG	CG	7.56	2.8	2.9	9.25	9.4	2.6	8.9	6.1	1	-0.96	-1.11	0.8	0.5	16.7	83		Y	
PRD	6415	9.263	PA	48	60	42	MIT	0	0	3.70	1	0	NT	4.95	9.04	4.5	100	FG	CG_FG	9.76	3.3	3.3	12.52	13.2	8.4	11.52	23	1	0.14	-0.54	1.7	-0.5	-12.5	135		Y	
JRD	8453	0.239	CP	48	48	45	PRO	0	0	3.8	2		MM	5	6.73	3.2	100	FG	FG	7	3.4	3.4	9.3					1	-10.40	-1.10	0.6	0.8	20.0	105		Y	
PRD	6324	0.079	PA	60	72	39	PRO	0	0	9.7	5	5	MM_MM	5.37	11	3.7	100	SC	SC	10.75	4.1	4.1	14.1	14.9	4.8	13	11.3	1	0.05	-0.75	-0.5	1.3	26.0	62		Y	
TRDN	2000000	123.830	CP	36	36	30		0	0	2.5	5	7	MM1	5.4	7.30	2.1	100	FG	FG	7.60	1.6	1.6	9.0	9.2	2.8	8.6	4.6	1	0.00	-0.20	1.0	0.9	30.0	120		Y	
TRDS	2054000	6.620	cp	60	60	40		0	0	7.6	7	2	hc_mm	5.0	8.30	3.3	100	sc_lc	lc_cg	8.95	3.6	3.6	12.3	12.60	9.3	12.7	11.7	1	0.05	-0.25	1.6	1.7	34.0	66		Y	
TRDS	3030000	9.210	CP	84	84	50	PRO	0		13.1	4	4	MM	4.9	8.46	7.2	100	SC	SC	9.02	7.9	8.5	16.1	16.70	10.8	14.2	24.6	1	-0.20	-0.82	1.1	-0.2	-2.1	53		Y	
TRDS	3030000	10.570	CP	96	96	50	PRO	0		9.8	5	2	MM	4.9	12.14	5.1	100	SC	LC	12.37	5.2	5.2	16.9	17.81	10.8	16.2	28.2	1	0.20	-0.72	0.5	2.9	36.5	81		Y	
TRDS	2054000	0.020	cpb	48	48	120	stb	0	0	10.7	1	4	pa_mm	5.0	21.30	3.9	100	cg	o_sc	27.35	3.5	3.5	30.8	31.00	4.1	30.7	5.4	1	0.15	-0.05	5.0	0.1	2.5	37		Y	
HRD	8530	3.230	CP	36	36	26	PRO	0	0	3.0	5	3	MM_MM	5	6.64	2.6	80	FG	S_FG	6.75	2.5	2.5	9.3	9.40	4.1	9.2	4.1	1	0.15	0.05	0.4	0.4	13.3	100		Y	
TRDN	2720000	0.292	CP	36	36	33		0	0	1.0	5	6	MM	6.0	7.20	2.0	80	CG	SC_CG	7.50	2.8	2.9	9.0	9.7	5.9	9.3	11.3	1	-0.60	-1.35	0.9	1.0	33.3	300		Y	
PRD	6415	6.825	PA	48	60	40	PRO	0	0	6.80	1	3	MM_MM	5.55	8.05	4	60	CG	CG	8.8	4.0	3.5	12.25	12.65	14	11.65	14.4	1	-0.15	-0.55	1.9	0.0	0.0	74		Y	
TRDS	3030100	1.300	CP	36	36	32	PRO	0		4.0	5	8	MM1	5.5	8.07	3.0	50	CG	CG	8.18	3.0	3.3	1091.0	11.11	3.5	10.5	16.2	1	-0.07	#####	0.3	0.0	0.0	75		Y	
TRDS	2054000	2.400	pa	76	110	42		0	0	6.9	4	3	pa_mm	5.0	6.95	6.4	40	s_fg	s_lc	7.10	6.2	6.3	13.2	13.80	8.3	9.6	12.6	1	0.50	-0.10	0.4	-0.1	-1.1	133		Y	
PRD	6031	3.891	PA1	66	90	52	MIT	0	0	12	6	6	MM_MM	5.37	10.5	5.7	40	S	SC	11	5.7	5.7	14.7	17	16.0	14.7	19.0	1	0.30	-2.00	1.1	-0.2	-3.6	63		Y	
JRD	8453	0.135	CP	24	23	38	PRO	0	0	2.2	1	1	MM	5	6.04	1.7	20	FG	S	6.12	1.7	1.8	7.8	8.1	3.4	7.6	4.4	1	0.28	-0.02	0.2	0.3	15.0	87		Y	
TRDN	2000000	124.600	CP	72	72	50		0	50	5.6	3	3	MM1	5.6	13.25	5.8	15	LC	CG	13.40	5.3	5.5	18.4	18.8	7.4	17.3	10.4	1	0.10	-0.30	0.3	0.2	3.3	107		Y	
TRDN	2000000	107.343	CP	60	60	76		0	0	9.7	7	8	HC2	5.6	22.30	4.7	10	SC	CG_LC	22.20	5.0	5.1	26.9	27.0	6.7	26.2	7.8	1	-0.20	-0.30	-0.1	0.3	6.0	52		Y	
TRDN	3000000B	86.286	CP	48	48	36		0	0	6.7	7	5	MC	5.8	8.35	3.6	10	CG_SC	LC_BC	8.40	4	4.45	11.7	12.2	8.3	11.4	11.2	1	-0.20	-0.70	0.1	0.4	10.0	60		Y	
TRDN	2000000	102.673	CP	72	72	42		0	0	9.2	2	2	MM1	5.6	7.48	5.5	10	CG_SC	CG_SC	7.81	3.7	3.7	10.3	11.5	22.0	9.7	NA	1	0.01	-1.12	0.8	0.5	8.3	65		Y	
TRDS	2050400	1.170	CP	108	108	50	PRO	0		14.6	3	1	MM1	5.5	8.55	9.0	10	CG	CG	9.30	8.8	8.9	15.5	16.40	12.8	15.9	14.0	1	-1.70	-2.60	1.5	0.0	0.0	62		Y	
TRDN	1500000	0.060	CP	36	36	30		0	0	5.4	2	1	ES	5.6	10.90	3.0	0		CG_FG	11.20	3.0	3.7	14.0	14.4	15.1	13.4	21.6	1	0.20	-0.20	1.0	0.0	0.0	56		Y	
TRDN	2000000	102.685	CP	36	36	40		0	0	3.0	1	1	MM1	5.6	7.77	2.9	0	NA	FS	8.14	3.0	3.0	9.7	11.4	10.1	9.3	NA	1	0.29	-1.43	0.9	0.1	3.3	100		Y	
TRDN	2000000	102.907	PA	63	87	36		0	0	8.4	5	4	MM1	5.6	7.11	5.2	0	NA	CG_SC	7.44	4.9	6.6	12.1	12.7	14.8	10.9	22.0	1	0.35	-0.28	0.9	0.0	1.0	86		Y	
TRDN	1525000	2.679	CP	89	128	58		0	0	13.5	2	2	MM1	5.7	14.30	7.8	0		LC	14.70	7.0	7.4	21.4	21.8	8.7	19.0	19.0	1	0.10	-0.30	0.7	-0.4	-5.2	79		Y	
TRDN	2000000	122.210	CP	96	96	64		0	0	13.6	5	3	MM1	5.6	14.80	8.0	0	NA	CG	14.90	8.0	8.2	21.2	22.1	18.3	20.5	20.3	1	-0.80	-1.70	0.2	0.0	0.0	59		Y	
TRDN	3000000B	84.046	CP	60	60	40		0	0	8.6	3	1	MM1	5.8	12.80	5.0	0		FG_SC	13.10	5.0	5.11	17.5	18.2	7.1	16.3	14.5	1	0.10	-0.60	0.7	0.0	0.0	58		Y	
TRDN	1445700	0.547	CP	72	72	40		0	5	10.4	2	1	MM1	5.4	9.00	5.9	0		B_SC	9.10	5.6	5.6	13.4	14.0	10.2	13.1	10.4	1	-0.70	-1.30	0.2	0.1	1.7	58		Y	
TRDS	3030000	15.570	CP	60	60	50	PRO	0			4	4	MM	4.9	11.84	4.9	0		CG	12.33	5.0	5.2	17.3	17.52	8.9	16.6	9.5	1	0.20	-0.07	1.0	0.1	2.3	####		Y	
TRDS	3030000	18.140	CP	72	72	50	PRO	0		4.2	2	3	MM	5.4	7.00	6.0	0	CG	LC	7.70	6.0	6.4	13.7	13.80	7.6	12.6	13.8	1	0.10	0.00	1.4	0.0	0.0	143		Y	
TRDS	2058000	2.040	CP	60	60	40	PRO	0		7.3	2	3	MM1	5.6	7.95	5.0	0		CG	8.00	5.1	5.2	12.0	12.20	9.0	11.7	10.3	1	-0.90	-1.10	0.1	0.0	0.0	68		Y	
TRDS	2054000	0.430	cp	60	60	58		0	0	na	1	1	pa	5.0	9.70	5.1	0		o	9.90	5.0	5.3	10.3	11.60	13.8	10.0	19.6	1	-3.30	-4.60	0.3	-0.1	-2.0	####		Y	
TRDS	2000000	76.935	CP	36	36	40		0	0	1.0	1	1	PA	5.8	8.40	3.0	0		O	9.50	3.0	3.4	12.4	12.10	0.5	12.4	1.7	1	-0.40	-0.10	2.8	0.0	0.0	300		Y	
TRDS	3000000	56.280	CP	18	18	40	PRO	0		2.6	1	2	PA1	5.4	10.92	1.5	0		O	10.79	1.5	2.1	11.6	12.60	4.6	11.6	4.6	1	0.30	-0.66	-0.3	0.0	-2.8	57		Y	
CRD	2014000	0.170	cp		48	33				4.1	2	4	mm	5	7.09	4.0	50	sc	sc_fg	6.86	4.0	4.0	10.8	11.1	2.5	10.27	4.8	1	0.20	-0.03	-0.7	-4.0	#####	98		Y	
CRD	2014000	0.190	cp		36	31				2.8	5	1	mm	5	8.73	3.0	30	fg	fg	8.92	2.9	3.0	11.8	12.0	2.1	11.15	3.4	1	0.15	-0.05	0.6	-3.0	#####	107		Y	
CRD	2150000	2.940	pa_ar	122	163	81	stb			22	3	3	mc	5	12.43	9.8	0		lc_bo	12.47	9.8	9.8	20.9	22.3	28.3	18.96	49.0	1	0.04	-1.34	0.0	0.4	3.6	62		Y	
CRD	2150000	3.140	cp	72	72	44				9	12	6	mc	5	8.20	6.0	0		lc_sc	8.73	6.0	6.4	14.1	14.6	8.4	13.62	12.9	1	-0.09	-0.65	1.2	0.0	0.0	67		Y	
PRD	6415	12.583	CP	36	36	34	PRO	0	0	5.40	0	0	PA_PA	4.95	6.72	3	60	S_O	S_O	6.7	2.6	2	7.18	8.68	3	6.8	18.7	1	-0.62	-2.12	-0.1	0.0	0.0	56	Y		
PRD	45001	0.640	PA	60	78	40	PRO	0	0	15.0	1	0	PA_PA	5.37	7.70	5.0	0	N	O	7.90	5.0	5.0	10.2	10.6	13.0	10.0	16.0	1	-2.30	-2.70	0.5	0.0	0.0	43	Y		
PRD	6415	10.194	CP	36	36	44	PRO	0	0	3.20	1	4	NT	4.95	13.2	2.7	100	CG_S	S	13.42	2.8	2.9	15.8	16.26	3.1	14.78	7.2	1	0.04	-0.42	0.5	0.3	10.0	94	Y		
PRD	6415	0.025	CP	36	36	30	PRO	0	0	2.40	1	3	MM_MM	5.55	7.15	2.3	100	0_CG	CG_FG	6.9	3.0	3.1	9.45	9.6	4.7	8.9	7.1	1	-0.30	-0.45	-0.8	0.7	23.3	125	Y		
PRD	6415	8.772	PA	72	84	46	MIT	0	0	6.60	2	2	MM_MM	4.95	8.06	5.4	100	CG	CG_SC	7.96	5.1	5.1	12.6	12.94	17.2	11.84	23.6	1	-0.12	-0.46	-0.2	0.6	10.0	106	Y		
PRD	6415	18.408	CP	36	36	38	PRO	0	0	2.20	2	1	MM_MM	4.95	10.8	2	100	ORG	CG	10.64	2.1	2.3	12.08	12.44	2.4	11.14	9.7	1	-0.30	-0.66	-0.3	1.0	33.3	136	Y		
PRD	6319	9.642	PA	36	54	42	PRO	0	0	6.6	3	1	MM_PA	5.37	9.35	2.8	100	CG	CG	9.8	2.3	2.3	10.5	11.4	10.8	9.3	20.0	1	-0.70	-1.60	1.1	0.2	6.7	68	Y		
PRD	6415	11.857	PA	60	84	44	MIT	0	0	5.00	2	0	PA_PA	4.95	8.46	4	100	CG	CG_SC	8.62	4.5	4.5	11.64	13.08	16.7	10.9	41.6	1	-0.04	-1.48	0.4	1.0	20.0	140	Y		
PRD	6241	0.373	CP	36	36	48	PRO	0	25	2.4	1	1	PA_PA	5.55	11.92	2.5	100	FG_O	O	6.86	1.9	1.9	8.23	10.80	6.6	8.10	10.3	1	2.04	-0.53	-10.5	0.5	16.7	125	Y		
PRD	6415	11.426	PA	78	96	38	MIT	0	0	9.50	0	1	PA_PA	4.95	7.46	6.6	100	S_O	S	7.58	6.5	6.5	11.04	16.4	7.3	10.28	8.4	1	2.32	-3.04	0.3	-0.1	-1.5	84	Y		
SRD	7540	1.277	CP	18	18	36	PRO	0	0	4	0	3	PA_PA	5	6.92	1.5	100	S	S_FG	6.9	1.2	1.2	7.9	8.1	3.7	7.8	5	1	0.00	-0.20	-0.1	0.0	0.0	38	Y		
TRDN	2000000	104.273	CO	144	144	78		0	0	4.0	8	6	HC	5.6	12.40	8.5	100	B_BO	B_BO	18.00	6.3	6.4	23.9	24.1	8.6	22.8	14.3	1	-0.20	-0.40	7.2	3.5	29.2	300	Y		
TRDN	2000000	120.968	CP	24	24	30		0	0	NA	1	1	PA5	5.6	6.75	1.7	100	S	S	8.00	2.0	2.0	8.4	NA	NA	NA	NA	1	######	-1.60	4.2	0.3	15.0	####	Y		
TRDN	2000000	120.981	CP	24	24	30		0	0	4.0	1	1	PA5	5.6	6.80	1.6	100	FG	O	7.40	1.9	1.8	7.5	NA	NA	NA	NA	1	######	-1.80	2.0	0.4	20.0	50	Y		
PRD	6415	17.699	CP	60	60	48	PRO	0	0	5.90	4	3	MM_MM	4.95	11.2	5	80	CS	CG	11.26	4.1	4.1	14.62	14.84	3.7	13.72	12	1	-0.52	-0.74	0.0	0.0	0.0	85	Y		
PRD	6415	11.042	CP2	48	48	40	PRO	0	0	3.60	2	4	MM_MM	4.95	6.78	4	75	CG_SC	CG	6.8	4.0	4.2	10.1	10.3	18.6	9.76	22	1	-0.50	-0.70	0.0	0.0	0.0	111	Y		
PRD	6040	13.297	AR	116	156	48	PRO	0	0	1.9	2	2	MM_MM	5.37	8.52	9.6	50	LG	LG	8.50	8.6	8.7	15.28	15.9	19.4	13.9	31.0	1	-1.18	-1.82	0.0	0.1	0.7	684	Y		
PRD	6415	11.043	CP2	48	48	40	PRO	0	0	3.60	2	4	MM_MM	4.95	6.8	3.9	50	CG	CG	6.8	4.0	4.5	10.1	10.3	18.6	9.76	22	1	-0.50	-0.70	0.0	0.1	2.5	111	Y		
HRD	8580	4.077	CP	48	48	33	PRO	0	0	2.4	1	1	PA_PA	5	8.13	4	30	FG	FG	8.41	3.7	3.6	11.9	12.20	4.5	11.8	5.6	1	0.09	-0.21	0.8	0.0	0.0	167	Y		
TRDN	2700000	0.743	PA	84	120	48		0	0	12.5	6	3	HC	5.0	8.20	7.4	30	BO	B	8.45	6.7	7.2	14.6	15.2	16.5	13.8	19.0	1	0.05	-0.55	0.5	-0.4	-5.7	80	Y		
TRDN	2000000	115.171	CP	120	120	52		0	0	13.5	4	5	MC2	5.6	9.60	7.6	15	LC	LC	9.75	8.4	8.5	15.9	17.7	22.0	15.2	28.0	1	-0.45	-2.25	0.3	2.4	24.0	74	Y		

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
TRDN	3000000E	85.612	CP	60	60	30		0	0	5.6	2	1	PA	5.80	7.18	5.0	10	O	O	7.10	4.9	60	10.2	11.4	10.4	9.7	NA	1	-0.60	-1.80	-0.3	0.0	0.0	89	Y		
WRD	6265	4.432	pa	114	180	47	stb	0	0	21	4	4	mc	4.75	8.2	9.6	10	cg	bo	8.2	9.7	9.9	17.6	18.1	21.8	16.8	22	1	0.20	-0.30	0.0	-0.1	-1.1	71	Y		
PRD	6235	17.703	CP	48	48	36		0	0	3.8	1	1	NT_PA	5.55	7.15	4.0	0	N	S	7.40	4.1	4.5	11.10	13.80	7.0	9.20	17.0	1	2.30	-0.40	0.7	0.0	0.0	105	Y		
CRD	2100000	5.710	cp	36	36	36		0		n/a	0	1	pa	5	6.89	2.0	0		o	7.02	3.0	3.2	10.2	10.3	2.7	9.61	6.9	1	0.28	0.15	0.4	1.0	33.3	####	Y		
JRD	8453	0.093	CP	24	24	37	PRO	0	0	2	3	2	MM	5	6.19	2	0		S	6.15	2	1.9	7.2	7.5	2.8	7.1	4.3	1	-0.65	-0.95	-0.1	0.0	0.0	100	Y		
PRD	6435	1.331	CP	48	48	48	PRO	0	0	5.3	5	5	HC_MM	5.30	12.3	4	0	N	LC_LG	12.51	4.0	4.3	15.36	15.96	6.9	15.17	9	1	-0.55	-1.15	0.4	0.0	0.0	75	Y		
PRD	6402	13.187	CP	24	24	32	PRO	0	0	1.00	4	0	MM_PA	5.55	7.18	2	0	N	CG	7.6	1.9	2.1	8.78	9.76	5.9	8.42	12.7	1	0.26	-0.72	1.3	0.0	0.0	200	Y		
PRD	6402	13.258	CP2	48	48	40	PRO	0	0	8.40	4	2	MM_PA	5.55	7.66	4	0	N	CG	7.14	4.0	4.4	10.48	11.52	6.4	11.2	14.3	1	0.38	-0.66	-1.3	0.0	0.0	48	Y		
PRD	6235	17.341	CP3	48	48	36	PRO	0	0	6.8	0	0	PA_PA	5.55	7.15	4.0	0	N	S_O	8.00	4.0	4.0	8.50					1	-12.00	-3.50	2.4	0.0	0.0	59	Y		
PRD	6235	17.347	CP3	48	48	36	PRO	0	0	6.8	0	0	PA_PA	5.55	7.95	4.3	0	N	S_O	8.50	4.2	4.3	8.50					1	-12.70	-4.20	1.5	-0.3	-7.5	59	Y		
PRD	45001	0.610	CP	36	36	30	PRO	0	0	2.3	4	1	PA_PA	5.37	7.30	2.3	0	N	S	7.70	2.3	2.3	10.1	10.6	3.8	9.8	4.1	1	0.60	0.10	1.3	0.7	23.3	130	Y		
SRD	7544	2.392	CP	18	18	22	pro	0	0	22	0.1		pa	5	6.35	1.55	0	n		6.2	1.5	8.19	7.8	8.32	15	7.55	15	1	0.62	0.10	-0.7	-0.1	-3.3	7	Y		
TRDN	1530000	0.418	CP	72	72	48		0	0	7.5	5	2	MC1	0.0	3.40	6.0	0		SC	3.60	6.0	6.5	9.1	9.4	18.0	8.0	19.0	1	-0.20	-0.50	0.4	0.0	0.0	80	Y		
TRDN	3070000	0.010	CP	48	48	36		0	0	5.3	3	2	MM	5.7	9.10	4.0	0		S	9.10	4.0	3.9	11.4	11.7	4.2	10.2	4.2	1	-1.40	-1.70	0.0	0.0	0.0	75	Y		
TRDN	2085000	1.552	CP	36	36	34		0	0	2.0	2	1	PA1	5.7	7.60	3.0	0		O	7.70	3.0	3.5	10.8	11.2	3.1	10.5	5.6	1	0.50	0.10	0.3	0.0	0.0	150	Y		
TRDN	2000000	113.804	CP	36	36			0	0	7.0	1	1	PA1	5.6	8.05	3.0	0	NA	O	8.70	3.0	3.3	9.2	11.1	10.5	8.3	14.0	1	-0.60	-2.50	####	0.0	0.0	43	Y		
TRDS	2054300	0.460	pa	67	95	40		0	0	na	1	1	pa	5.0	8.10	6.2	0		o	8.00	5.8	5.8	9.2	14.80	56.0	9.9	60.0	1	1.00	-4.60	-0.2	-0.6	-11.0	####	Y		
TRDN	3000000E	79.940	CP	24	24	40		O	40	3.6	1	1	PA1	5.6	8.10	2.4	0		O_SI	9.35	2	3.6	12.4	13.0	2.6	11.6	3.3	1	1.66	1.08	3.1	-0.4	-20.0	56			Y
PRD	6402	13.257	CP2	48	48	40	PRO	N	N	8.40	4	2	MM_PA	5.55	7.64	4	0	N	CG	6.92	4.0	4.8	10.48	11.52	6.4	10.2	14.3	1	0.60	-0.44	-1.8	0.0	0.0	48			Y
PRD	6415	10.455	PA2	60	84	40	MIT	100	0	6.30	0	1	PA_PA	4.95	7.1	5.1	100	ORG	ORG	7.06	5.1	5.2	10.12	9.5	10.8	9.32	15.9	1	-2.66	-2.04	-0.1	-0.1	-2.0	111			Y
PRD	6415	10.458	PA2	60	84	40	MIT	100	0	6.30	0	1	PA_PA	4.95	7.36	4.4	100	ORG	ORG	7	5.1	5.1	10.12	9.5	10.8	9.32	15.9	1	-2.60	-1.98	-0.9	0.6	12.0	111			Y
TRDN	3000000E	81.438	CP	48	48	50		100	100		0	0	ES	5.7	NA	4.0	100	LC_BO	O_LC				15.2					1	0.00	15.24	####	0.0	0.0	####			Y
SRD	7624	0.106	CP	36	36	40		100	0	POND	0	2	FP	5	6.56	1.29	100	FS	FS	7.5	3	11	9.63	11	14.4	9.92	15.1	1	0.50	-0.87	2.4	1.7	57.0	####			Y
TRDN	1505300	0.215	CP	60	60	44		90	0	NA	1	1	PA5	5.60	9.90	1.8	100	O	O	10.00	5.1	5.3	13.4	NA	NA	11.0	24.9	1	######	-1.70	0.2	3.2	64.0	####			Y
WRD	6590	26.858	AR	70	90	39		85	10	31	1	1	PA	4.75	8.10	5.8	60	S_CG	S_CG	9.75	5.2	5.3	20.15	20.65	5.1	19.05	10.5	1	5.70	5.20	4.2	0.0	0.6	24			Y
TRDS	2000000	76.978	CP	60	60	56		80	0	NA	0	0	PA	5.8	7.00	4.0	5	O	O	7.70	1.3	NA	NA	NA	NA	NA	NA	1	######	#####	1.3	1.0	20.0	####			Y
TRDS	3000000	58.860	CP	24	24	32	PRO	80	10	2.0	4	1	PA1	5.4	10.92	1.0			O	12.66	1.3	1.3	11.5	0.00	0.0	0.0	0.0	1	-13.97	-2.43	5.4	1.0	52.4	102			Y
TRDS	3015600	2.890	CP	36	36	40	PRO	80	0	8.1	3	2	MM1	5.5	6.50	1.3	100	CG_SC	CG_SC	7.60	0.8	NA	NA	NA	NA	NA	NA	1	######	#####	2.8	1.7	56.7	37			Y
TRDN	1445000	3.123	CP	72	72	40		70	0	NA	0	1	PA5	5.4	8.30	2.7	0		0	8.30	5.9	5.9	NA	NA	NA	NA	NA	1	######	#####	0.0	3.3	55.0	####			Y
SRD	7500	7.506	CP	60	60	32	PRO	60	0	12	3	2	AF	5	6.25	1.78	100	SC	SC	6.95	1.7	1.75	8.35	8.7	40	EE NOTE	40	1	0.05	-0.30	2.2	3.2	64.4	42			Y
CRD	2013100	0.010	cp		18			50		2	30	8	hc	5	9.55	1.6	0		sc	10.86	1.5	4.0	13.6	13.6	4.5	13.25	8.1	1	1.26	1.26	####	-1.6	#####	75			Y
PRD	6235	17.334	CP3	36	36	44	PRO	50	0	6.8	0	0	PA_PA	5.55	7.80	1.7	0	N	S_O	8.65	3.0	3.2	8.50					1	-11.65	-3.15	1.9	1.3	43.3	44			Y
TRDS	3000000	48.610	CP	18	18	25	PRO	50	30	1.6	1	2	PA5	5.4	6.63	1.0	80	SC	SC	6.92	1.0	1.1	8.3	8.33	2.6	8.0	4.9	1	0.36	0.33	1.2	0.5	34.4	91			Y
PRD	6402	13.202	CP	36	36	32	PRO	35	0	2.80	3	1	MM_PA	5.55	7.12	1.9	100	CG	CG	7.2	1.8	1.9	8.48	8.89	3.16	8.14	12.1	1	-0.11	-0.52	0.3	1.1	36.7	107			Y
TRDN	3000000E	86.646	CP	72	72			30	0	15.5	4	4	MM	5.8	13.90	4.5	10	SC_O	LC_BO	14.10	6	6.25	16.3	18.9	16.3	17.1	25.4	1	-1.20	-3.85	####	1.5	25.0	39			Y
PRD	6420	0.783	CP	60	60	80	PRO	25	15	5	8	6	HC_MM	5.30	29.4	3.8	95	LG_SC	SC	29.6	4.7	4.7	33.3	33.4	6.7	32.64	7.8	1	-0.90	-1.00	0.3	1.2	24.0	100			Y
SRD	7544	1.634	CP	24	24	26	pro	25	25	5.3	0.5	2	fp	5	8.1	1.4	0	0	or	7.1	1.4	8.6	8.55	8.8	5.3	8.63	6	1	0.30	0.05	-3.8	0.6	30.0	38			Y
TRDN	1530000	2.249	CPA	83	128	50		20	0	19.0	3	3	MM1	6.1	11.90	7.0	0		SC_BO	11.60	7.2	7.4	18.4	19.0	30.0	17.7	30.0	1	0.20	-0.40	-0.6	-0.1	-1.2	56			Y
PRD	6415	8.762	CP	48	48	40	PRO	15	0	3.20	1	2	MM_MM	4.95	9.46	4	40	LC_CG	FG	9.88	4.0	4.1	13.96	14.1	2.8	13.24	7.1	1	0.22	0.08	1.1	0.0	0.0	125			Y
PRD	6420	2.087	CP	48	48	40		15	0	6	5	6	MM_MM	5.30	10.3	3.1	100	LG_SC	LG_SC	11.02	4.0	4.3	14.1	14.46	8.2	13.48	9.7	1	-0.56	-0.92	1.8	0.9	22.5	67			Y
PRD	6314	2.176	CP	36	36	48	PRO	10	0	1.5	7	6	NT_NT	5.37	10.36	3.0	0	N	LG_O	13.28	3.0	3.2	16.08	16.1	2.2	15.9	5.3	1	-0.14	-0.20	6.1	0.0	0.0	200			Y
TRDS	3030000	8.310	CP	48	48	35	PRO	10	10	7.5	3	2		5.4	0.00	3.5		SC	CG	7.51	3.4	3.4	10.8	0.00	0.0	10.3	4.9	1	-10.89	-0.13	21.5	0.5	13.1	53			Y
TRDS	3000000	47.630	CP	48	48	30	PRO	10		4.3	4	3	MM1	5.4	7.54	4.1	5	SC	CG	8.00	3.7	3.4	12.2	12.82	4.9	11.2	8.2	1	1.15	0.52	1.5	-0.1	-2.5	94			Y
TRDN	2085000	3.147	CP	36	36	44		5	0	2.5	5	6	AF1	5.7	8.90	3.0	20	SC	LC	9.40	3.0	3.5	12.6	12.9	3.4	12.0	8.1	1	0.50	0.20	1.1	0.0	0.0	120			Y
SRD	7624	0.712	CP	48	48	36	PRO	2	0		2	2	MC	5	6.6	4.1	0	0	SG	7.29	4	12.3	11.7	12.25	10.9	11.68	11.2	1	0.96	0.41	1.9	-0.1	-2.5	####			Y
TRDS	2050300	0.060	CP	36	36	40	PRO	0		4.5	6	3	MM1	5.6	6.10	3.0	100	SC	SC	6.75	2.3	2.4	8.4	8.70	4.0	7.8	12.0	1	-0.35	-0.65	1.6	0.0	0.0	67			Y
TRDS	3000000	48.560	CP	36	36	30	PRO	0		4.3	1	2	PA5	5.4	6.86	3.6	100	CG	SC	7.22	2.6	2.7	8.9	8.92	9.8	8.8	14.8	1	-0.92	-0.98	1.2	-0.6	-19.2	70			Y
TRDS	3015600	1.170	CP	48	48	40	PRO	0	0	8.2	3	3	MM1	5.5	7.20	2.7	100	CG_SC	CG_SC	7.30	3.3	3.4	10.4	10.50	7.6	10.0	12.0	1	-0.10	-0.20	0.2	1.3	32.5	49			Y
SRD	7500	7.469	CP	36	36	32	PRO	0	0	2	4	2	AF	5	7.95	1.65	100	SC	SC_LC	7.85	1.74	2.35	8.7	10.2	8.7	8.3	40	1	0.61	-0.89	-0.3	1.4	45.0	150			Y
HRD	8502	0.996	CP	72	72	52	PRO	0	0	8.0	3	2	MM_MM	5	10.5	5.4	100	FG	FG_S	11.64	4.7	4.7	17.5	16.30	7.2	15.6	9.6	1	-0.04	1.16	2.2	0.6	10.0	75			Y
PRD	6407	2.534	PA2	77	53	64	MIT	0	0	10.40	3	2	MM_MM	5.55	9.24	5.3	95	SC	CG_SC	9.26	5.2	5.2	13.3	13.5	25.2	12.86	30.1	1	-0.96	-1.16	0.0	1.1	17.4	42			Y
PRD	6407	2.537	PA2	77	53	62	MIT	0	0	10.40	3	2	MM_MM	5.55	9.18	5.2	90	SC	CG_SC	9.02	5.3	5.4	13.3	13.5	25.2	12.86	30.1	1	-0.82	-1.02	-0.3	1.2	19.0	42			Y
TRDS	3030000	13.150	CP	36	36	40	PRO	0		3.6	2	1	MM	4.9	8.04	2.8	80	O	O	8.66	2.7	2.7	9.7	11.15	3.6	9.9	4.3	1	-0.20	-1.64	1.6	0.2	7.1	83			Y
TRDN	1530000	0.468	CP	72	72	48		0	0	13.0	4	3	MC1	0.0	3.50	5.7	75	SC	SC_CG	3.80	6.0	6.2	9.1	9.5	11.0	8.1	13.0	1	-0.30	-0.70	0.6	0.3	5.0	46			Y
PRD	6415	15.299	PA	72	84	44	MIT	0	0	8.00	2	1	MM_NT	4.95	8.18	5.8	70	CG_SC	CG	8.14	5.5	5.5	12.92	14.16	8.8	11.7	29.3	1	0.52	-0.72	-0.1	0.2	3.3	88			Y
PRD	6402	16.013	CP	36	36	42	PRO	0	0	3.5	5	7	MM_MM	5.30	8.16	3	35	CG	CG	9.46	3.0	3.3	12.4	12.7	3.7	12.3	4.8	1	0.24	-0.06	3.1	0.0	0.0	86			Y
HRD	8580	4.519	CP	36	36	40		0	0	1.9	3	1	MM_ES	5	7.41	3.2	30	S	S	8.05	2.8	2.8	10.4	11.10	3.5	10.1	3.9	1	0.25	-0.45	1.6	-0.2	-6.7	158			Y
TRDN	2000000	107.391	CP	60	60	62		0	0	6.9	10	NA	HC2	5.6	11.40	2.5	30	LC	B_LC	17.20	4.6	4.6	21.6	21.8	6.1	21.4	7.9	1	0.00	-0.20	9.4	2.5	50.0	72			Y
PRD	40000	4.972	CP	60	60	30	MIT	0	0	13.0	0	1	NT	5.55	8.16	5.5	25	S	S	7.93	5.5	5.5	12.10	13.50	11.7	10.90	12.9	1	0.07	-1.33	-0.8	-0.5	-10.0	38			Y
TRDN	1446000	0.325	CP	70	96	59	MIT	0	0	13.8	19	2	HC2	5.40	12.00	5.7	20	LC	B_BO	13.50	5.3	5.3	18.4	18.8	14.0	17.6	25.0	1	0.00	-0.40	2.5	0.1	2.3	58			Y
TRDS	2300000	1.900	CP	36	36	36	PRO	0		2.3	10	10	MM1	5.4	8.00	3.0	5	SC	SC	9.54	2.6	2.6	11.9	11.97	2.6	11.6	3.0	1	-0.13	-0.23	4.3	0.0	1.6	131			Y
PRD	6307	0.149	CP	24	24	35	PRO	0	0	3.8	9	2	HC_ES	5.37	8.55	2.0	0	N	SC	10.70	2.0	2.2						1	-12.70	-12.70	6.1	0.0	0.0	53			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
JRD	8453	0.173	PA	30	40	39	PRO	0	0	4.8	6			5	7.25	2.5	0		FG	7.79	2.6	2.5	9.7	10.1	5.3	9.3	6.3	1	-0.29	-0.69	1.4	0.0	0.0	69			Y
PRD	45001	0.185	CP	36	36	50	PRO	0	0	2.3	6	3	HC_MM	5.37	11.75	3.0	0	N	CG	14.60	3.0	3.6	17.4	17.8	1.6	17.2	3.1	1	0.20	-0.20	5.7	0.0	0.0	130			Y
PRD	6416	0.137	CP	48	48	52		0	0	5	3	3	MM_MM	5.30	11.74	4.1	0	N	LG	12.58	4.1	4.6	15.68	15.82	9.5	14.26	10.3	1	-0.86	-1.00	1.6	-0.1	-2.5	80			Y
PRD	6420	2.103	PA	72	96	40		0	0	15	5	6	MM_MM	5.30	6.9	6.7	0	0	SC	8.62	6.6	7.5	14.54	14.88	22	14.1	24	1	-0.34	-0.68	4.3	-0.7	-11.7	53			Y
PRD	6402	13.291	CP	48	48	30	PRO	0	0	4.00	2	1	PA5_PA5	5.55	6.32	3.9	0	N	CG	6.86	4.0	4.2	10.6	11.02	3.9	10.06	11.2	1	0.16	-0.26	1.8	0.1	2.5	100			Y
SRD	7500	7.869	CP	48	48	34	PRO	0	0	SWAMP	1	1	AF	5	5.7	3.3	0		O	6.09	4.11	4.16	8.4	10.25	SWAMP	SWAMP	SWAMP	1	0.05	-1.80	1.1	0.7	17.5	####			Y
SRD	7546	2.786	CP	24	24	30	PRO	0	0	3	11	4	MM	5	6.15	1.8	0		FG	7.7	2	2.3	9.5	9.7	4.5	8.9	6	1	0.00	-0.20	5.2	0.2	10.0	67			Y
SRD	7546	4.439	CP	18	18	38	PRO	0	0	3	5	8	N	5	6	1.7	0		O	8.1	1.8	7	NA	NA				1	######	#####	5.5	-0.2	-13.3	50			Y
TRDN	2000000	102.944	CP	36	36	42		0	0	1.5	3	3	HC	5.7	8.05	3.2	0	NA	CG_S	8.48	2.9	3.0	11.2	11.5	4.9	10.7	7.5	1	0.07	-0.19	1.0	-0.2	-6.7	200			Y
TRDN	2000000	89.035	CP	48	48	80		0	0	4.0	15	11	HC	5.8	13.00	7.0	0			15.20	7	6.6	19.7	20.5	10.0	19.8	18.0	1	-1.70	-2.50	2.8	-3.0	-75.0	100			Y
TRDN	3000000B	87.325	CP	48	48	50		0	0	6.1	3	2	MC	5.8	10.00	4.0	0		CG	12.10	4.0	4.45	15.6	15.6	6.5	14.2	12.2	1	-0.50	-0.50	4.2	0.0	0.0	66			Y
TRDN	2700000	5.623	CP	24	24	34		0	0	3.6	3	8	MC1	6.0	8.00	2.1	0		O_FG	8.85	2.0	2.1	10.6	10.9	4.0	10.3	6.6	1	0.05	-0.25	2.5	-0.1	-5.0	56			Y
TRDS	2000000	72.499	CP	96	96	86		0	0	7.6	11	3	HC	5.8	15.10	8.0	0		BO	18.20	8.0	8.2	26.0	26.40	14.7	24.2	24.9	1	0.20	-0.20	3.6	0.0	0.0	105			Y
TRDS	3000000	45.930	CP	24	24	40	PRO	0		2.3	3	3	MC1	5.4	10.56	2.0	0		SC	14.92	2.0	3.3	13.3	13.51	3.9	12.8	6.9	1	-3.38	-3.61	10.9	0.0	1.6	87			Y
TRDS	2054000	3.560	cp	36	36	32		0	0	2.4	3	3	mm	5.0	6.70	2.9	0		cg	7.20	3.0	3.2	10.4	10.50	3.4	10.2	14.6	1	0.30	0.20	1.6	0.1	3.3	125			Y
TRDS	3030000	11.150	CP	48	48	47	PRO	0		3.9	7	5	MM	5.7	9.35	4.2	0		CG	11.64	3.9	3.9	15.3	15.58	3.6	15.1	6.6	1	0.07	-0.26	4.9	-0.2	-4.1	102			Y
TRDS	3030000	13.990	CP	60	60	60	PRO	0	10	3.9	4	2	MM	4.9	4.89	4.9	0		SC	8.69	5.0	5.2	12.8	13.05	9.5	12.6	10.5	1	-0.62	-0.89	6.3	0.1	1.6	127			Y
TRDS	3030000	16.200	CP	84	84	50	PRO	0		7.2	5	4	MM	5.4	8.70	7.0	0		SC	10.00	7.0	86.0	16.6	16.70	12.3	14.9	21.4	1	-0.30	-0.40	2.6	0.0	0.0	97			Y
TRDS	3000000	48.670	CP	18	18	30	PRO	0		1.3	1	1	MM1	5.4	6.43	1.5	0		SC	7.15	1.5	1.5	8.1	8.20	2.0	7.9	3.9	1	-0.43	-0.49	2.4	0.0	1.6	114			Y
TRDS	2300000	3.840	CP	48	48	60	PRO	0		3.6	2	5	MM1	5.4	15.51	3.9	0		O	16.50	3.0	3.1	19.1	19.45	3.9	19.0	4.3	1	0.00	-0.36	1.6	0.1	1.6	111			Y
TRDS	2050400	0.560	CP	48	48	41	PRO	0		6.9	7	2	MM	5.6	8.40	4.1	0		SC	8.95	4.0	4.1	12.3	12.70	5.9	11.9	11.7	1	-0.25	-0.65	1.3	-0.1	-2.5	58			Y
PRD	6350	5.183	CP	18	18	40	PRO	0	0	3.6	1	2	MM_MM	4.95	8.94	1.5	0	N	FG	8.74	1.5	1.6	10.12	10.22	3.7	9.20	12.2	1	-0.02	-0.12	-0.5	0.0	0.0	42			Y
SRD	7500	7.710	CP	48	72	34		0	0	85	1	1	AF	5	6.49	4.56	0		O	6.49	5.11	5.16	9.69	11.65	12	9	65	1	0.05	-1.91	0.0	-0.6	-14.0	7			Y
TRDN	1500000	0.581	CP	60	60	32		0	0	18.0	1	1	ES	5.6	8.40	5.1	0		FG_CG	8.55	5.2	5.7	NA	NA	NA	NA	NA	1	######	#####	0.5	-0.1	-2.0	28			Y
TRDN	2700000	5.673	CP	36	36	36		0	0	14.0	7	3	HC2	6.0	8.00	3.2	0		B_LC	8.10	3.0	3.2	10.3	10.8	5.8	9.5	16.6	1	-0.35	-0.80	0.3	-0.2	-6.7	21			Y
TRDN	3000000B	80.785	CP	60	60	51		0	0	10.5	6		MM1	5.8	10.65	4.9	0		CG_SC	11.60	5	5.2	15.7	15.9	14.0	14.7	16.0	1	-0.70	-0.90	1.9	0.1	2.0	48			Y
TRDN	1430310	0.013	CP	62	78	42		0	0	14.5	1	2	MM1	5.40	9.90	5.1	0		CG_FG	9.50	5.2	5.7	14.9	14.6	9.9	14.1	11.5	1	-0.10	0.20	-1.0	0.1	1.3	45			Y
TRDN	1445000	3.190	PA	59	81	47		0	10	18.0	1	2	MM1	5.4	10.20	4.8	0		S_SC	10.40	5.2	5.4	14.9	15.8	32.0	14.5	32.0	1	0.20	-0.70	0.4	0.1	2.4	38			Y
TRDN	2900000	9.075	CP	18	18			0	0	4.8	2	1	MM1	5.6	7.50	1.5	0		O_CG	7.55	1.5	2.1	9.0	9.3	3.8	8.8	11.1	1	0.25	-0.05	####	0.0	0.0	31			Y
TRDN	3000000B	93.920	PA	96	144	40		0	0	25.0	1	1		5.8	7.60	8	0	N	SC	7.40	8	15.5	12.8	15.5	25.0	11.8	26.0	1	0.10	-2.60	-0.5	0.0	0.0	48			Y
PRD	6415	8.932	PA	53	65	36	PRO	0	0	7.50	1	3	AF_AF	4.95	6.8	4.5	0	N	CG_SC	7.5	4.3	4.7	11.94	12.38	5.1	10.86	14.3	1	0.58	0.14	1.9	-0.1	-1.9	72			Y
PRD	6204	8.002	CP	60	60	42	PRO	0	0	6.2	1	1	FP_FP	5.55	9.22	5.0	0	N	S	9.10	5.0	6.1	14.24	15.34	2.7	13.92	9.7	1	1.24	0.14	-0.3	0.0	0.0	81			Y
PRD	6314	4.283	CP	36	36	48	PRO	0	10	3.5	3	7	HC_HC	5.37	12.20	3.0	0	N	SC	12.70	3.0	3.6	15.98	16.4	3.5	15.6	5.8	1	0.72	0.28	1.0	0.0	0.0	86			Y
PRD	6031	2.958	CP	36	36	36	PRO	0	0	2.7	5	2	MM_MM	5.37	10.8	3	0	N	CG	11.15	3	3.2	14.3	15	3.4	13.6	5.8	1	0.85	0.15	1.0	0.0	0.0	111			Y
PRD	6404	3.339	CP	48	48	38	PRO	0	0	2.5	3	0	MM_PA	5.37	6.7	3.8	0.0	N	SC	6.72	4.1	4.9	10.98	12.54	9.8	11	11.5	1	1.72	0.16	0.1	0.2	5.0	160			Y
SRD	7500	7.801	CP	48	48	32	PRO	0	0	SWAMP	1	1	AF	5	6.9	3.35	0		O	6.95	3.15	3.25	10.42	13.3	SWAMP	SWAMP	SWAMP	1	3.20	0.32	0.2	0.7	16.3	####			Y
TRDN	1400000	7.052	CP	72	72	55		0	0	6.9	4	3	MC1	5.40	9.20	6.0	0		CG_SC	10.10	6.0	6.7	15.9	16.7	11.2	15.6	12.8	1	0.60	-0.20	1.6	0.0	0.0	87			Y
TRDN	2000000	83.710	CP	96	96	48		0	35	12.0	3	3	MM	5.8	13.50	7.7	0	0	12	12.80	8	8.5	19.0	21.3	22.7	18.9	23.7	1	0.50	-1.80	-1.5	0.3	3.8	67			Y
TRDN	1525000	3.403	CP	89	128	62		0	0	11.5	4	3	MM1	5.7	14.20	7.7	0		LC	14.40	7.0	7.9	21.7	22.6	11.0	20.3	25.0	1	1.20	0.30	0.3	-0.3	-3.8	93			Y
TRDN	1430310	0.705	CP	36	36	31		0	0	3.7	2	1	MM1	5.40	6.90	3.0	0		SC_O	7.00	3.0	3.4	10.3	10.6	5.4	9.8	6.1	1	0.60	0.30	0.3	0.0	0.0	81			Y
TRDS	2054000	3.780	cp	36	36	38		0	0	3.0	4	3	mm	5.0	8.50	2.8	0		o_cg	8.50	3.0	3.8	11.6	11.90	3.2	11.0	6.9	1	0.40	0.10	0.0	0.2	6.7	100			Y
TRDS	3030100	0.750	CP	60	60	36	PRO	0	15	4.0	3	1	PA4	5.7	6.80	5.3	0		O	6.50	5.1	5.1	10.2	12.00	8.9	9.9	9.0	1	0.40	-1.40	-0.8	-0.3	-6.0	125			Y
TRDS	3030000	13.750	CP	60	60	40	PRO	0		9.8	3	3	MM	4.9	5.08	0.0			O	9.12	4.9	5.1	13.1	13.64	7.5	13.1	8.5	1	-0.39	-0.95	10.1	5.0	100.0	51			Y
SRD	7546	1.184	CP	36	36	34	PRO	0	0	9	18	8	LC	5	6.55	2.2	30_50	CG	CG	9.1	1.7	1.8	10.5	10.8	7.6	10	14	1	0.00	-0.30	7.5	0.8	26.7	33			Y
HRD	8530	3.023	CP	36	36	32	PRO	0	0	6.1	3		MM_MM	5	8.97	2.7	100	FG_SC	S_FG	12.38	2.2	2.3	14.3	14.50	12.9	13.7	13.1	1	-0.08	-0.28	10.7	0.3	10.0	49			Y
PRD	6032	0.042	PA	60	84	41	MIT	0	0	8.8	8	9	HC_MM	5.37	7.75	3.8	100	CG	CG	8.7	4.3	4.3	15.1	15.5	8.1	14.4	12.6	1	2.50	2.10	2.3	1.2	24.0	80			Y
PRD	6032	0.756	PA	60	84	54	MIT	0	0	9.4	8	9	HC_MM	5.37	11.8	5	100	CG	CG	12.85	3.2	3.2	18.8	19.1	17.0	17.9	21.0	1	3.05	2.75	2.0	0.0	0.0	74			Y
PRD	6032	0.235	PA	48	60	40	MIT	0	0	7.4	7	8	MM_MM	5.37	8.3	3.8	100	CG	CG	8.85	4	4	13.5	13.9	8.8	13	15.0	1	1.05	0.65	1.4	0.2	5.0	68			Y
PRD	6032	0.569	PA	60	84	52	MIT	0	0	6.8	5	3	MM_MM	5.37	11.3	5.7	100	SC	CG	12.95	5	5	19.7	19.8	11.6	19.2	21.8	1	1.85	1.75	3.2	-0.7	-14.0	103			Y
TRDN	1446000	0.054	CP	60	60	61		0	0	3.0	1	4	MM1	5.40	13.80	4.5	90	SC	SC_LC	14.00	5.0	5.0	19.4	19.5	24.0	18.1	28.0	1	0.50	0.40	0.3	0.5	10.0	167			Y
PRD	6030	5.163	PA	44	72	40	PRO	0	0	12.3	3	2	MM_MM	5.37	10.85	3.4	50	SC	SC	10.30	4.0	4.7	14.4	14.9	10.7	14.0	14.2	1	0.60	0.10	-1.4	0.3	7.3	49			Y
TRDN	3000000B	88.208	CP	72	72	50		0	0	15.8	6	7	HC2	5.8	15.50	6.0	50	LC	BO_LC	16.60	5.3	5.35	20.4	20.6	17.7	20.4	18.3	1	-1.25	-1.45	2.2	0.0	0.0	38			Y
TRDN	2000000	123.946	CP	36	36	60		0	0	NA	13	2	PA5	5.4	14.20	2.4	50	CG	O	13.90	2.1	2.3	16.5	17.3	4.5	16.2	6.1	1	1.30	0.50	-0.5	0.6	20.0	####			Y
TRDS	2050300	0.870	CP	48	48	62	PRO	0		6.5	9	6	HC2	5.6	14.60	3.9	50	LC	LC	16.40	3.0	3.1	19.3	19.70	3.0	18.8	7.0	1	0.30	-0.10	2.9	0.1	2.5	62			Y
TRDS	3000000	46.200	CP	36	36	40	PRO	0	10	2.6	14	15	MC1	5.4	10.86	2.6	40	LC	B	10.66	3.0	4.6	14.9	15.09	4.3	15.0	6.2	1	1.44	1.28	-0.5	0.4	12.5	114			Y
SRD	7546	6.031	CP	24	24	30	PRO	0	999	4	11	8	MC	5	5.6	1.6	30	CG	CG	6.6	4	3.5	9.6	11.2	4	9.4	6	1	0.60	-1.00	3.3	0.4	20.0	50			Y
TRDN	2700000	0.710	CP	48	48	40		0	0	7.1	8	2	MM	5.0	6.50	3.6	25	LC	LC	6.50	4.0	5.3	11.5	12.0	6.2	10.4	9.4	1	1.50	1.00	0.0	0.4	10.0	56			Y
TRDN	2000000	125.430	CP	36	36	40		0	0	2.5	3	1	MM1	5.6	7.60	3.0	20	FG	CG	9.20	2.2	2.1	11.5	12.0	3.4	10.6	4.8	1	0.60	0.10	4.0	0.0	0.0	120			Y
TRDS	3000000	48.020	CP	24	24	44	PRO	0		1.6	20	10	HC2	5.4	11.35	2.1	10	LC	SC	11.91	1.6	1.6	13.8	13.84	5.6	13.1	8.5	1	0.36	0.30	1.3	-0.1	-6.6	122			Y
PRD	6235	17.227	CP	24	24	30	PRO	0	0	1.9	2	4		5.55	8.60	1.7	5	FG	S	8.70	2.0	2.8	11.30	11.50	2.2	10.85	5.0	1	0.80	0.60	0.3	0.3	15.0	105			Y
HRD	8582	0.114	CP	36	36	32	PRO	0	0	3.5	1	1	FP_FP	5	6.71	2.5	0		FG	9.09	2.3	1.9	11.6	11.90	7.8	11.4	8.3	1	0.51	0.21	7.4	0.5	16.7	86			Y
HRD	8580	9.838	PA	64	83	34	PRO	0	0	8.0	4	5	MM_MM	5	6.06	5.3	0		CG	6.26	5.3	5.8	12.6	12.90	12	12.1	14.7	1	1.34	1.04	0.6	0.0	0.6	86			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
PRD	6326	4.170	CP	36	36	41	PRO	0	0	6.3	8	9	HC_HC	5.37	12.00	3.0	0	N	LC	14.05	2.2	2.2	15.8	16.4	6.2	15.8	7.5	1	0.15	-0.45	5.0	0.0	0.0	48			Y
PRD	6333	0.062	CP	18	18	40	PRO	0	0	4.5	10	6	HC_HC	5.37	11.85	1.5	0	0	SC	13.85	1.5	2.4	14.9	15.5	2.4	14.5	6.6	1	0.15	-0.45	5.0	0.0	0.0	33			Y
PRD	45001	0.485	CP	36	36	44	PRO	0	0	2.1	7	5	HC_MM	5.37	7.10	3.0	0	N	CG_FG	8.70	3.0	3.3	11.8	12.1	3.4	11.5	4.4	1	0.40	0.10	3.6	0.0	0.0	143			Y
PRD	6031	3.833	CP	36	36	36	PRO	0	0	6.4	5	5	MM_MM	5.37	9.1	3	0	N	SC	10.3	3	3.2	12.6	13.4	4.9	12.6	5.6	1	0.10	-0.70	3.3	0.0	0.0	47			Y
PRD	6031	6.166	PA	60	84	42	PRO	0	0	5.3	2	3	MM_MM	5.37	9.45	5	0	N	O_FS	9.75	5	5.5	15.3	15.9	5.8	14.2	8.3	1	1.15	0.55	0.7	0.0	0.0	132			Y
PRD	6317	0.043	CP	36	36	60	PRO	0	0	4.5	4	4	MM_MM	5.37	13.54	3.0	0	N	SG	14.72	3.0	4.6	17.82	18.10	3.3	17.02	10.2	1	0.38	0.10	2.0	0.0	0.0	67			Y
PRD	6350	11.325	CP	48	48	35	PRO	0	0	6.5	4	4	MM_MM	4.95	6.96	4.1	0	N	SC_CG	8.34	4.0	4.8	12.66	13.10	6.3	12.20	19.8	1	0.76	0.32	3.9	-0.1	-2.5	62			Y
PRD	6416	0.767	CP	48	48	50	PRO	0	0	8.7	4	4	MM_MM	5.3	10.26	4	0	N	SC	11.48	4.0	5.23	14.86	14.94	16.9	14.3	19.8	1	-0.54	-0.62	2.4	0.0	0.0	46			Y
PRD	6430	0.607	PA	96	120	54	PRO	0	0	26	2	2	MM_MM	4.75	6.92	7.7	0	N	LC_CG	7.84	7.7	7.8	14.18	14.88	16.60	12.4	36.0	1	-0.66	-1.36	1.7	0.3	3.8	38			Y
PRD	45601	1.301	PA	54	66	48	PRO	0	0	4.0	2	2	MM_PA	5.37	10.15	4.3	0	N	CG	10.55	4.4	5.7	15.3	15.8	4.6	15.0	10.8	1	0.85	0.35	0.8	0.2	4.4	138			Y
PRD	6435	0.512	CP	36	36	36	PRO	0	5	4.5	4	4	N	5.30	6.86	3.2	0	0	SG	8.02	3.0	3.5	11.27	11.51	5.2	10.53	5.9	1	0.49	0.25	3.2	-0.2	-6.7	67			Y
PRD	6031	0.583	CP	24	24	40	PRO	0	5	2.3	2	2	PA_PA	5.37	9.25	2	0	N	O	9.4	1.8	2.3	11.7	11.9	0.9	11.5	6.0	1	0.70	0.50	0.4	0.0	0.0	87			Y
SRD	7546	6.625	CP	18	18	36	PRO	0	0	1.5	5	30	AF	5	6.4	1.5	0		O	9.4	1	1.2	10	11.5	2	10.9	3.5	1	1.10	-0.40	8.3	0.0	0.0	100			Y
SRD	7546	6.249	CP	36	36	40	PRO	0	0	4	20	10	LC	5	9.65	2.9	0		O	12.95	3	3.2	15.7	18.6	4	17.8	13	1	2.65	-0.25	8.3	0.1	3.3	75			Y
SRD	7546	4.841	CP	24	24	40	PRO	0	0	3	25	25	MC	5	6.25	1.8	0		CG	8.2	2	3	10.5	11.2	4	8.1	6	1	1.00	0.30	4.9	0.2	10.0	67			Y
SRD	7546	0.436	CP	18	18	32	PRO	0	0	3	6	6	MC	5	7.45	1.6	0		MS	8.99	1.6	3	11.4	NA	2	11.2	4	1	######	0.81	4.8	-0.1	-6.7	50			Y
SRD	7546	7.144	CP	18	18	30	PRO	0	0	2	7	25	MM	5	6.9	1.8	0		O	8.15	1.5	1.7	9.2	10.1	8	9.7	8.5	1	0.45	-0.45	4.2	-0.3	-20.0	75			Y
SRD	7540	106.845	CP	36	36	34	PRO	0	0	6	4	6	MM	5	7.9	2.9	0	N		8.69	3	3.56	11.62	12.3	7	11.2	9	1	0.61	-0.07	2.3	0.1	3.3	50			Y
TRDN	1445630	1.527	CP	24	24	27		0	0	6.2	3	2	ES	5.40	7.20	2.0	0	NA	O	7.80	2.0	2.6	9.5	9.8	2.9	8.9	8.9	1	0.00	-0.30	2.2	0.0	0.0	32			Y
TRDN	2000000	117.733	CP	84	84	92		0	0	7.0	10	12	HC3	0.0	15.40	7.3	0	NA	LC_BO	27.50	7.0	7.8	42.4	43.3	8.8	41.7	13.6	1	8.80	7.90	13.2	-0.3	-4.3	100			Y
TRDN	3060000	0.005	CP	36	36	52		0	0	3.5	3	5	MC1	5.7	11.80	3.1	0		LC_LG	13.70	3.2	3.5	17.0	17.3	6.8	16.7	10.1	1	0.40	0.10	3.7	-0.1	-3.3	86			Y
TRDN	2000000	125.414	CP	24	24	36		0	0	2.2	3	1	MM1	5.6	9.10	2.0	0	NA	FG	9.40	2.0	2.9	12.2	12.3	7.5	10.8	8.0	1	0.90	0.80	0.8	0.0	0.0	91			Y
TRDN	3000000B	80.709	CP	18	18	30		0	50	4.7	8	28	MM1	5.6	7.60	1.7	0		CG_SC	8.29	1.5	1.6			5.9		7.2	1	-9.79	-9.79	2.3	-0.2	-13.3	32			Y
TRDN	3000000B	93.211	CP	36	36	40		0	0	3.0	1	3	PA	5.8	8.70	3	0	N	O	8.80	3	12.4	12.6	13.5	6.0	11.6	10.0	1	1.70	0.80	0.3	0.0	0.0	100			Y
TRDS	2050400	0.160	CP	36	36	35	PRO	0		2.9	1	5	MM	5.6	6.95	3.0	0		CG	7.55	3.0	3.6	10.9	11.05	3.9	10.6	6.6	1	0.50	0.30	1.7	0.0	0.0	103			Y
TRDS	3030000	7.980	CP	24	24	36	PRO	0	30	4.3	4	4		4.9	6.36	1.9	0		CG	6.76	1.9	2.0	8.5	8.82	4.8	7.2	6.6	1	0.13	-0.16	1.1	0.1	4.9	47			Y
SRD	7546	6.897	AR	144	168	46	PRO	0	0	30	7	7	LC	5	8.5	9.5	100	LC	BO	10.4	7.2	7.2	16.6	19	22	15.5	30	1	1.40	-1.00	4.1	2.5	20.8	47			Y
TRDS	3030000	19.420	CP	93	93	70	PRO	0		22.0	3	3	MM	5.7	12.85	7.2	15	SC	LC	12.60	6.2	6.5	20.5	20.60	30.0	20.2	38.7	1	1.80	1.70	-0.4	0.6	7.1	35			Y
PRD	6350	11.351	CP	24	24	30	PRO	0	0	1.9	3	3	MM_MM	4.95	8.46	2.0	10	CG	CG	9.30	2.1	3.7	12.64	12.72	5.8	11.70	9.7	1	1.32	1.24	2.8	0.0	0.0	105			Y
HRD	8580	9.288	CP	48	48	34	PRO	0	0	4.5	3	4	MM_MM	5	5.66	4	0		FG	7.25	4	4.6	11.7	11.80	5.6	11.5	6.4	1	0.55	0.45	4.7	0.0	0.0	89			Y
PRD	6235	17.071	CP	48	48	36	PRO	0	0	5.2	3	1	AF_NT	5.55	6.90	4.2	0	N	CG	7.94	4.0	4.8	12.36	13.70	5.8	10.46	14.2	1	1.76	0.42	2.9	-0.2	-5.0	77			Y
PRD	6235	0.713	CP	36	36	34	PRO	0	0	3.2	19	7	HC_AF2	5.55	8.56	3.0	0	N	CG	10.54	3.0	4.1	15.00	15.60	1.8	13.80	7.2	1	2.06	1.46	5.8	0.0	0.0	94			Y
PRD	6319	10.571	CP	36	36	36	PRO	0	0	2.7	28	11	HC_HC	5.37	8.75	3	0	N	SC	9.95	3	6	14.4	14.8	4.2	13.8	6.5	1	1.85	1.45	3.3	0.0	0.0	111			Y
PRD	6434	2.568	CP	48	48	50	PRO	0	0	6.6	9	8	HC_HC	4.75	10.8	4	0	N	LC_SC	12.02	4.0	6.5	18.15	18.35	5.20	16.1	8.0	1	2.33	2.13	2.4	0.0	0.0	61			Y
PRD	6032	0.484	CP	60	60	70	PRO	0	0	5	16	7	HC_MM	5.37	17.5	5	0	N	CG	21.6	5	6.2	30.8	31.3	3.7	30.4	7.2	1	4.70	4.20	5.9	0.0	0.0	100			Y
PRD	6032	0.859	CP	60	60	81	PRO	0	0	8	7	5	HC_MM	5.37	19.3	5	0	N	LC_SC	22.65	5	5.7	31.4	31.6	8.5	30.5	15.0	1	3.95	3.75	4.1	0.0	0.0	63			Y
PRD	6350	15.318	CP	36	36	30	PRO	0	25	4.7	7	6	MM_MM	4.95	5.68	3.0	0	N	S_SC	6.54	2.9	6.6	11.48	11.96	4.4	9.82	11.1	1	2.52	2.04	2.9	0.0	0.0	64			Y
PRD	6415	2.836	CP2	48	48	40	PRO	0	0	7.50	3	4	MM_MM	5.55	9.7	4.1	0	N	CG	10.35	4.2	5.5	15.5	15.65	6.7	14.05	8.7	1	1.10	0.95	1.6	-0.1	-2.5	53			Y
PRD	6235	15.450	CP	48	48	36	PRO	0	0	4.6	4	1	MM_NT	5.55	7.54	4.2	0	N	SC	8.65	4.1	5.3	13.57	14.30	4.7	11.70	10.3	1	1.55	0.82	3.1	-0.2	-5.0	87			Y
PRD	6032	0.133	CP	36	36	34	PRO	0	15	4.5	19	14	N_N	5.37	7.3	3	0	N	FG	8.65	3	3.9	14.6	14.7	3.7	14.2	6.2	1	3.05	2.95	4.0	0.0	0.0	67			Y
PRD	6031	0.597	CP	36	36	60	PRO	0	0	2.5	2	6	PA_MM	5.37	12.4	3	0	N	S	14.6	3	3.5	19.3	19.6	4.9	18.8	8.7	1	2.00	1.70	3.7	0.0	0.0	120			Y
PRD	6235	0.190	CP	24	24	40		0	0	4.7	1	1	PA_NT	5.55	7.86	2.4	0	N	S_O	8.20	2.0	4.5	12.64	14.30	2.4	11.00	8.1	1	4.10	2.44	0.8	-0.4	-20.0	43			Y
SRD	7546	7.366	PA	36	52	40	PRO	0	0	7	8	20	LC	5	9.4	3.4	0		CG	11.75	3.3	4.5	15.6	16.4	5	15.2	9.5	1	1.35	0.55	5.9	-0.4	-13.3	62			Y
SRD	7546	7.038	CP	18	18	36	PRO	0	0	7	5	8	M	5	6.45	1.5	0		O	6.5	1.9	1.5	9.6	10.2	4	9.4	5.5	1	1.80	1.20	0.1	0.0	0.0	21			Y
SRD	7546	6.329	CP	18	18	32	PRO	0	0	3	22	40	MC	5	9.6	1.4	0		O	12.85	1.5	2	14.9	16.6	3.5	15.9	5	1	2.25	0.55	10.2	0.1	6.7	50			Y
SRD	7540	106.827	CP	36	36	28	PRO	0	0	18	6	5	MC	5	7	2.57	0	N	SC	7.96	3	4	11.15	11.5	10.3	11	13	1	0.54	0.19	3.4	0.4	14.3	17			Y
SRD	7546	0.684	CP	18	18	28	PRO	0	0	4	10	10	MM	5	7.65	1.2	0		FS	9.2	1.6	2.3	11.1	11.3	4	9.9	6.5	1	0.50	0.30	5.5	0.3	20.0	38			Y
SRD	7546	4.388	CP	18	18	26	PRO	0	0	4	6	7	N	5	7.9	1.3	0		O	8.55	1.5	2.3	10.2	10.9	4.5	9.9	6.5	1	0.85	0.15	2.5	0.2	13.3	38			Y
SRD	7542	0.109	CP	24	24	34	PRO	0	0	4.4	1	1		5	9.05	2	0	N	FG_CG	10	2	12	11.9	12.7	4	11.45	6	1	0.70	-0.10	2.8	0.0	0.0	45			Y
TRDN	1470000	6.048	CP	60	60	60		0	0	8.6	6	3	ES3_MM1	5.40	8.80	6.3	0		LC	14.30	6.3	11.8	22.7	23.3	23.4	21.7	29.0	1	2.70	2.10	9.2	-1.3	-26.0	58			Y
TRDN	2700000	3.718	CP	36	36	38		0	0	6.0	9	5	HC	6.0	10.55	3.0	0		CG_SC	11.40	3.0	4.0	15.9	16.3	7.3	15.7	8.8	1	1.85	1.50	2.2	0.0	0.0	50			Y
TRDN	2000000	117.023	CP	72	72	70		0	0	10.0	9	9	HC2	5.4	14.10	6.0	0	NA	LC	16.80	6.0	7.6	24.6	25.0	5.3	23.1	24.8	1	2.20	1.80	3.9	0.0	0.0	60			Y
TRDN	3060000	0.660	CP	24	24	40		0	0	3.2	5	13	MC1	5.7	7.90	2.0	0		FG_SC	11.00	1.9	2.6	14.1	14.2	7.0	13.7	9.5	1	1.30	1.20	7.8	0.0	0.0	63			Y
TRDN	3000000B	81.621	CP	48	48	76		0	0	11.8	4	11	MC1	5.6	7.60	4.1	0		BR_LC	10.15	4	4.75	14.1	14.7	LC_BO	13.9	11.6	1	0.54	-0.02	3.4	0.0	-1.3	34			Y
TRDS	3015600	1.240	CP	36	36	40	PRO	0	0	2.1	15	6	HC2	5.6	6.30	3.1	0		CG_S	7.45	3.0	4.0	11.1	11.20	5.2	10.7	9.1	1	0.75	0.65	2.9	-0.1	-3.3	143			Y
TRDS	2000648	0.500	CP	24	24	30	PRO	0		1.2	4	7	MM	5.0	7.40	2.0	0		FG	8.70	2.0	2.4	10.9	11.10	1.0	10.6	3.3	1	0.40	0.20	4.3	0.0	0.0	167			Y
TRDS	3030000	11.220	CP	24	24	40	PRO	0		2.3	1	3	MM	5.7	7.54	1.9	0		O	8.20	2.0	2.2	10.5	10.63	4.6	10.0	8.5	1	0.46	0.36	1.6	0.1	4.9	87			Y
TRDS	3000000	47.870	CP	36	36	32	PRO	0		3.9	6	6	MM1	5.4	3.94	3.1	0		O	7.51	2.9	2.9	10.8	10.92	3.3	10.3	4.9	1	0.49	0.39	11.2	-0.1	-2.8	76			Y
TRDS	2058150	0.730	CP	36	36	40	PRO	0		3.5	2	5	MM1	5.6	12.10	2.7	0		O	12.85	2.9	3.2	16.5	16.60	3.0	16.0	4.6	1	0.85	0.75	1.9	0.3	10.0	86			Y
WRD	6590	17.168	CP	36	36	30		0	0	5.5	9	14	HC	4.00	5.75	3.0	0		SC	6.95	3.0	5.3	11.80	11.90	8.4	11.30	10.8	1	1.95	1.85	4.0	0.0	0.0	55			Y
WRD	6590	17.639	CP	48	48	60		0	999	16.4	7	4	HC_MM	5.00	14.80	3.5	0		SC_LC	16.60	4.0	4.6	20.80	21.10	6.1	23.30	18.7	1	0.50	0.20	3.0	0.5	12.5	24			Y
PRD	6235	15.846	CP2	48	48	34	PRO	0	0	10.4	1	2	FP_FP	5.55	7.50	4.4	0	N	CG	8.20	4.0	4.8	12.65	13.95	13.6	11.90	14.2	1	1.75	0.45	2.1	-0.4	-10.0	38			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
PRD	6031	6.631	CP	24	24	40	PRO	0	0	4.3	10	8	HC_HC	5.37	9.1	2	0	N	SC	10.25	2	3.6	13.8	15.2	3.3	13.8	4.8	1	2.95	1.55	2.9	0.0	0.0	47			Y
PRD	6031	3.161	CP	60	60	54	PRO	0	0	11.4	9	9	MC_MC	5.37	11.1	5	0	N	LC	12.85	5	6.1	19	20	10.8	19	11.4	1	2.15	1.15	3.3	0.0	0.0	44			Y
PRD	6031	5.840	CP	36	36	40	PRO	0	0	9.5	3	4	MM_MM	5.37	11.5	3	0	N	O	12.95	3	3.9	16.8	18.7	9.5	16.8	10.8	1	2.75	0.85	3.6	0.0	0.0	32			Y
SRD	7543	0.203	CP	48	48	50	PRO	0	0	13	2	2	MM	5	14.3	4	0			15		17.5	18.3	17.5	9	18.8	13	1	2.50	3.30	1.5	0.0	0.0	31			Y
TRDN	1400000	6.354	CP	18	18	40		0	0	3.3	4	5	MM1	5.40	10.90	1.5	0		FS_O	12.10	1.5	2.0	14.4	14.3	2.3	13.7	5.1	1	0.70	0.80	3.0	0.0	0.0	45			Y
TRDS	2300000	3.530	CP	40	40	60	PRO	0		8.5	3	80	MM1	5.4	15.19	4.1	0		CG	17.32	4.0	4.6	21.7	22.07	4.9	21.4	6.6	1	0.75	0.43	3.6	-0.8	-23.0	39			Y
CRD	2150000	3.200	cp	36	36	34				9	9	2	mm	5	7.97	2.5	0		lc_sc	8.20	2.9	2.9	11.0	11.2	6.3	10.53	6.9	1	0.12	-0.14	0.7	0.5	16.7	33			Y
TRDS	3000000	48.960	CP	18	18	30	PRO			2.0	1	1	PA1	5.4	7.58	1.5			O	8.76	1.1	1.1	8.9	9.41	2.6	8.5	3.9	1	-0.43	-0.92	3.9	0.0	1.6	76			Y
CRD	2013000	0.100	cp		48	33				6.5	33	11	hc	5	6.07	4.0	0		bo	9.09	4.0	5.7	17.6	17.7	6.1	16.67	10.0	1	4.63	4.46	9.2	-4.0	#####	62			Y
CRD	2013000	0.081	cp		60	40				5.9	16	14	hc_af	5	5.25	5.0	0		bo	7.51	5.0	7.6	15.1	15.2	4.6	14.34	16.0	1	2.68	2.55	5.7	-5.0	#####	85			Y
SRD	7542	0.027	PA	47	60	64	PRO	0	0	10	3	3	MC	5	7.4	3.7	O	N	SC_CG	8.1	3.9	12.6	12	11.4	22	10.2	26	1	-0.60	0.00	1.1	0.2	5.5	50		Y	
SRD	7500	7.455	CP	36	36	30	PRO	0	0	2	4	2	AF	5	6.7	2.3	100	SC	SC_LC	6.85	3.25	3.44	8.78	10.3	7.7	8.6	28	1	0.20	-1.32	0.5	0.7	23.3	150		Y	
TRDN	1445000	9.708	CP	60	60	40		0	0	5.2	3	3	MM1	5.4	7.90	4.7	100	SC	CG_SC	8.40	4.4	4.4	12.2	12.4	6.2	12.1	7.7	1	-0.40	-0.60	1.3	0.3	6.0	96		Y	
TRDS	2054000	1.175	cp	48	48	40		0	0	5.9	3	3	mc	5.0	8.10	3.4	100	cg_fg	cg	8.30	3.7	3.7	11.5	11.80	10.3	11.2	13.2	1	-0.20	-0.50	0.5	0.6	15.0	68		Y	
SRD	7540	8.054	CP	70	106	41	pro	0	0	16	3.5	4	mm	5	8.6	6	35	fs	fs	8.7	5.6	5.7	13.05	14	13.5	12.45	14.1	1	-0.30	-1.25	0.2	-0.2	-2.9	55		Y	
SRD	7500	8.073	CP	18	18	32	PRO	0	0	SWAMP	0.5	0.5	AF	5	6.4	1.6	0		O	6.55	2.04	2.25	8.05	8.8	SWAMP	SWAMP	SWAMP	1	0.21	-0.54	0.5	-0.1	-6.7	####		Y	
TRDS	2058000	1.610	CP	60	60	50	PRO	0		3.0	2	5	MM1	5.6	9.65	4.1	100	CG	CG	9.50	4.1	4.2	13.4	13.60	4.2	13.1	5.4	1	0.00	-0.20	-0.3	0.9	18.0	167	Y		
TRDS	3000000	56.820	CP	36	36	40	PRO	0		3.3	2	2	PA1	5.4	11.12	2.3	50	SC	O	10.86	3.0	3.0	13.2	13.71	5.2	12.9	5.2	1	-0.10	-0.59	-0.7	0.7	23.5	91	Y		
SRD	7500	8.470	CP	48	48	30	PRO	0	0	2	2	2	AF	5	6.55	2.7	5	S	S_O	6.3	3.06	3.1	8.95	9.4	7	8	9.6	1	0.04	-0.41	-0.8	1.3	32.5	200	Y		
SRD	7500	7.791	CP	48	72	32	PRO	0	0	SWAMP	1	1	AF	5	6.55	4.5	0		O	6.76	4.79	4.79	10.4	11.55	SWAMP	SWAMP	SWAMP	1	0.00	-1.15	0.7	-0.5	-12.5	####	Y		
TRDN	3000000B	84.181	CP	60	60	40		0	0	5.4	4	3	MM1	5.8	7.70	5.0	0		FG_SC	7.70	5.0	5.15	9.9	NA	NA	NA	NA	1	######	-2.80	0.0	0.0	0.0	93	Y		
TRDN	3000000B	85.462	CP	24	24	40		0	0	NA	1	2	PA	5.80	10.45	2.3	0		O	10.20	2.0	1.9	10.5	NA	NA	NA	NA	1	######	-1.70	-0.6	-0.3	-17.0	####	Y		
TRDS	3000000	57.730	CP	96	96	60	PRO	0		9.8	6	5	MC2	5.4	12.69	7.9	0		SC	12.96	7.9	8.4	18.5	19.71	21.3	18.3	26.2	1	-1.12	-2.36	0.4	0.1	1.6	81	Y		
TRDS	3000000	46.800	CP	24	24	30	PRO	0		2.6	1	1	MM1	5.4	6.69	2.1	0		O	6.10	2.1	2.4	7.9	8.10	3.0	9.9	6.6	1	-0.10	-0.26	-2.0	-0.1	-3.3	76	Y		
TRDS	2300000	1.410	CP	48	48	70	PRO	0		4.3	2	3	MM1	5.4	17.81	5.0	0		O	18.17	4.9	5.0	22.1	22.50	4.9	22.0	6.2	1	-0.56	-0.92	0.5	-1.0	-25.5	94	Y		
TRDN	2085000	2.649	CP	60	60	38		10	0	7.0	7	5	AF1	5.7	8.00	5.4	100	LC	LC_B	8.20	5.8	5.8	13.1	13.2	1.7	12.1	10.1	2	-0.80	-0.90	0.5	-0.4	-8.0	71		Y	N
TRDS	3030000	6.010	PA	72	87	44	PRO	10		13.1	25	10		5.4	7.97	4.9	100	LC	BO	8.40	4.8	4.9	12.3	13.12	14.8	11.3	18.0	2	-0.07	-0.92	1.0	1.1	19.1	55		Y	N
TRDN	2085000	1.856	CP	48	48	40		10	0	4.4	6	8	MM1	5.7	9.30	3.8	100	CG_LC	LC	9.60	3.5	3.9	12.8	13.2	6.3	12.3	9.9	2	0.10	-0.30	0.7	0.2	5.0	91		Y	N
TRDS	3030000	9.250	CP	72	72	40	PRO	5		8.5	4	2	MM	4.9	7.87	5.9	100	CG	CG	8.20	4.8	4.8	12.1	12.37	16.4	11.9	18.0	2	-0.62	-0.89	0.8	0.1	1.6	70		Y	N
TRDN	2085000	1.168	CP	48	48	40		5	0	6.2	6	NA	MM1	5.7	7.10	3.4	5	LC	CG_SC	7.10	4.0	4.0	9.6	9.6	NA	NA	NA	2	-1.50	-1.50	0.0	0.6	15.0	65		Y	N
PRD	6407	4.028	CP	60	66	46	MIT	0	0	3.70	10	3	MM_MM	5.55	8.28	5.3	100	LC	SC_B	8.96	5.0	5.2	13.48	13.9	4.8	13.04	13.2	2	-0.06	-0.48	1.5	-0.3	-6.0	149		Y	N
TRDN	2000000	120.277	CPB	60	60	55		0	0	5.0	14	11	HC1	5.6	12.85	4.0	100	SC	LC	13.10	5.2	5.3	18.0	18.6	4.6	17.3	9.6	2	0.30	-0.30	0.5	1.0	20.0	100		Y	N
TRDN	2000000	117.220	CP	60	60	70		0	75	6.0	9	14	HC2	0.0	14.10	2.3	100	CG	LC	15.30	4.8	5.0	17.6	18.2	4.8	17.3	7.8	2	-1.90	-2.50	1.7	2.7	54.0	83		Y	N
TRDN	2000000	129.222	CP	72	72	40		0	10	5.4	5	5	MC1	5.8	11.70	3.6	100	LC_B	LC_B	11.90	5.2	5.4	17.1	17.4	6.0	16.6	10.3	2	0.30	0.00	0.5	2.4	40.0	111		Y	N
TRDN	3000000B	87.695	CP	48	48	40		0	0	7.8	6	5	MC1	5.8	10.90	3.6	100	LC_CG	LC_CG	10.45	4.0	4.3	13.8	14.4	9.2	13.4	10.2	2	-0.05	-0.65	-1.1	0.4	10.0	51		Y	N
TRDN	1500000	12.589	CP	60	60	30		0	0	4.5	4	3	MM1	0.0	2.50	4.0	100	SC	SC	2.50	4.6	4.7	7.1	7.3	5.7	6.0	9.9	2	0.20	0.00	0.0	1.0	20.0	111		Y	N
TRDN	2000000	127.575	CP	48	48	46		0	0	4.5	2	1	MM1	5.80	8.10	3.6	100	ORG	SC_LC	8.40	3.4	3.3	11.1	11.4	3.7	10.7	4.9	2	-0.40	-0.70	0.7	0.4	10.0	89		Y	N
TRDS	2054000	2.030	cp	60	60	46		0	0	4.0	5	2	pa_mc	5.0	8.20	3.8	100	s_cg	cg	8.40	3.6	3.5	12.0	12.20	5.9	11.7	8.7	2	0.20	0.00	0.4	1.2	24.0	125		Y	N
TRDN	2900000	3.925	CP	36	36	40		0	0	3.0	8	3	HC2	5.6	8.80	2.0	50	LC	CG_SC	8.95	3.0	3.1	11.5	12.1	7.4	11.4	7.7	2	0.15	-0.45	0.4	1.0	33.3	100		Y	N
TRDN	2000000	82.677	CP	60	60	50		0	10	3.3	2		MM	5.8	13.50	4.9	50	O	SG	14.00	3.4	3.4	16.4	17.0	4.9	15.7	7.6	2	-0.40	-1.00	1.0	0.1	2.0	152		Y	N
TRDN	1500000	13.116	CPB	36	36	44		0	0	5.5	3	2	MM1	0.0	7.60	3.6	50	LC	SC	10.50	3.0	2.8	12.0	12.3	8.5	10.5	9.5	2	-1.20	-1.50	6.6	-0.6	-20.0	55		Y	N
TRDN	2085000	2.479	CP	36	36	40		0	0	4.9	6	6	AF1	5.7	8.00	2.6	25	SC	SC_CG	8.10	3.0	3.3	10.6	10.7	3.9	10.0	14.1	2	-0.40	-0.50	0.2	0.4	13.3	61		Y	N
TRDN	3000000B	92.615	CP	48	48	40		0	0	4.0	6	6	HC	5.8	12.75	3.5	10	LC	LC_SC	13.05	3.8	16.6	16.3	16.4	4.0	15.7	5.0	2	-0.45	-0.55	0.8	0.5	12.5	100		Y	N
TRDN	2085000	0.445	CP	36	36	44		0	0	5.3	2	2	MM1	5.7	13.90	3.0	5	CG	CG_SC	13.80	3.0	3.2	16.7	16.8	5.9	16.1	6.3	2	0.00	-0.10	-0.2	0.0	0.0	57		Y	N
PRD	6235	9.300	CP	72	72	60	MIT	0	0	5.5	2	5	MM_MM	4.95	13.83	6.0	0	N	SC	14.82	6.0	6.1	20.16	20.36	9.8	19.50	13.1	2	-0.46	-0.66	1.7	0.0	0.0	109		Y	N
TRDN	3000000B	89.109	CPB	48	48	80		0	0	3.1	8	7	HC2	5.8	15.50	3.9	0			21.30	4.0	4.2	25.2	25.8	4.2	24.8	4.6	2	0.50	-0.10	7.3	0.1	2.5	129		Y	N
TRDN	3000540	0.230	CP	60	60	52	PRO	0	0	5.2	3	3	MM	5.7	14.90	5.0	0		S	15.40	4.8	4.8	19.1	19.5	4.6	18.3	8.8	2	-0.70	-1.10	1.0	0.0	0.0	96		Y	N
TRDN	1470600	0.864	CP	48	48	40		0	0	7.0	7	2	MM1	5.4	13.10	3.8	0		FG_SC	13.00	4.0	4	15.7	16.2	7.9	14.9	14.9	2	-0.80	-1.30	-0.2	0.2	5.0	57		Y	N
TRDS	2054000	4.600	cp	84	84	58		0	0	11.8	10	7	hc	5.0	9.00	7.2	0		sc_lc	9.50	7.0	7.5	15.5	16.10	16.9	15.1	20.0	2	-0.40	-1.00	0.9	-0.2	-2.9	59		Y	N
TRDS	2050000	2.390	PP	36	36	40	PRO	0		2.0	9	6	MM	5.6	9.10	3.0	0		CG	9.30	2.9	2.9	12.0	12.05	6.0	11.6	10.2	2	-0.15	-0.25	0.5	0.0	0.0	150		Y	N
TRDS	3000000	56.220	CP	24	24	40	PRO	0		2.3	2	2	PA1	5.4	12.30	1.6	0		SC	12.69	1.8	2.0	14.2	14.37	2.3	14.1	4.3	2	-0.10	-0.26	1.0	0.4	21.3	87		Y	N
TRDS	3030000	7.500	CP	48	48	60	PRO	0		5.2	3	35		5.4	12.00	4.2			FS	12.56	4.2	0.0	0.0	0.00	0.0	0.0	0.0	2	-16.73	-16.73	0.9	-0.2	-4.1	76		Y	N
PRD	6407	6.493	CP	36	36	50	PRO	0	0	5.20	4	5	MM_MM	5.55	16.1	3	100	CG	CG	16.2	2.8	2.9	18.76	19.1	5.3	18.44	6.6	2	0.10	-0.24	0.3	0.0	0.0	58		Y	N
PRD	6030	9.223	CP	48	48	40	PRO	0	0	5.4	5	1	MC_MC	5.37	10.00	4.0	50	SC	SC	10.30	3.7	3.8	13.6	14.1	5.8	13.3	6.7	2	0.10	-0.40	0.8	0.0	0.0	74		Y	N
PRD	6402	11.813	CP	36	36	40	PRO	0	0	4.30	3	4	MM_MM	5.55	8.8	2.6	50	CG	CG	8.62	3.0	3.9	11.32	11.72	5.5	10.94	12.8	2	0.10	-0.30	-0.5	0.4	13.3	70		Y	N
TRDS	2059300	1.380	CP	48	48	44	PRO	0		6.8	4	9	MM1	5.7	18.30	4.1	20	CG	CG	8.60	3.7	3.8	11.4	11.80	6.6	11.0	9.3	2	-0.50	-0.90	-22.0	-0.1	-2.5	59		Y	N
TRDN	1430310	0.573	CP	36	36	40		0	0	2.7	1	3	MM1	5.40	6.50	3.0	10	SC	O	6.90	3.0	3.1	9.9	10.0	4.2	9.7	4.5	2	0.10	0.00	1.0	0.0	0.0	111		Y	N
JRD	8561	0.063	CP	36	36	34	PRO	0	0	3.8	1	3	FP_FP	5	6.65	3.2	0		S	6.98	3	3	9.6	10.1	6.3	9.1	11.3	2	0.12	-0.38	1.0	-0.2	-6.7	79		Y	N
PRD	6350	4.693	CP	24	24	52	PRO	0	5	2.9	3	3	MM_MM	4.95	9.56	1.8	0	N	CG	10.10	1.8	1.8	11.54	11.84	2.8	11.22	6.3	2	-0.06	-0.36	1.0	0.2	10.0	69		Y	N
PRD	6440	0.115	CP	36	36	36	PRO	0	0	4.2	1	2	MM_MM	4.75	6.76	3	0	N	CG	6.58	2.7	2.8	9.07	9.28	4.40	8.3	7.1	2	0.00	-0.21	-0.5	0.0	0.0	71		Y	N
TRDN	1400000	6.455	CP	48	48	41		0	0	6.2	2	2	MM1	5.40	7.20	4.0	0		FS_CG	7.10	4.0	4.4	11.0	11.4	6.9	10.6	7.8	2	0.30	-0.10	-0.2	0.0	0.0	65		Y	N
TRDN	3000000B	89.944	CP	60	60	70		0	0	4.9	7	10	HC2	5.8	19.90	4.5	0		SC_CG	20.70	4.6	4.6	25.2	25.4	2.6	25.0	2.9	2	0.10	-0.10	1.1	0.5	10.0	102		Y	N

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
TRDS	3000000	57.620	CP	24	24	30	PRO	0		3.3	3	4	HC2	5.4	7.64	2.0	0		O	7.97	2.0	2.0	9.3	9.87	2.6	9.3	2.6	2	-0.07	-0.66	1.1	0.0	1.6	61		Y	N
TRDS	2300000	4.090	CP	72	72	50	PRO	0		11.5	5	4	MC2	5.4	13.12	6.2	0		CG	13.61	5.9	6.0	18.8	19.25	5.6	18.4	8.5	2	-0.26	-0.75	1.0	-0.2	-2.8	52		Y	N
TRDS	2054000	5.330	cp	36	36	48		0	0	2.6	2	5	mm	5.0	10.35	2.8	0		fg_cg	10.80	3.0	3.1	13.6	14.00	3.8	13.4	4.7	2	0.20	-0.20	0.9	0.2	6.7	115		Y	N
TRDS	3015105	0.570	CP	24	24	30	PRO	0	0	2.2	3	4	MM1	5.0	6.10	2.4	0		SC_S	6.35	2.0	2.0	8.2	8.60	2.0	7.8	3.3	2	0.25	-0.15	0.8	-0.4	-20.0	91		Y	N
TRDN	2000000	123.767	CP	24	24	40		0	0	3.5	8	11	HC2	5.4	9.10	1.7	100	FG	CG	9.40	1.9	1.9	11.4	11.6	1.2	10.7	4.3	2	0.30	0.10	0.8	0.3	15.0	57		Y	N
TRDS	3000000	53.090	CP	60	60	45	PRO	0		9.8	15	10	HC2	5.4	10.69	3.0	100	LC	LC	11.02	4.6	4.9	15.6	15.94	5.6	15.0	7.2	2	0.33	-0.03	0.7	2.0	41.0	51		Y	N
TRDS	2050000	3.010	CP	36	36	30	PRO	0		3.4	5	2	MM	5.6	8.02	2.3	100	SC	CG	8.25	2.3	2.3	10.6	10.70	6.3	10.3	8.2	2	0.15	0.05	0.8	0.7	23.3	88		Y	N
TRDS	2050300	2.930	CP	60	60	45	PRO	0		7.6	7	4	MM1	5.6	10.20	4.3	100	SC	CG	10.73	4.7	4.7	15.1	15.50	9.8	14.6	12.7	2	0.07	-0.33	1.2	0.7	14.0	66		Y	N
PRD	6031	3.893	PA2	66	90	51	MIT	0	0	12	6	6	MM_MM	5.37	10.3	6	30	S	SC	10.95	6	6	14.7	17	16.0	14.7	19.0	2	0.05	-2.25	1.3	-0.5	-9.1	63		Y	N
PRD	6402	16.196	PA	60	72	42	MIT	0	0	11	4	4	MM_MM	5.30	12.6	5	0	N	LC	13.4	5.1	5.2	18.1	18.8	11	18	12.7	2	0.30	-0.40	1.9	0.0	0.0	55		Y	N
PRD	6407	3.176	CP	48	60	44	MIT	0	0	6.90	2	4	MM_MM	5.55	8.76	3.9	90	CG	CG	9.36	3.6	3.8	13.04	13.2	3.4	12.7	10.9	2	0.24	0.08	1.4	0.1	2.5	72		Y	N
CRD	2100000	18.130	cp	36	36	38				3.8	4	6	mm	5	8.30	2.0	100	cg_fg	cg_fg	8.46	2.8	2.9	10.9	10.9	2.3	10.30	5.5	2	-0.37	-0.37	0.4	1.0	33.3	79		Y	N
TRDS	2050610	0.370	PP	36	36	40	PRO			6.0	3	1	MM	5.0	8.95	3.0	0		CG	9.05	3.0	3.1	11.4	11.55	12.3	10.8	13.9	2	-0.50	-0.65	0.3	0.0	0.0	50		Y	N
CRD	2100000	18.960	cp	48	48	40				8	8	5	hc	5	7.22	3.0	100	fg_cg	lc	7.74	2.5	2.6	8.1	8.0	5.7	9.94	13.6	2	-2.24	-2.17	1.3	1.0	25.0	50		Y	N
PRD	6423	0.071	CP	48	48	40	PRO	10	0	2	1	1	PA_PA	5.37	6.74	3.7	0	N	ORG	7.1	4	4.2	10.92	11.04	3.6	10.44	6.9	2	-0.06	-0.18	0.9	0.3	7.5	200	Y		N
PRD	6415	16.615	CP	48	48	34	PRO	0	0	5.70	1	0	PA_PA	4.95	9.02	3.6	100	ORG	S_ORG	9.48	3.7	3.5	10.68	13.96	6	10.16	20.4	2	0.78	-2.50	1.4	0.4	10.0	70	Y		N
PRD	46437	0.051	CP	36	36	40	PRO	0	0	2.5	3	1	MC_MM	5.37	11.4	2.3	100	LG	LG	10.88	3	2.9	13.18	14.08	5	12.24	6	2	0.20	-0.70	-1.4	0.7	23.3	120	Y		N
PRD	6407	7.708	CP	60	60	48	PRO	0	0	6.70	4	1	MM_MM	5.55	10.5	5	100	CG_SC	CG	10.68	4.6	4.8	15.35	15.5	5.4	15.06	6.7	2	0.22	0.07	0.3	0.0	0.0	75	Y		N
PRD	6415	9.893	PA	60	84	35	MIT	0	0	4.50	2	6	MM_MM	4.95	6.64	5.8	100	CG	CG	6.66	4.4	4.4	10.54	10.84	13.5	10.26	19.6	2	-0.22	-0.52	0.1	-0.8	-16.0	156	Y		N
PRD	6030	3.658	PA	48	72	36	PRO	0	0	7.6	2	0	MM_PA	5.37	7.45	3.8	100	FG	FS	7.30	3.1	3.2	10.2	12.4	2.8	9.6	5.9	2	2.00	-0.20	-0.4	0.2	5.0	79	Y		N
WRD	6265	2.427	co	36	72	33		0	0	5	6	8	mm	4.75	5.65	3	100	sc	s_cg	7	3	2.85	10	10.4	4.2	9.6	5.1	2	0.40	0.00	4.1	0.0	0.0	120	Y		N
TRDS	2300000	1.170	CP	36	36	40	PRO	0		3.6	1	1	PA5	5.4	10.10	3.0	20	O	O	10.99	2.7	2.7	0.0	0.00	0.0	0.0	0.0	2	-13.71	-13.71	2.2	0.0	1.6	83	Y		N
TRDN	2000000	85.884	CP	48	48	50		0	0	2.0	3	2	PA	5.8	9.00	3.3	10	SC/B	SC	9.30	4	4.3	13.1	13.5	6.6	13.8	14.5	2	0.20	-0.20	0.6	0.7	17.5	200	Y		N
TRDN	2079000	5.107	CP	96	96	65		0	0	10.2	4	5	MC2	5.5	14.00	8.0	5	CG	BO_SC	14.50	7.9	7.7	20.6	21.2	20.4	20.5	28.3	2	-1.20	-1.80	0.8	0.0	0.0	78	Y		N
PRD	6030	3.365	CP	36	36	36	PRO	0	0	2.6	3	5	MM_MM	5.37	10.15	3.0	0	N	FG	10.15	3.0	3.2	12.7	13.0	3.0	12.2	5.7	2	-0.15	-0.45	0.0	0.0	0.0	115	Y		N
PRD	6402	8.273	CP	36	36	44	PRO	0	0	3.60	3	5	MM_MM	4.95	6.5	3	0	N	FG	6.54	3.0	3.2	9.26	9.4	3.5	8.66	4.4	2	-0.14	-0.28	0.1	0.0	0.0	83	Y		N
PRD	6030	1.006	CP	48	48	60	PRO	0	0	6.2	2	1	MM_PA	5.37	13.35	4.0	0	N	O	13.30	4.0	4.0	15	18.7	9.0	15.0	10.4	2	1.40	-2.30	-0.1	0.0	0.0	65	Y		N
PRD	6030	4.085	CP	72	72	36	PRO	0	0	12.4	1	0	PA_PA	5.37	7.15	6.0	0	N	O	7.40	6.0	6.3	10.9	12.1		10.9		2	-1.30	-2.50	0.7	0.0	0.0	48	Y		N
PRD	6030	10.382	CP	48	48	40	PRO	0	0	8.5	1	1	PA_PA	5.37	10.45	4.0	0	N	CS	10.75	4.0	4.5	13.3	14.4	8.7	12.9	12.6	2	-0.35	-1.45	0.8	0.0	0.0	47	Y		N
PRD	6402	17.041	CP	24	24	34	PRO	0	0	4.8	2	6	PA_PA	5.30	9	2	0	CG	O	10.1	2.0	2.2	12.1	12.5	5.4	12	6	2	0.40	0.00	3.2	0.0	0.0	42	Y		N
PRD	6441	0.126	CP	18	18	28	PRO	0	0	6.5	0	0	PA_PA	4.75	5.54	1.5	0	N	O	6.24	1.5	3.0	6.16	9.20	8.30	6.1	26.0	2	1.46	-1.58	2.5	0.0	0.0	23	Y		N
TRDN	1480000	4.180	CP	48	48	36		0	0	5.2	2	6	MC1	5.40	9.00	4.0	0		CG_FG	9.00	3.9	4.0	12.5	12.9	9.6	12.3	14.8	2	0.00	-0.40	0.0	0.0	0.0	77	Y		N
TRDN	3000000B	93.019	CP	36	36	38		0	0	3.0	3	5	MM	5.8	10.20	3.0	0	CG	CG	10.40	2.6	13.1	12.2	12.8	4.0	11.9	5.0	2	-0.20	-0.80	0.5	0.0	0.0	100	Y		N
TRDN	2000810	0.390	CP	36	36	40		0	0	3.0	3	3	MM	5.6	9.70	3.0	0		S	9.70	2.9	2.9	11.2	11.7	6.2	11.1	11.2	2	-0.90	-1.40	0.0	0.0	0.0	100	Y		N
TRDN	1500000	12.105	CP	60	60	40		0	0	4.0	3	3	MM1	0.0	2.70	5.0	0	NA	CG	2.70	5.0	5.1	7.3	7.5	6.6	6.4	8.0	2	-0.20	-0.40	0.0	0.0	0.0	125	Y		N
TRDN	1500000	13.066	CP	60	60	34		0	0	6.0	4	4	MM1	0.0	4.00	5.0	0	NA	CG	4.10	5.4	5.4	9.2	9.3	6.5	8.2	11.3	2	-0.20	-0.30	0.3	0.0	0.0	83	Y		N
TRDN	2085000	1.291	CP	24	24	40		0	0	2.0	5	1	N	5.7	9.30	2.0	0		O_S	9.30	2.0	2.3	11.1	11.0	2.0	10.9	2.5	2	-0.30	-0.20	0.0	0.0	0.0	100	Y		N
TRDN	2000000	129.831	CP	72	72	70		0	0	NA	0	0	PA	5.80	13.70	6.5	0		ORG	14.20	6.3	6.3	17.2	19.6	9.9	17.0	NA	2	-0.90	-3.30	0.7	-0.5	-8.3	####	Y		N
TRDN	2900000	15.063	CP	36	36	30		0	0	NA	3	2	PA5	5.80	8.80	2.9	0		O	7.70	2.9	3.0				10.0	3.9	2	-10.60	-10.60	-3.7	0.1	3.3	####	Y		N
TRDS	2000000	76.716	CP	36	36	40		0	10	1.0	1	1	N	5.8	9.20	3.0	0		O	9.25	3.5	3.5	12.8	12.70	0.3	12.5	1.6	2	-0.05	0.05	0.1	0.0	0.0	300	Y		N
TRDS	2058000	0.960	CP	36	36	41	PRO	0		10.0	0	0	PA	5.5	7.90	3.0	0		O	8.00	2.4	2.9	8.9	11.00	8.0	8.8	9.7	2	0.60	-1.50	0.2	0.0	0.0	30	Y		N
TRDS	2300000	0.550	CP	36	36	40	PRO	0		4.3	1	1	PA1	5.4	11.51	2.3	0		O	10.59	2.8	2.9	11.4	11.68	8.9	10.8	8.9	2	-1.74	-1.97	-2.3	0.7	23.5	70	Y		N
TRDS	3000000	58.130	CP	24	24	40	PRO	0		3.3	4	4	PA1	5.4	6.53	2.1	0		O	8.36	1.9	2.0	8.6	9.09	3.3	8.0	3.3	2	-1.21	-1.71	4.6	-0.1	-3.3	61	Y		N
TRDS	3000000	58.750	CP	24	24	30	PRO	0		5.9	2	8	PA1	5.4	8.50	2.0	0		O	8.30	1.3	1.3	9.2	9.68	4.3	9.1	4.3	2	0.07	-0.43	-0.7	0.0	1.6	34	Y		N
CRD	2150000	3.430	cp	18	18	30				2.2	1	1	pa	5	6.14	1.9	0		s_o	6.69	1.8	1.8	7.3	8.8	5.0	7.45	8.8	2	0.30	-1.14	1.9	-0.4	-26.7	68	Y		N
CRD	2100000	1.590	cp	18	18	30				2.2	3	2	pa	5	7.61	1.5	0		fg	8.14	1.5	3.0	7.3	7.6	2.5	10.43	4.1	2	-2.02	-2.29	1.7	0.0	0.0	68	Y		N
CRD	2100000	1.630	cp	18	18	30				4.6	1	1	pa	5	8.04	1.7	0		s	9.02	1.5	1.6	10.3	10.8	6.8	10.01	9.2	2	0.30	-0.19	3.3	-0.2	-13.3	33	Y		N
CRD	2100000	4.600	cp	24	24	30				2.2	3	1	pa	5	7.68	2.2	0		s_o	8.96	1.7	1.9	9.8	11.3	8.0	9.51	11.0	2	0.66	-0.88	4.3	-0.2	-10.0	91		?	Y
TRDN	2087000	0.144	CP	60	60	40		N	N	8.0	4	3	MM1	5.6	10.25	4.9	0		CG	10.80	5.0	7.4	16.3	16.8	11.7	15.7	16.1	2	1.00	0.50	1.4	0.1	2.0	63			Y
HRD	8578	1.203	CP	48	48	41	PRO	N	N	2.0	11	3	MM	5	7.41	4.09	0	NA	CG	8.5	4	5.4	12.92	13.38	7.4	12.81	8.4	2	0.88	0.42	2.7	-0.1	-2.3	200			Y
TRDN	3000000B	92.340	CP	18	18	34		N	N	3.0	6	6	HC	5.8	7.90	1.5	0	N	O	8.70	1.5	12.9	12.0	12.9	3.0	11.6	4.0	2	2.65	1.80	2.4	0.0	0.0	50			Y
TRDN	2087000	0.089	CP	18	18	30		N	N	3.0	8	8	HC2	5.6	7.80	1.5	0		CG	8.40	1.7	2.4	10.9	11.2	3.7	10.4	4.8	2	1.10	0.80	2.0	0.0	0.0	50			Y
TRDN	1445000	3.826	CP	18	18			100	NA	NA	0	1	PA	5.4	NA	NA	NA	NA	O	9.90	1.6	1.6	10.9	11.4	7.9	10.5	11.0	2	-0.10	-0.60	####	#####	#####	####			Y
HRD	8578	0.129	CP	24	24	30	PRO	100	0	15.0	3	16	HC												5			2	0.00	0.00	0.0	2.0	100.0	13			Y
WRD	6590	26.624	CP	18	18	28		100		3.5	1	1	PA	4.75		1.5	100	CS	S_O	11.20	1.2	1.1	11.40	13.10	6.2	10.70	10.8	2	0.70	-1.00	####	0.0	0.0	43			Y
SRD	7540	107.755	CP	36	36	47	PRO	100	0	5.6	2	2	N	5	9.1	3	0	N	CG_SC	10.2	3	16.4	15.1	16.1	2.5	14.7	6	2	2.90	1.90	2.3	0.0	0.0	54			Y
TRDS	2050300	8.100	CP	60	60	40	PRO	100		7.0	7	9	HC2	5.5	7.80	1.3	0		LC	10.65	4.9	5.9	15.9	16.10	6.5	15.3	14.0	2	0.55	0.35	7.1	3.7	74.0	71			Y
TRDS	2050300	7.000	CP	24	24	30	PRO	100		6.2	4	19	MM	5.8	8.39	0.0			CG	9.60	2.0	2.3	13.2	13.60	3.5	13.0	5.0	2	2.00	1.60	4.0	2.0	100.0	32			Y
PRD	6441	0.613	PA	48	48	30	PRO	90	0	5	1	1	PA_PA	5.30	7.2	5.1	####	CG	O	6.7	3.2	3.3	8.9	9.2		8.6		2	-0.70	-1.00	-1.7	-1.1	-27.5	80			Y
PRD	6402	18.149	CP	48	48	34	PRO	90	0	15	1	2	PA_PA	5.30	6.85	2	90	O	O	7.3	3.3	3.8	10.3	11.1	2.9	9.6	3.8	2	0.50	-0.30	1.3	2.0	50.0	27			Y
PRD	6402	19.280	CP	18	18	30	PRO	90	0	3	2	1	PA_PA	5.30	7.6	1.4	0	N	O	8.1	1.5	2.1	10.5	10.9	1.8	9.9	2.9	2	1.30	0.90	1.7	0.1	6.7	50			Y
PRD	6410	1.565	CP	36	36	72	PRO	80	5	6	0	3	PA_HC	5.30	18.7	2.9	0	N	ORG	18.82	2.8	2.7	20.1	20.32	12	19.9	14.7	2	-1.30	-1.52	0.1	0.1	3.3	50			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
PRD	6235	17.579	CP	36	36	34	PRO	80	0	5.3	1	1	PA_NT	5.55	8.20	2.6	50	O_S	O	8.20	3.0	4.6	12.70	14.50	2.2	11.40	15.3	2	3.30	1.50	0.0	0.4	13.3	57			Y
PRD	6030	11.712	CP	48	72	57	PRO	75	0	4.8	4	3	MM_MM	5.37	8.20	1.9	100	FG	CG	8.25	2.2	2.2	10.5	10.7	6.4	10.2	7.6	2	0.25	0.05	0.1	2.1	52.5	125			Y
TRDN	2086000	1.221	CP	48	48			75	0	NA	1	5	PA5	5.7	7.50	3.4	100	O	O	8.70	1.6	1.4	8.5	8.8	NA	8.3	NA	2	-1.50	-1.80	####	0.6	15.0	####			Y
TRDN	1500000	0.375	CP	36	36	40		75	75	3.3	3	2	ES	5.6	10.85	3.0	0		O	11.10	2.4	3.2	13.8	14.3	10.9	13.4	15.2	2	0.80	0.30	0.6	0.0	0.0	91			Y
TRDN	2000860	1.828	CP	36	36	60		70	80	2.4	3	1	MM1	5.7	14.00	2.9	0		S	14.80	3.0	3.9	18.6	19.6	7.6	17.9	17.2	2	1.80	0.80	1.3	0.1	3.3	125			Y
PRD	6435	0.942	CP	48	48	32	PRO	60	0	4	2	2	MM_PA	5.30	7.03	4	0	N	G_ORC	7.23	4.1	4.8	9.17	9.5	10	9.07	40	2	-1.83	-2.16	0.6	0.0	0.0	100			Y
TRDN	2000860	1.405	CP	36	36	40		60	0	3.6	3	3	MM1	5.7	7.20	2.5	0		O_F	7.50	3.0	3.1	9.9	10.1	4.3	9.3	5.2	2	-0.40	-0.60	0.8	0.5	16.7	83			Y
WRD	6265	7.693	cp	48	48	48		60	0	7.5	19	17	hc	5	4.25	2.2	0	0	lc_sc	11.75	4	4.4	15.1	15.2	9	14.8	10.2	2	-0.55	-0.65	15.6	1.8	45.0	53			Y
TRDS	3030000	5.830	PA	72	95	46	PRO	60		11.5	14	17		5.4	10.20	3.6	90	LC	BO	9.91	5.5	6.6	15.8	16.73	5.9	15.2	12.8	2	1.28	0.39	-0.6	2.4	40.4	69			Y
WRD	6590	26.544	CP	36	36	38		60	0	15.2	2	1	PA	4.00	6.50	2.6	0		S	8.15	3.0	3.2	11.10	11.70	7.3	10.70	8.3	2	0.55	-0.05	4.3	0.4	13.3	20			Y
PRD	6333	1.069	CP	36	36	36	PRO	60	0	8.4	16	14	HC_HC	5.37	10.90	2.4	0	N	LC	13.25	3.0	4.1	16.6	16.9	7.5	15.9	9.1	2	0.65	0.35	6.5	0.6	20.0	36			Y
TRDS	3030000	11.200	CP	18	18	32	PRO	50	5	2.0	3	3	MM	5.7	7.61	1.1	100	O	O	7.90	1.3	1.5	8.4	8.66	1.3	7.9	4.3	2	-0.56	-0.85	0.9	0.4	25.7	76			Y
TRDN	2000000	134.694	CP	36	36	40		50	20	2.1	14	16	HC2	5.80	9.70	3.0	40	CG_LC	FS_LC	13.10	1.6	NA	NA	NA	NA	15.7	3.8	2	######	#####	8.5	0.0	0.0	143			Y
HRD	8578	3.490	CP	18	18	37	PRO	50	0	1.5	11	6	HC	5	9.05	1.25	25	FG	FG	12.9	0.6	1.8	13.3	13.45	1.5	13.2	2	2	-0.05	-0.20	10.4	0.3	16.7	100			Y
TRDN	2000900	0.474	CP	24	24	30		50	20	NA	1	1	PA5	5.7	6.70	1.5		O	O	7.30	1.4	1.5	6.3					2	-8.70	-2.40	2.0	0.5	25.0	####			Y
PRD	6319	7.736	CP	24	24	38	PRO	50	0	4.2	19	17	HC_HC	5.37	12.2	2	25	CG	CG	14.45	1.4	1.4	15	15.3	4.2	14.7	12.0	2	-0.55	-0.85	6.1	0.0	0.0	48			Y
PRD	6416	1.841	CP2	48	48	40	PRO	50	5	12	5	7	HC_HC	5.3	9.08	2.4	0	N	LC	8.98	4.0	6.4	16.74	17.02	8.7	13.98	18.5	2	4.04	3.76	-0.2	1.6	40.0	33			Y
PRD	6352	7.000	CP	36	36	50	PRO	50	0	6.3	14	12	HC_HC	5.37	20.2	2.2	0.0	N	LC	27.58	3	7.1	34.31	34.91	8.2	33.91	9	2	4.33	3.73	14.8	0.8	26.7	48			Y
TRDS	2050400	3.350	CP	36	36	40	PRO	40		6.0	14	11	HC2	5.6	11.05	1.4	100	LC	LC	11.50	1.6	1.7	12.7	12.70	2.6	12.2	6.4	2	-0.40	-0.40	1.1	1.6	53.3	50			Y
TRDN	1480000	4.090	CP	36	36	29		30	0	2.9	9	4	HC2	5.40	8.55	1.0	100	FG_CG	CG_B	8.80	1.8	1.8	10.4	10.7	5.4	9.9	8.9	2	0.10	-0.20	0.9	2.0	66.7	103			Y
TRDN	2000810	0.300	CP	36	36	30		30	10	3.0	7	10	HC	5.6	7.00	3.0	20/80	CG	S_CG	8.40	2.1	2.2	10.6	10.7	4.9	10.5	8.1	2	0.20	0.10	4.7	0.0	0.0	100			Y
PRD	6402	22.952	CP	48	48	40	PRO	30	0	4.7	5	3	MM_MM	4.75	9.62	1.8	100	N	SC_FG	10.96	1.9	1.9	12.92	13.04	5.10	12.2	12.6	2	0.18	0.06	3.4	2.2	55.0	85			Y
PRD	6402	19.268	CP	36	36	44	PRO	30	0	4.1	2	1	MM_PA	5.30	8.6	2.8	0	N	O	9.2	2.9	3.2	11	11.3				2	-0.80	-1.10	1.4	0.2	6.7	73			Y
PRD	6416	2.348	CP2	48	48	62	PRO	30	0	5	4	4	MM_MM	5.3	13.52	4.1	0	N	LG_SC	15.26	4.0	5.2	20.44	21.02	4.9	19.54	9.2	2	1.76	1.18	2.8	-0.1	-2.5	80			Y
PRD	6430	1.173	CP	24	24	46	PRO	30	0	3.4	4	3	NT	4.75	14.2	2	0	N	FG	16.80	1.8	2.1	19.86	19.92	4.30	18.0	12.5	2	1.32	1.26	5.6	0.0	0.0	59			Y
PRD	6407	7.338	CP	48	48	54	PRO	29	0	3.90	5	4		5.55	14.9	2.8	90	SC	SC	15	4.0	5.7	19.66	20.16	4.7	19.2	9.3	2	1.16	0.66	0.3	1.2	30.0	103			Y
PRD	6434	4.497	CP	36	36	34	PRO	28	0	4.4	4	3	MM_MM	4.75	8.72	1.9	100	FG	SC_FG	8.62	2.7	2.8	11.10	11.28	3.60	10.4	8.2	2	-0.04	-0.22	-0.3	1.1	36.7	68			Y
WRD	6265	4.516	cp	48	48	41		25	0	3.1	2	1	mm	4.75	8.1	4.1	75	s	s	8.1	4.2	4.3	11.9	12	3.2	11.8	3.6	2	-0.30	-0.40	0.0	-0.1	-2.5	129			Y
TRDS	3030000	15.540	CP	48	48	44	PRO	25		3.3	3	3	MM	4.9	10.40	2.5	50	SC	LC	11.05	2.5	2.5	13.5	13.58	3.0	13.2	4.3	2	0.07	-0.03	1.5	1.5	38.5	122			Y
TRDN	2079000	7.488	CP	36	36	30		25	0	6.0	5	6	MM1	5.5	10.80	2.2	10	CG_SC	SC_BC	11.60	2.5	2.6	14.0	14.4	4.3	13.8	6.6	2	0.30	-0.10	2.7	0.8	26.7	50			Y
PRD	6438	0.385	CP	24	24	40	PRO	25	10	2.5	5	3	MM_PA	5.30	10.5	1.4	0.0	N	CG	10.6	1.7	1.8	11.7	12.8	50	11.7	50	2	0.50	-0.60	0.2	0.6	30.0	80			Y
PRD	6040	8.525	CP	36	36	44	PRO	25	0	2.4	3	16	MC_HC	5.37	9.25	3.0	0	N	O	11.45	3.0	4.4	15.2	15.7	5.9	15.0	8.1	2	1.25	0.75	5.0	0.0	0.0	125			Y
PRD	6430	1.013	CP	24	24	30	PRO	25	0	3.3	2	3	MM_MM	4.75	5.82	2	0	N	O	6.28	2.0	2.2	9.05	9.20	2.40	7.9	4.5	2	0.92	0.77	1.5	0.0	0.0	61			Y
PRD	6407	6.976	CP	48	48	34	PRO	22	0	3.20	5	3		5.55	8.66	3.1	100	CG	CG	8.56	3.8	3.8	12.46	12.6	3.2	12.06	6	2	0.24	0.10	-0.3	0.9	22.5	125			Y
PRD	6420	1.578	CP	48	48	30	PRO	20	30	3.5	12	5	HC_HC	5.30	9.04	3.8	75	LG	LG	9.04	3.0	3.2	11.06	11.2	7.7	10.82	13.9	2	-0.84	-0.98	0.0	0.2	5.0	114			Y
HRD	8578	0.111	CP	24	24	32	PRO	20	10	3.0	3	17	HC															2	0.00	0.00	0.0	2.0	100.0	67			Y
TRDN	2085000	1.123	CP	48	48	40		20	0	3.8	3	3	MM1	5.7	9.20	2.6	100	CG	CG_SC	9.70	2.7	2.7	12.5	12.6	5.4	11.9	7.5	2	0.20	0.10	1.3	1.4	35.0	105			Y
WRD	6265	2.515	cp	48	48	30		20	10	1.6	8	3.5	mm	4.75	6.4	3	60	fg	fg	6.9	3.75	3.7	10.2	10.7	1.6	9.2	2	2	0.05	-0.45	1.7	1.0	25.0	250			Y
TRDN	3000000E	92.743	CP	120	120	70		20	0	15.2	6	6	MC	5.8	17.20	10.0	0	N	B	20.60	10.0	32.5	28.4	29.0	16.1	28.2	17.1	2	-1.59	-2.20	4.9	0.0	0.0	66			Y
TRDN	2084015	0.133	CP	72	72	54		20	0	10.2	12	10	HC2	5.7	15.50	5.4	100	SC	BD_SC	15.90	6.4	6.4	23.0	23.3	11.0	22.4	11.6	2	1.00	0.70	0.7	0.6	10.0	59			Y
TRDS	3030600	0.030	CP	36	36	35	PRO	20		4.3	5	6	MM1	5.7	9.70	1.8	100	CG	CG	9.90	2.2	5.2	13.1	13.40	4.1	12.1	4.3	2	1.30	1.00	0.6	1.2	40.0	70			Y
TRDS	3030000	19.020	CP	24	24	40	PRO	20		2.0	8	7	HC	5.7	15.65	2.0	0		CG	7.85	0.7	0.8	9.0	9.10	2.7	8.8	5.2	2	0.55	0.40	-19.5	0.0	0.0	100			Y
HRD	8578	1.020	CP	24	24	37	PRO	20	0	3.5	9	8	HC2	5	10.2	7.25	0	NA	SC	11.4	2	2.4	18.05	18.55	9	17.6	11	2	5.15	4.65	3.4	-5.3	-262.5	57			Y
HRD	8578	3.020	CP	24	24	36	PRO	20	20	2.5	14		HC2	5	11.1	2.2	0	NA	CG	13.54	1.65	1.8	16.74	16.93	4.5	16.31	5.5	2	1.74	1.55	6.8	-0.2	-10.0	80			Y
TRDN	1445700	1.102	CP	24	24	42		20	0	2.1	6	3	MM1	5.4	9.50	1.5	0		CG_SC	10.70	2.0	2.8	13.3	13.4	4.2	13.0	4.7	2	0.70	0.60	2.9	0.5	25.0	95			Y
TRDN	2000810	1.107	CP	36	36	40		15	5	3.0	3	2	PA	5.6	13.60	2.3	5_10	O	F	13.60	2.6	2.6	15.1	15.6	5.7	14.6	8.3	2	-0.60	-1.10	0.0	0.7	23.3	100			Y
PRD	46041	0.831	PA		78	38	MIT	15	0	5	3	3	MM_MM	5.30	8.2	4.2	100	SC_LG	SC	9.24	3.8	4	13.24	13.34	4.7	12.58	7.2	2	0.30	0.20	2.7	-4.2	#####	130			Y
TRDN	2000000	108.011	CP	36	36	48		15	0	3.5	13	NA	HC2	5.6	10.80	1.6	45	CG	FG_CG	10.90	1.7	1.7	NA	NA	NA	NA	NA	2	######	#####	0.2	1.4	46.7	86			Y
TRDN	2085000	3.019	CP	60	60	40		15	0	9.9	6	5	AF1	5.7	8.30	4.7	100	LC_B	LC_B	9.60	4.0	4.1	13.3	13.6	4.2	12.9	14.0	2	0.00	-0.30	3.3	0.3	6.0	51			Y
TRDS	3000000	53.180	PA	24	30	36	PRO	15	15	3.6	8	7	HC2	5.4	6.10	1.6	100	CG	CG	7.54	1.6	1.6	9.3	9.41	2.6	8.9	3.3	2	0.23	0.16	4.0	0.4	19.6	69			Y
PRD	6410	0.513	CP	36	36	50		15	5	1.5	5	8	HC_HC	5.30	13.3	2.6	75	LG	LG	13.34	2.6	2.7	15.92	16.4	1.7	15.14	7.8	2	0.46	-0.02	0.1	0.4	13.3	200			Y
TRDN	1470000	7.225	CP	60	60	85		15	0	20.0	1	1	PA5	5.40	22.70	3.9	0		O	23.70	4.9	5.1	27.1	NA	25.0	NA	28.0	2	######	-1.50	1.2	1.1	22.0	25			Y
PRD	6407	1.743	CP	24	24	37	PRO	15	0	9	4	5	MM_MM	5.30	9.4	1.6	0	0	CG	9.5	2.0	3.2	12	12.2	1.9	11.3	8.6	2	0.70	0.50	0.3	0.4	20.0	22			Y
TRDN	2000000	125.242	CP	48	48	60		15	0	4.5	4	4	MM1	5.6	13.20	3.2	0	NA	FG	14.70	3.9	4.7	18.8	19.2	8.8	18.2	13.3	2	0.60	0.20	2.5	0.8	20.0	89			Y
WRD	6590	27.907	CO	38	76	33		15	0	4	2	9	HC	4.75	6.90	3.6	100	SC_LC	SC	8.65	4.2	4.2	15.90	16.20	3.9	14.90	5.5	2	3.35	3.05	5.3	-0.4	-13.7	158			Y
PRD	6416	1.842	CP2	48	48	40	PRO	15	0	12	5	7	HC_HC	5.3	9.12	3.3	90	SC_LG	LC	8.88	4.0	6.7	16.74	17.02	8.7	13.98	18.5	2	4.14	3.86	-0.6	0.7	17.5	33			Y
HRD	8578	0.887	CP	36	36	36	PRO	15	0	5.0	8	10	HC2	5	7.35	2.56	50	SC	SC	9.92	3	3.5	13.57	13.79	9	13.62	10	2	0.87	0.65	7.1	0.4	14.7	60			Y
PRD	6317	2.112	CP	72	72	44	PRO	15	15	8.0	9	7	HC_MM	5.37	10.18	6.0	0	N	LC	12.22	6.0	8.0	20.04	20.32	8.6	19.34	13.2	2	2.10	1.82	4.6	0.0	0.0	75			Y
PRD	6434	4.716	CP	36	36	40	PRO	15	0	3.6	4	3	MM_MM	4.75	6.26	3	0	N	CG	8.60	3.1	4.2	12.71	12.92	3.70	12.0	8.2	2	1.22	1.01	5.9	0.0	0.0	83			Y
HRD	8578	2.360	CP	18	18	29	PRO	10	0	2.5	4	9	MM	5	7.55	1.3	90	FG	FG	8.65	1.31	1.25	9.64	10.03	3	9.51	3.5	2	0.07	-0.32	3.8	0.2	13.3	60			Y
HRD	8578	2.445	CP	18	18	25	PRO	10	0	3.0	20	16	MM	5	6.46	1.34	100	FG	FG	6.65	0.98	1.75	8.05	8.39	1.9	8.05	2	2	0.76	0.42	0.8	0.2	10.7	50			Y
PRD	6402	10.048	CP	24	24	30	PRO	10	0	2.90	8	11	HC_HC	4.95	6.14	1.6	100	CG	CG	6.7	1.6	1.6	8.4	8.68	2.2	8	3.4	2	0.38	0.10	1.9	0.4	20.0	69			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
TRDN	2000860	1.069	CP	48	48	40		10	0	7.2	2	6	PA	5.7	8.90	3.7	0		O	9.20	4.0	5.3	13.8	14.0	4.2	13.5	7.9	2	0.80	0.60	0.7	0.3	7.5	56			Y
PRD	6317	5.880	CP	36	36	30	PRO	10	0	4.0	26	5	HC_HC	5.37	6.80	2.6	0	N	B_LC	8.40	3.0	5.4	13.78	14.32	3.7	13.20	8.3	2	2.92	2.38	5.3	0.4	13.3	75			Y
TRDS	2050050	0.820	CP	108	108	80	PRO	10	5	4.0	9	10	HC3	5.5	26.00	9.8	0		B	32.30	9.6	10.0	42.4	43.40	8.4	41.2	12.4	2	1.50	0.50	7.9	-0.8	-8.9	225			Y
TRDS	3030000	0.050	PA	91	141	48	PRO	10		16.4	13	10		5.4	7.38	7.9	0		BO	10.27	7.9	11.5	18.8	20.07	0.0	18.4	29.5	2	1.94	0.62	6.1	-0.3	-3.8	72			Y
PRD	6326	5.861	CP	24	24	32	PRO	10	0	4.6	8	12	HC_HC	5.37	9.15	1.8	50	SC_CG	SC	10.30	2.0	2.9	14.5	15.4	4.3	14.2	5.1	2	3.10	2.20	3.6	0.2	10.0	43			Y
TRDN	2000860	0.715	CP	36	36	40		5	0	3.7	3	6	MM1	5.7	6.70	3.1	100	O	O_CG	7.50	2.5	2.5	9.0	9.2	4.6	8.8	5.9	2	-0.80	-1.00	2.0	-0.1	-3.3	81			Y
TRDS	2050610	0.300	PP	36	36	40	PRO	5		5.5	6	4	MM1	5.6	11.85	2.1	75	SC	SC	11.75	3.0	3.3	15.0	15.10	7.9	14.7	10.5	2	0.35	0.25	-0.2	0.9	30.0	55			Y
TRDN	2085000	3.115	CP	36	36	36		5	0	7.2	6	7	AF1	5.7	8.90	2.9	10	LC	LC_CG	9.00	3.0	3.7	12.0	12.2	5.1	11.4	10.7	2	0.20	0.00	0.3	0.1	3.3	42			Y
TRDN	2000850	0.392	CP	24	24	32		5	15	2.0	2	0	PA5	5.7	6.40	1.9	0		O	7.30	1.9	1.9	8.3					2	-9.20	-0.90	2.8	0.1	5.0	100			Y
TRDS	2050000	5.050	CP	36	36	30	PRO	5		2.7	17	7	HC2	5.0	6.80	2.8	0		CG	6.90	3.0	4.0	10.9	10.20	3.1	10.5	7.3	2	0.30	1.00	0.3	0.2	6.7	111			Y
TRDS	2057000	2.140	CP	18	18	45	PRO	5		3.5	6	3	MM1	5.0	9.45	1.6	80	SC	SC	10.25	1.3	1.5	11.5	11.70	2.8	11.4	4.5	2	0.15	-0.05	1.8	-0.1	-6.7	43			Y
HRD	8578	0.219	CP	36	36	30	PRO	5	5	5.0	8	12	HC	5	9.02	2.55	10	90	CG	9.93	2.2	2.2	10.93	15.50	5.6	14.88	6	2	3.37	-1.20	3.0	0.5	15.0	60			Y
TRDN	2085000	2.659	CP	48	48	40		5	0	10.5	6	6	AF1	5.7	8.20	4.0	10	LC	LC_B	8.00	4.0	4.3	12.0	12.6	3.6	11.0	11.5	2	0.60	0.00	-0.5	0.0	0.0	38			Y
TRDS	3030100	0.250	CP	18	18	30	PRO	5	10	1.5	30	12	HC2	5.7	8.10	1.0	0		CG	9.40	1.5	2.0	11.2	11.30	4.3	10.8	5.7	2	0.40	0.30	4.3	0.5	33.3	100			Y
HRD	8578	0.928	CP	24	24	30	PRO	5	0	2.5	7	6	HC2	5	8.39	1.83	10	CG	CG	9.72	2	2.2	12.55	12.78	3.4	12.36	3.7	2	1.06	0.83	4.4	0.2	8.5	80			Y
HRD	8578	3.386	CP	18	18	36	PRO	5	0	2.5	12	16	HC2	5	9.55	1.35	0	NA	FG	10.74	1.5	1.8	13.4	13.60	6	13.25	7.6	2	1.36	1.16	3.3	0.2	10.0	60			Y
HRD	8578	3.511	CP	36	36	30	PRO	5	0	3.0	8	15	HC2	5	10.1	2.92	0	NA	CG	10.9	3	3.5	14.91	15.02	4	14.65	4.8	2	1.12	1.01	2.6	0.1	2.7	100			Y
TRDS	3030000	16.420	CP	24	24	36	PRO	2		1.5	9	8	HC	5.4	9.40	2.0	0		FG	9.60	2.0	2.2	12.8	13.00	3.6	12.4	6.4	2	1.40	1.20	0.6	0.0	0.0	133			Y
PRD	6461	1.133	CP	36	48	48	PRO	0	0	4.2	6	4	HC_HC	4.75	12.7	1.9	100	SC	SC	13.55	2.0	1.9	15.19	15.39	4.20	14.4	6.4	2	-0.16	-0.36	1.8	1.1	36.7	95			Y
PRD	6241	0.727	CP	24	24	26	PRO	0	0	1.7	1	3	NT_NT	5.55	11.92	2.5	100	FG_S	S	12.73	2.3	2.3	14.85	15.10	1.9	14.43	2.3	2	0.07	-0.18	3.1	-0.5	-25.0	118			Y
TRDN	2934000	0.133	CP	48	48	40		0	0	3.1	3	5	MM1	5.6	11.55	3.6	100	FG_SC	FG_SC	12.70	3.1	2.9	15.4	15.6	2.6	15.1	3.7	2	-0.20	-0.40	2.9	0.4	10.0	129			Y
TRDN	1445000	9.731	CP	36	36	34		0	0	3.3	3	3	MM1	5.4	8.50	2.9	100	CG	FG_CG	9.00	2.7	2.7	11.5	11.6	5.5	11.3	7.2	2	-0.15	-0.20	1.5	0.1	3.3	91			Y
TRDN	1430310	0.356	CP	36	36	40		0	0	3.9	4	5	MM1	5.40	7.00	2.6	100	SC	SC_LC	7.60	3.0	3.4	10.7	10.8	5.4	10.4	6.8	2	0.20	0.10	1.5	0.4	13.3	77			Y
TRDS	3000000	49.500	CP	24	24	34	PRO	0		2.0	15	5	HC	5.4	9.22	1.6	100	SC	SC	9.84	2.0	2.3	11.4	11.55	3.3	11.2	8.2	2	-0.26	-0.36	1.8	0.4	19.6	102			Y
TRDS	3000000	49.360	CP	48	48	40	PRO	0		4.6	13	7	HC	5.4	7.18	2.8	100	SC	SC	8.27	3.3	3.3	11.2	11.38	4.9	10.8	7.9	2	-0.16	-0.33	2.7	1.2	30.3	87			Y
TRDS	2054000	6.540	cp	48	48	41		0	999	3.2	13	10	hc	5.0	10.80	3.1	100	lc_sc_fg	fg_lc	11.80	2.9	3.0	14.4	14.80	2.8	14.2	5.3	2	0.10	-0.30	2.4	0.9	22.5	125			Y
TRDS	2000000	77.077	CP	48	48	40		0	0	1.0	3		MM	5.8	8.90	3.4	100	LG	LG	9.80	3.6	3.7	13.6	13.55	2.9	13.4	8.5	2	0.15	0.20	2.3	0.6	15.0	400			Y
TRDS	3030105	0.001	CP	24	24	26	PRO	0		2.3	7	3	MM1	5.7	7.10	2.0	100	O	CG	7.70	1.5	1.6	9.0	9.10	2.5	8.4	6.1	2	-0.10	-0.20	2.3	0.0	0.0	87			Y
TRDS	3015300	0.040	CP	36	36	40	PRO	0	0	2.6	3	4	MM1	5.6	12.60	2.6	100	CG_FG	CG_SC	13.30	2.7	2.8	16.1	16.20	2.3	15.8	8.3	2	0.20	0.10	1.8	0.4	13.3	115			Y
TRDS	2059300	0.220	CP	48	48	32	PRO	0		4.0	8	2	MM1	5.6	8.40	3.3	100	FG	FG	8.80	3.1	3.1	11.7	12.05	2.1	11.2	8.6	2	0.15	-0.25	1.3	0.7	17.5	100			Y
WRD	6265	2.524	cp	24	24	30.5		0	0	2.7	9	8	mm	4.75	8	1.35	100	s	sc	9.3	1.4	1.3	10.1	10.4	3.6	9.9	10.4	2	-0.30	-0.60	4.3	0.7	32.5	74			Y
TRDN	2000000	122.678	CP	30	30			0	0	6.0	2	3	MM1	5.6	11.80	1.7	100	FG	O	13.40	1.9	2.1	15.2	15.6	3.5	14.4	5.5	2	0.30	-0.10	####	0.8	32.0	42			Y
TRDS	2050000	3.890	CP	24	24	26	PRO	0		5.8	6	8	HC2	5.0	6.60	1.4	100	CG	CG	6.85	1.7	1.8	8.5	8.70	6.1	7.9	8.3	2	0.15	-0.05	1.0	0.6	30.0	34			Y
PRD	6030	8.775	CP	36	36	40	PRO	0	0	3.2	3	4	MM_MM	5.37	11.60	3.0	100	FG	CG	11.65	3.0	3.3	14.9	15.0	4.9	14.7	5.7	2	0.35	0.25	0.1	0.0	0.0	94			Y
PRD	6328	0.103	PA	36	60	32	PRO	0	0	3.3	10	4	HC_HC	5.37	7.95	3.0	100	SC	SC	8.35	2.8	2.8	10.7	11.6	2.7	10.6	3.5	2	0.45	-0.45	1.3	0.0	0.0	152			Y
PRD	6402	18.360	PA	48	60	34	PRO	0	0	6	3	3	MM_MM	5.30	8.1	2.8	100	CG	CG	7.9	2.9	3	10.7	11.5	6.7	10.4	9.3	2	0.70	-0.10	-0.6	1.2	30.0	83			Y
PRD	6415	8.267	CP	48	48	36	PRO	0	0	2.60	1	2	NT_NT	4.95	6.82	4	100	O_FS	CG	6.56	4.0	4.2	10.66	11.16	1.7	10.12	5.5	2	0.60	0.10	-0.7	0.0	0.0	154			Y
PRD	6204	1.997	PA	36	60	40	PRO	0	0	13.4	12	5	AF	5.55	9.75	3.0	95	SC_CG	LC_SC	10.10	2.9	2.7	11.50	12.35	6.1	11.30	13.6	2	-0.65	-1.50	0.9	0.0	0.0	37			Y
TRDN	1480000	4.080	CP	36	36	32		0	0	3.3	3	4	MM1	5.40	7.50	2.3	90	SC_CG	CG_LC	8.40	3.0	3.1	11.3	11.4	4.2	11.1	14.4	2	0.00	-0.10	2.8	0.7	23.3	91			Y
TRDS	3000000	59.940	CP	48	48	50	PRO	0		5.6	5	7	MC2	5.4	10.20	4.1	80	SC	SC	18.73	4.5	4.9	21.9	22.44	8.2	21.1	13.1	2	-0.82	-1.38	17.1	-0.1	-2.5	72			Y
PRD	6434	4.388	CP	36	36	34	PRO	0	5	6	4	4	MM_MM	4.75	8.16	2.2	80	SC	CG	8.19	2.8	3.1	10.93	11.18	6.40	10.0	11.6	2	0.19	-0.06	0.1	0.8	26.7	50			Y
TRDN	2000000	118.937	CP	72	72	50		0	0	NA	1	7	PA5_MM1	5.4	11.60	5.2	75	SC	O	11.30	6.0	6.4	17.4	17.9	11.2	15.8	14.3	2	0.60	0.10	-0.6	0.8	13.3	####			Y
TRDN	2000000	108.128	CP	36	36	80		0	0	3.0	13	10	HC2	5.6	20.90	1.0	65	CG	SC_CG	22.60	2.5	2.7	25.2	25.3	2.7	24.6	6.7	2	0.20	0.10	2.1	2.0	66.7	100			Y
PRD	6416	0.233	CP	18	18	30		0	0	1.5	3	4	N	5.3	7.16	1.5	60	LG_ORG	G_ORG	8.3	1.5	12	9.42	9.38	1	8.84	1.7	2	-0.42	-0.38	3.8	0.0	0.0	100			Y
HRD	8582	1.238	CP	36	36	38	PRO	0	0	3.2	2	12	MM_MM	5	10.1	3.1	50	FG	CG	11.24	2.9	2.9	13.3	13.60	12.8	13.1	13.3	2	-0.54	-0.84	3.0	-0.1	-3.3	94			Y
TRDN	1480000	2.280	CP	36	36	35		0	0	5.4	14	6	HC2	5.40	6.90	3.0	50	SC	LC_SC	7.60	2.7	2.8	10.3	10.6	5.7	9.3	8.7	2	0.30	0.00	2.0	0.0	0.0	56			Y
TRDN	2000000	83.391	CP	36	36	50		0	0	2.6	6	4	MM	5.8	12.10	3.0	50	O	S	15.10	2.0	2.1	16.9	17.2	1.2	16.5	3.1	2	0.10	-0.20	6.0	0.0	0.0	115			Y
TRDS	2058000	2.100	CP	24	24	40	PRO	0		2.0	9	14	HC2	5.6	8.45	2.0	50	O	O	9.75	1.5	1.6	10.0	10.40	1.5	9.9	3.0	2	-0.85	-1.25	3.3	0.0	0.0	100			Y
TRDS	2050000	5.390	CP	60	60	38	PRO	0		3.9	8	4	HC2	5.0	8.60	4.1	50	SC	LC	9.60	4.9	4.8	13.1	13.40	4.2	12.7	10.2	2	-1.10	-1.40	2.6	0.9	18.0	128			Y
TRDS	3000000	52.920	CP	96	96	56	PRO	0		10.5	8	5	MC2	5.4	10.20	7.5	50	BO	BO	14.30	6.7	6.7	20.3	20.73	13.1	19.9	17.1	2	-0.23	-0.62	7.3	0.5	5.7	76			Y
TRDS	2059000	0.012	CP	48	48	36	PRO	0		2.3	6	5	MM1	5.7	8.40	3.7	50	SC	CG	9.00	3.9	3.9	12.7	9.00	2.3	12.6	5.4	2	-3.90	-0.20	1.7	0.3	7.5	174			Y
TRDN	2085000	0.240	CP	36	36	32		0	0	2.1	3	3	MM1	5.7	8.70	2.9	40	CG	SC_CG	9.30	2.5	2.5	11.9	12.0	2.3	11.5	3.2	2	0.20	0.10	1.9	0.1	3.3	143			Y
TRDS	3030000	11.940	CP	36	36	52	PRO	0		3.0	4	5	MM	4.9	12.73	2.7	40	CG	CG	14.07	2.6	2.6	13.5	16.56	4.9	16.1	7.2	2	-0.13	-3.21	2.6	0.3	9.3	102			Y
TRDN	1470000	3.782	CP	24	24	30		0	0	3.5	6	0	MM1	5.40	6.00	2.0	40	LC	O_FG	6.10	1.8	2.1	8.2	8.7	4.9	7.8	10.9	2	0.80	0.30	0.3	0.0	0.0	57			Y
PRD	6415	12.729	CP	36	36	38	PRO	0	5	1.60	2	3	NT	4.95	5.58	3	30	CG	CG	6.86	2.9	3.2	9.66	10.04	3.6	8.84	6.5	2	0.28	-0.10	3.4	0.0	0.0	188			Y
PRD	6030	8.947	CP	36	36	38	PRO	0	0	2.8	5	6	MM_MM	5.37	9.55	3.0	25	SC	FG	9.65	2.9	3.0	12.8	13.3	3.2	12.2	4.4	2	0.75	0.25	0.3	0.0	0.0	107			Y
TRDN	1430000	3.176	CP	60	60	40		0	0	10.2	2	2	MM1	5.40	7.00	5.0	10	SC	CG_FG	7.10	5.1	5.1	11.7	11.7	7.4	10.2	11.1	2	-0.50	-0.50	0.2	0.0	0.0	49			Y
TRDN	2500000	0.677	CP	48	48	38		0	15	3.6	12	3	MM	5.6	8.60	4.0	10	SC	CG_SC	8.70	4.0	4.2	12.6	13.4	4.5	11.8	17.3	2	0.70	-0.10	0.3	0.0	0.0	111			Y
TRDN	2085000	1.325	CP	24	24	40		0	0	1.6	4	3	N	5.7	10.20	2.0	5	CG	O	10.80	2.0	2.3	12.9	13.0	1.3	12.7	1.8	2	0.20	0.10	1.5	0.0	0.0	125			Y
TRDN	2084000	0.265	CP	18	18	36		0	0	1.5	2	2	MM1	5.7	11.00	1.5	5	LG	FG_O	11.10	1.5	2.0	12.8	13.7	2.4	12.5	3.2	2	1.10	0.20	0.3	0.0	0.0	100			Y
HRD	8578	3.342	CP	24	24	33	PRO	0	0	2.5	8	10	HC2	5	9.15	1.9	0	NA	CG	10.83	2	2.7	12.75	12.95	4.7	12.55	7	2	0.12	-0.08	5.1	0.1	5.0	80			Y
PRD	6314	4.009	PA	36	48	46	PRO	0	0	3.0	4	4	HC_HC	5.37	8.12	3.2	0	N	B_LC	9.64	3.3	3.5	12.52	13.0	3.2	12.2	6.1	2	0.02	-0.42	3.3	-0.2	-6.7	133			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
PRD	6324	0.653	CP	36	36	36	PRO	0	0	3.2	13	11	HC_HC	5.37	9.15	3	0	N	SC	10.75	3	3.8	13.7	14	4.2	13.4	5.4	2	0.25	-0.05	4.4	0.0	0.0	94			Y
PRD	6326	3.478	CP	48	48	44	PRO	0	0	6.6	10	9	HC_HC	5.37	9.80	4.0	0	N	LC	10.65	4.0	4.0	13.7	14.3	4.7	13.7	4.7	2	-0.35	-0.95	1.9	0.0	0.0	61			Y
PRD	6358	0.881	CP	48	48	48	PRO	0	10	4.0	17	15	HC_HC	4.95	9.22	4.0	0	N	B	14.36	4.0	4.4	17.38	17.42	5.0	16.66	29.4	2	-0.94	-0.98	10.7	0.0	0.0	100			Y
PRD	6415	4.371	CP2	48	48	100	PRO	0	0	7.60	13	13	HC_HC	3.28	23.7	4	0	N	B	30.1	3.6	3.6	33.5	33.8	6.4	33.15	6.8	2	0.10	-0.20	6.5	0.0	0.0	53			Y
PRD	6204	5.895	CP	36	36	40	PRO	0	0	2.7	7	6	HC_MM	5.55	7.91	3.0	0	N	CG	10.56	3.0	3.0	13.16	13.46	2.6	13.01	3.6	2	-0.06	-0.36	6.6	0.0	0.0	111			Y
PRD	6328	0.650	CP	24	24	42	PRO	0	0	3.3	12	6	HC_MM	5.37	10.30	2.0	0	N	CG_SC	15.00	2.0	2.0	16.7	17.0	3.3	16.7	3.3	2	0.00	-0.30	11.2	0.0	0.0	61			Y
PRD	6420	1.725	CP	36	36	32	PRO	0	5	3	15	5	HC_MM	5.30	6.24	3	0	0	S_O	7.26	3.0	4.3	10.28	10.38	8.3	10.16	13.2	2	0.12	0.02	3.2	0.0	0.0	100			Y
PRD	40000	2.492	CP	48	48	42	PRO	0	0	6.2	8	7	HC1_HC1	5.55	7.25	3.9	0	N	LG_LC	8.44	4.0	4.5	12.24	12.35	4.1	11.80	9.3	2	-0.09	-0.20	2.8	0.1	2.5	65			Y
PRD	6441	0.196	CP	36	36	30	PRO	0	0	4.7	2	3	LC_LC	4.75	7.56	2.4	0	N	FG	8.24	2.5	2.7	10.40	10.62	8.30	10.0	10.4	2	-0.12	-0.34	2.3	0.6	20.0	64			Y
PRD	6350	5.363	CP	36	36	32	PRO	0	0	3.3	4	3	MC_MM	4.95	7.74	3.0	0	N	SC_CG	10.36	3.0	3.0	12.20	12.44	2.9	11.06	13.3	2	-0.92	-1.16	8.2	0.0	0.0	91			Y
PRD	6031	4.340	CP	48	48	38	PRO	0	0	6	3	3	MM_MM	5.37	7.45	4	0	N	O	8.15	4	4.2	9.6	12.2	6.4	9.6	15.0	2	0.05	-2.55	1.8	0.0	0.0	67			Y
PRD	6326	1.191	CP	48	48	48	PRO	0	0	6.1	2	6	MM_MM	5.37	12.35	4.0	0	N	S_O	12.90	4.0	4.4	15.6	16.4	9.2	15.6	9.2	2	-0.50	-1.30	1.1	0.0	0.0	66			Y
PRD	6350	16.628	CP	48	48	60	PRO	0	0	3.1	7	3	MM_MM	4.95	11.36	4.0	0	N	SC	16.42	4.0	4.9	20.48	20.56	4.4	19.18	15.0	2	0.14	0.06	8.4	0.0	0.0	129			Y
PRD	6407	4.558	CP	64	84	44	MIT	0	0	6.30	6	7	MM_MM	5.55	8.12	5.4	0	N	SC_CG	8.9	5.4	6	14.08	14.4	5.8	13.62	13.2	2	0.10	-0.22	1.8	-0.1	-1.3	111			Y
PRD	6430	1.628	CP	60	60	41	PRO	0	0	6	2	3	MM_MM	4.75	6.64	5	0	N	FG_SC	7.62	5.1	5.7	12.64	12.88	9.00	10.6	28.0	2	0.16	-0.08	2.4	0.0	0.0	83			Y
PRD	6408	0.345	CP	48	48	35	PRO	0	0	5.8	4	3	MM_-MM	5.30	6.2	4	0.0	N	CG	7.9	4.0	4.3	11.2	11.4	5.3	10.4	10.7	2	-0.50	-0.70	4.9	0.0	0.0	69			Y
PRD	6310	0.041	CP	24	24	45	PRO	0	0	2.8	3	1	MM_PA	5.37	11.25	2.0	0	N	O	12.85	2.0	2.9	14.7	15.1	4.9	14.2	6.0	2	0.25	-0.15	3.6	0.0	0.0	71			Y
PRD	6350	14.780	CP	36	36	34	PRO	0	0	2.4	3	1	MM_PA	4.95	7.62	3.0	0	N	FG_S	10.44	3.0	3.1	13.44	13.52	2.4	12.46	19.3	2	0.08	0.00	8.3	0.0	0.0	125			Y
PRD	6358	2.481	CP	48	48	40	PRO	0	0	3.6	3	1	MM_PA	4.95	6.52	4.0	0	N	SC_CG	9.30	4.0	4.0	11.24	12.26	12.6	10.64	19.8	2	-1.04	-2.06	7.0	0.0	0.0	111			Y
PRD	6403	0.016	CP	18	18	34	PRO	0	15	1.5	3	3	N	5.37	8.3	1.55	0	N	LG	10.06	1.7	1.7	11.44	11.84	0.8	11.12	1.6	2	0.08	-0.32	5.2	-0.1	-3.3	100			Y
PRD	6407	1.759	CP	18	18	30	PRO	0	0	2	3	4	N_N	5.30	6.8	1.5	0	N	CG	8.5	1.5	1.7	9.7	9.9	1.6	9.6	3.1	2	-0.10	-0.30	5.7	0.0	0.0	75			Y
PRD	6350	15.906	CP	36	36	32	PRO	0	0	2.3	11	7	NT_HC	4.95	7.56	3.0	0	N	FG_SC	9.16	3.0	3.2	12.14	12.38	2.0	11.04	9.7	2	0.22	-0.02	5.0	0.0	0.0	130			Y
PRD	6352	2.086	CP	24	24	36	PRO	0	0	2.4	6	7	NT_NT	4.95	11.26	2.0	0	N	CG	13.64	2.0	2.0	15.70	15.80	0.9	15.16	1.8	2	0.16	0.06	6.6	0.0	0.0	83			Y
PRD	6245	4.690	CP	48	48	50	PRO	0	0	4.0	6	5		5.55	12.70	4.7	0	N	CG_S	15.06	3.9	3.9	18.20	19.10	3.5	18.00	7.8	2	0.14	-0.76	4.7	-0.7	-17.5	100			Y
PRD	6245	7.052	CP	48	48	40		0	20	3.0	6	5		5.55	7.00	2.9	0	N	LC	8.34	4.0	4.3	11.46	11.70	15.7	11.30	17.7	2	-0.64	-0.88	3.4	1.1	27.5	133			Y
SRD	7500	13.741	CP	18	18	24	PRO	0	0	2	2	2	MC	5	5.09	1.61	0		SC	7.25	0.85	1.05	7.7	8.3	2	8	2	2	0.20	-0.40	9.0	-0.1	-7.3	75			Y
SRD	7500	12.500	CP	36	36	44	PRO	0	0	3	2	2	MC	5	7	3.5	0		SC	7.5	3.1	3.19	10.4	10.69	2.2	9.82	2.2	2	0.09	-0.20	1.1	-0.5	-16.7	100			Y
SRD	7500	13.621	CP	18	18	24	PRO	0	0	2	2	2	SWAMP	5	5.9	1.5	0		O	6.4	1.2	1.4	7.7	7.8	3	7.5	5	2	0.20	0.10	2.1	0.0	0.0	75			Y
SRD	7500	13.578	CP	18	18	24	PRO	0	0	SWAMP	2	2	SWAMP	5	6.55	1.45	0		O_SC	7.1	1.4	1.5	8.3	8.6	3.5	8	5.9	2	0.10	-0.20	2.3	0.1	3.3	####			Y
TRDN	2500000	2.095	CP	24	24	30		0	0	3.2	6	1	HC	5.6	8.20	2.0	0		CG	8.80	2.0	2.3	10.7	10.8	7.5	10.0	9.8	2	0.00	-0.10	2.0	0.0	0.0	63			Y
TRDN	2080000	0.713	CP	72	72	50		0	0	11.5	12	10	HC	5.0	11.00	6.0	0		B	12.90	6.0	7.8	14.6	14.9	6.8	12.9	10.3	2	-4.00	-4.30	3.8	0.0	0.0	52			Y
TRDN	2000000	103.352	CP	24	24	50		0	0	2.5	5	4	HC1	5.6	10.40	2.0	0	NA	FS_SG	13.60	2.0	2.7	12.9	13.0	2.7	12.6	3.0	2	-2.60	-2.70	6.4	0.0	0.0	80			Y
TRDN	2000000	111.438	CP	48	48	40		0	0	3.9	12	7	HC2	5.6	10.80	4.0	0		LC_CG	13.05	3.4	3.4	16.4	16.6	4.1	16.3	4.9	2	0.15	-0.05	5.6	0.0	0.0	103			Y
TRDN	2000000	129.675	CP	36	36	40		0	0	4.2	32	35	HC2	5.80	11.60	2.8	0		CG_LC	14.90	3.0	3.3	17.5	17.7	3.5	17.3	3.7	2	-0.20	-0.40	8.3	0.2	6.7	71			Y
TRDN	1480000	4.130	CP	24	24	34		0	0	3.5	10	5	HC2	5.40	7.90	1.8	0		FG_CG	8.50	2.1	2.2	10.4	10.6	6.1	10.1	8.4	2	-0.05	-0.25	1.8	0.2	10.0	57			Y
TRDN	1400000	6.284	CP	18	18	42		0	0	2.9	12	14	HC2	5.40	11.60	1.5	0		CG_SC	12.70	1.6	1.5	13.7	14.0	2.4	13.3	5.0	2	-0.30	-0.60	2.6	0.0	0.0	52			Y
TRDN	2087100	0.647	CP	60	60	40		0	0	7.0	5	2	MC	5.7	9.70	5.0	0		SC	11.10	4.8	5.2	15.3	15.6	4.3	15.0	9.6	2	-0.30	-0.60	3.5	0.0	0.0	71			Y
TRDN	1430310	0.663	CP	36	36	30		0	10	1.8	7	2	MM1	5.40	6.50	3.0	0		LG	7.30	3.1	3.2	10.5	10.7	3.0	10.0	3.3	2	0.30	0.10	2.7	0.0	0.0	167			Y
TRDN	2000850	0.080	CP	36	36	40		0	0	2.0	3	5	MM1	5.7	9.60	3.0	0		O	11.20	2.9	3.0	13.9	14.0	1.3	13.4	2.3	2	-0.10	-0.20	4.0	0.0	0.0	150			Y
TRDN	1445310	0.751	CP	24	24	41		0	0	2.0	5	2	MM1	5.40	9.10	2.0	0		CG	10.10	1.9	2.0	11.8	11.9	0.8	11.3	5.2	2	-0.10	-0.20	2.4	0.0	0.0	100			Y
TRDN	1445310	0.388	CP	24	24	54		0	0	2.0	3	2	MM1	5.40	7.40	2.0	0		O	8.40	2.0	2.1	10.5	10.6	1.1	10.2	3.2	2	0.20	0.10	1.9	0.0	0.0	100			Y
TRDN	1525200	1.183	CP	18	18	30		0	0	1.6	6	1	MM1	5.7	10.50	1.5	0		FG_CG	11.40	1.5	1.5	12.0	12.5	2.0	11.5	3.7	2	-0.40	-0.90	3.0	0.0	0.0	94			Y
TRDN	2085000	0.944	CP	36	36	38		0	0	3.5	4	3	MM1	5.7	7.80	3.0	0		SC_CG	9.00	2.9	3.1	11.7	11.9	3.3	11.2	7.0	2	0.00	-0.20	3.2	0.0	0.0	86			Y
TRDN	1530000	1.376	CP	36	36	40		0	0	4.3	5	9	MM1	6.1	10.70	3.0	0		CG_SC	11.30	2.9	3.0	13.7	13.8	5.5	13.3	7.0	2	-0.40	-0.55	1.5	0.0	0.0	70			Y
TRDN	1400000	2.989	CP	36	36	38		0	0	4.2	3	4	MM1	5.40	8.40	3.0	0		FS_O	8.90	3.0	3.4	11.8	12.0	3.9	11.5	6.1	2	0.10	-0.10	1.3	0.0	0.0	71			Y
TRDN	3000000B	91.255	CP	24	24	40		0	0	NA	5	0	PA	5.8	10.00	2	0	N	O	11.50	2	13.7	12.1	13.4	NA	NA	NA	2	-0.10	-1.40	3.8	0.0	0.0	####			Y
TRDN	2500000	1.095	CP	36	36	36		0	0	4.2	2	0	PA	5.6	7.30	3.1	0	NA	S	8.30	2.9	3.1	9.1	NA	NA	NA	NA	2	######	-2.10	2.8	-0.1	-2.7	71			Y
TRDN	2085000	2.571	CP	18	18	40		0	0	1.5	4	2	PA5	5.7	6.50	1.5	0		FG	8.00	1.7	1.8	9.7	9.8	1.3	9.4	2.0	2	0.10	0.00	3.8	0.0	0.0	100			Y
TRDS	2057000	2.830	CP	24	24	38	PRO	0		2.9	8	7	HC2	5.0	9.85	1.0	0		CG	10.40	2.0	2.1	12.4	12.50	2.6	12.2	3.6	2	0.10	0.00	1.4	1.0	50.0	69			Y
TRDS	3000000	59.170	CP	60	60	75	PRO	0		8.2	13	14	HC2	5.4	17.61	5.2	0		BO	24.40	5.0	5.3	29.1	29.45	7.5	28.8	14.8	2	0.03	-0.30	9.1	-0.2	-3.6	61			Y
TRDS	2050000	2.710	CP	36	36	41	PRO	0	5	2.2	8	8	HC2	5.6	8.50	2.8	0		CG	10.00	3.1	4.6						2	-13.10	-13.10	3.7	0.2	6.7	136			Y
TRDS	2059300	1.120	CP	48	48	40	PRO	0		6.0	4	8	MC2	5.7	10.60	4.0	0		CG	11.80	4.1	4.3	15.0	15.50	14.2	13.1	16.6	2	-0.40	-0.90	3.0	0.0	0.0	67			Y
TRDS	3030000	10.800	CP	36	36	40	PRO	0		2.3	4	2	MM	4.9	9.41	3.0	0		CG	10.63	2.3	2.3	12.7	12.73	5.9	12.3	7.4	2	-0.16	-0.23	3.0	0.0	1.6	131			Y
TRDS	2050300	2.970	CP	24	24	30	PRO	0		2.7	6	5	MM1	5.6	7.60	2.0	0		FG	8.62	2.0	2.1	10.6	10.80	1.9	10.5	2.1	2	0.18	-0.02	3.4	0.0	0.0	74			Y
TRDS	3030000	18.290	CP	18	18	38	PRO	0		1.0	3	6	MM2	5.4	7.90	1.5	0		S	9.60	1.5	19.0	10.6	10.70	3.1	10.0	6.0	2	-0.40	-0.50	4.5	0.0	0.0	150			Y
TRDS	3030000	0.340	CP	24	24	40	PRO	0		2.6	15	16		5.4	6.92	1.9	0		LC	8.07	2.0	2.4	9.7	9.97	3.9	9.5	7.2	2	-0.07	-0.36	2.9	0.1	4.9	76			Y
TRDS	3030000	6.540	CP	48	48	50	PRO	0		5.2	9	15		5.4	13.25	4.0	0		SC	14.66	3.6	3.7	17.2	17.68	10.2	16.9	16.4	2	-0.59	-1.08	2.8	0.0	0.0	76			Y
WRD	6265	2.862	cp	36	36	34		0	0	4.5	22	19	hc	4.75	8.25	3.1	0	0	lc	10.6	3	3.3	13.8	13.9	5.9	13.5	6.6	2	0.30	0.20	6.9	-0.1	-3.3	67			Y
WRD	52031	0.476	CP	18	18	30		0	0	2.0	7	6	HC_MM	5.00	7.80	2.0	0		CG	9.10	1.5	1.8	10.80	10.90	3.2	10.50	11.5	2	0.30	0.20	4.3	-0.5	-33.3	75			Y
PRD	6407	2.338	CP	18	18	32	PRO	0	0	5.30	2	6	HC_HC	5.55	6.26	1.5	0	N	S_O	6.14	1.5	1.9	7.38	7.82	3.2	6.9	5.4	2	0.18	-0.26	-0.4	0.0	0.0	28			Y
TRDN	2500000	0.227	CP	24	24	44		0	0	4.7	2	1	MC1	5.6	12.80	1.8	0		O	13.10	2.0	2.3	14.5	14.6	2.1	14.2	17.3	2	-0.50	-0.60	0.7	0.2	10.0	43			Y
TRDS	3015250	0.030	CP	48	48	40	PRO	0	0	9.2	7	6	MC1	5.5	7.90	4.0	0		LC_BR	8.30	4.0	4.2	12.0	12.40	8.4	11.6	9.1	2	0.10	-0.30	1.0	0.0	0.0	43			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
HRD	8578	2.196	CP	24	24	39	PRO	0	0	4.0	7	8	HC	5	9.05	1.94	0	NA	FG	9	2	2.59	11.26	11.60	3.5	11.1	3.9	2	0.60	0.26	-0.1	0.1	3.0	50			Y
PRD	6407	1.452	CP	36	36	48	PRO	0	5	3.4	3	3	MM_MM	5.30	9.4	2.9	0	N	CG	9.7	3.0	3.6	12.9	13.3	2.3	12.7	3.5	2	0.60	0.20	0.6	0.1	3.3	88			Y
SRD	7500	11.932	CP	48	48	38		0	0	3.5	3	3	MC	5	7.1	3.9	0		O_SC	7.2	4	5.19	11.25	12.4	9	11.15	10.1	2	1.20	0.05	0.3	0.1	2.5	114			Y
TRDN	2000000	90.201	CP	60	60	50		0	0	5.5	7	11	HC	5.8	12.80	5.0	0	N	LC	13.80	5	5.8	18.8	19.9	11.0	18.1	11.5	2	1.10	0.00	2.0	0.0	0.0	91			Y
TRDN	2085000	0.408	CP	18	18			0	0	2.2	12	7	HC1	5.7	10.20	1.5	0		O	11.10	1.5	2.2	12.9	13.0	1.9	12.7	2.2	2	0.40	0.30	####	0.0	0.0	68			Y
TRDN	2900000	4.849	CPB	72	72	44		0	0	9.7	16		HC2	5.6	7.20	5.9	0		B_B0	9.20	6.1	7.0	15.5	16.0	9.5	14.9	12.5	2	0.70	0.20	4.5	0.1	1.7	62			Y
TRDN	1525000	5.606	CP	48	48	40		0	0	3.0	3	3	MM1	5.7	10.50	4.4	0		CG	10.90	4.0	4.3	15.2	15.3	6.1	13.8	6.6	2	0.40	0.30	1.0	-0.4	-10.0	133			Y
TRDN	2000000	113.696	CP	24	24	40		0	0	2.6	2	2	MM1	5.6	9.40	2.0	0	NA	O	9.60	2.0	3.7	11.8	12.3	1.3	11.0	2.5	2	0.70	0.20	0.5	0.0	0.0	77			Y
TRDN	1400000	2.761	CP	48	48	36		0	0	5.9	2	4	MM1	5.40	7.20	4.0	0		FS_FG	7.30	4.0	4.2	11.3	11.7	15.2	10.7	17.0	2	0.40	0.00	0.3	0.0	0.0	68			Y
TRDN	1400000	2.877	PA	86	130	48		0	0	17.3	4	2	MM1	5.40	8.40	7.1	0		BR_LC	8.60	7.0	6.9	15.0	16.4	10.8	13.9	14.7	2	0.80	-0.60	0.4	0.1	0.9	63			Y
TRDN	1446000	1.542	CP	48	48	48		0	0	NA	0	7	NA	5.40	11.00	3.9	0		O	11.00	4.0	4.8	15.3	15.8	8.7	15.1	10.6	2	0.80	0.30	0.0	0.1	2.5	####			Y
TRDS	2000000	81.181	CP	18	18			0	0	NA	2	2	MM	5.8	10.30	1.5	0		O	11.00	1.5	2.4	12.8	13.00	0.4	12.4	2.5	2	0.50	0.30	####	0.0	0.0	####			Y
TRDS	3030400	0.220	CP	18	18	30	PRO	0		2.4	1	1	PA1	5.7	6.30	1.5	0		O	6.50	1.5	1.9	8.3	8.50	2.0	8.0	4.6	2	0.50	0.30	0.7	0.0	0.0	63			Y
SRD	7500	12.771	CP	24	24	43	PRO	0	0	6	6	6	MC	5	12	1.5	O		SC	15	2	2.2	16.6	17.2	6	18	6	2	0.20	-0.40	7.0	0.5	25.0	33			Y
PRD	6031	12.263	PA	76	114	44	MIT	0	0	8.4	6	13	HC_HC	5.37	8	5.5	100	CG	SC	8.7	6	6.2	15.2	15.8	15.0	15.2	25.0	2	1.10	0.50	1.6	0.8	13.2	113			Y
TRDN	2000000	89.894	AO	108	54	91		0	0	3.5	23	13	HC	5.8	18.50	5.5	100	BO_LC	B	31.80	5.5	5.7	37.9	38.1	3.6	36.8	8.1	2	0.80	0.60	14.6	3.5	38.9	129			Y
TRDN	1445310	0.166	CP	84	84	40		0	0	6.0	6	3	MM1	5.40	9.60	5.7	100	FG	CG	9.60	6.6	6.8	16.8	16.9	2.1	15.1	9.1	2	0.70	0.60	0.0	1.3	18.6	117			Y
TRDN	2087000	0.696	CP	48	48	40		0	0	8.4	3	1	PA1	5.7	8.40	3.9	100	O	O	9.50	3.5	3.3	9.8	11.3	8.7	9.1	9.8	2	-1.70	-3.20	2.8	0.1	2.5	48			Y
TRDS	2050000	4.310	CP	48	48	38	PRO	0		11.4	16	11	HC2	5.0	7.80	3.8	100	FG	LC	8.20	3.2	3.2	10.3	10.50	5.1	9.8	12.0	2	-0.90	-1.10	1.1	0.2	5.0	35			Y
TRDS	2060000	1.075	CP	36	36	36		0	0	3.8	1.5	2.0	MM1	5.5	9.30	1.7	100	SC_O	SC_CG	9.50	1.9	1.7	12.4	12.40	6.7	11.8	7.7	2	1.00	1.00	0.6	1.3	43.3	79			Y
PRD	6352	2.106	CP	72	72	52	PRO	0	0	11.2	7	9	MM_MM	4.95	10.20	5.7	60	SC	CG	10.30	6.0	7.7	19.60	19.40	13.2	18.22	22.8	2	3.10	3.30	0.2	0.3	5.0	54			Y
TRDS	3030000	18.410	CP	36	36	40	PRO	0		7.5	7	14	HC	5.4	8.00	3.0	60	CG	LC	8.90	2.0	24.0	10.7	10.90	2.9	10.1	12.0	2	0.00	-0.20	2.3	0.0	0.0	40			Y
TRDS	3000000	48.110	CP	36	36	30	PRO	0	5	4.3	11	4	MM1	5.4	7.15	2.6	60	CG	CG	7.25	2.6	4.1	10.4	10.46	3.9	9.5	7.5	2	0.59	0.52	0.3	0.4	12.5	70			Y
PRD	6358	2.450	CP	36	36	34	PRO	0	0	2.8	2	0	NT_PA	4.95	6.04	3.0	50	0	O	7.46	2.9	2.9	8.00	11.02	8.5	7.20	30.0	2	0.66	-2.36	4.2	0.0	0.0	107			Y
PRD	40000	2.956	CP	60	60	52	PRO	0	0	4.7	14	14	HC_HC	5.55	14.25	4.4	40	LC	SC_B	15.30	5.0	5.8	20.70	21.90	6.8	20.10	8.4	2	1.60	0.40	2.0	0.6	12.0	106			Y
PRD	6415	3.934	CP	24	24	32	PRO	0	25	5.30	13	4	HC_MM	5.55	7.1	2	40	SC_LC	SC_LG	8.15	1.8	1.9	9.55	9.75	3.3	9.05	6.7	2	-0.20	-0.40	3.3	0.0	0.0	38			Y
TRDN	2000000	108.153	CPB	60	60	120		0	0	6.6	14	10	HC2	5.6	16.30	3.4	20	LC	BO_LC	22.70	3.7	3.7	27.7	27.8	4.6	26.8	6.3	2	1.40	1.30	5.3	1.6	32.0	76			Y
PRD	6350	11.314	CP	18	18	30	PRO	0	0	2.6	2	1	FP_MM	4.95	7.76	1.4	20	CG	FS	9.22	1.5	1.5	10.50	11.20	6.8	10.00	8.4	2	0.48	-0.22	4.9	0.1	6.7	58			Y
PRD	40000	3.356	CP	96	96	40	PRO	0	0	19.0	5	8	HC_HC	5.55	9.72	8.2	20	SC	SC_LC	10.40	7.8	9.0	16.66	20.00	8.3	18.10	16.8	2	1.80	-1.54	1.7	-0.2	-2.5	42			Y
PRD	6352	1.956	CP	24	24	40	PRO	0	15	2.8	15	11	NT_NT	4.95	12.52	1.5	20	CG	CG	13.94	1.8	2.3	15.70	16.14	2.4	15.22	7.0	2	0.40	-0.04	3.6	0.5	25.0	71			Y
TRDS	2050000	4.640	CP	36	36	26	PRO	0		5.1	20	6	HC2	5.0	6.60	3.0	15	LC	LC	7.10	3.0	3.5		10.60	3.9	10.0	6.8	2	0.50	-10.10	1.9	0.0	0.0	59			Y
PRD	6402	6.017	CP	36	36	60	PRO	0	15	5.40	2	4	MM_MM	4.95	18.9	3.2	15	SC	FG	18.5	3.0	4.9	23.36	23.62	3.3	23.16	8.2	2	2.12	1.86	-0.6	-0.2	-6.7	56			Y
PRD	6350	14.806	CP	24	24	33	PRO	0	0	2.5	8	3	NT_PA	4.95	7.68	2.0	10	SC	LC_S	9.60	1.8	1.8	11.46	11.92	2.7	10.40	8.6	2	0.52	0.06	5.8	0.0	0.0	80			Y
PRD	6411	0.546	CP	36	36	30	PRO	0	0	2.8	3	4	MC_MC	5.37	8.58	3	5	N	LG	8.96	3	3.2	11.9	12.44	3	11.52	3.7	2	0.48	-0.06	1.3	0.0	0.0	107			Y
TRDS	2000000	76.527	PA	54	63	50		0	0	2.5	1	3	MM	5.8	13.00	4.6	3		O	13.80	5.0	5.4	19.3	19.55	2.3	18.8	5.0	2	0.75	0.50	1.6	-0.1	-2.2	210			Y
PRD	6327	0.842	CP	36	36	42	PRO	0	0	4.9	12	3	HC_MM	5.37	10.50	3.0	0	N	FG_S	14.60	3.0	3.0	17.9	18.7	2.9	17.6	3.3	2	1.10	0.30	9.8	0.0	0.0	61			Y
TRDN	1530000	1.976	CP	18	18	30		0	0	2.0	7	6	HC2	6.1	7.80	1.5	0		CG_FG	8.70	1.4	1.4	10.1	10.5	3.0	9.7	4.0	2	0.40	0.00	3.0	0.0	0.0	75			Y
TRDS	3015105	0.840	CP	24	24	31	PRO	0	0	2.0	7	12	HC2	5.0	6.90	2.0	0		CG_SC	7.10	1.9	3.2	11.3	11.40	2.7	11.2	3.3	2	2.40	2.30	0.6	0.0	0.0	100			Y
PRD	6317	5.841	CP	36	36	30	PRO	0	0	3.5	11	6	HC_HC	5.37	7.54	3.0	0	N	LC_SC	9.90	3.0	3.6	12.88	13.32	6.7	12.24	17.7	2	0.42	-0.02	7.9	0.0	0.0	86			Y
PRD	6326	3.898	CP	36	36	30	PRO	0	0	3.5	8	9	HC_HC	5.37	9.90	3.0	0	N	SC	11.50	3.0	3.6	14.7	15.2	6.0	14.7	7.4	2	0.70	0.20	5.3	0.0	0.0	86			Y
PRD	6328	0.510	CP	24	24	56	PRO	0	0	6.1	8	9	HC_HC	5.37	13.00	2.0	0	N	SC	14.15	2.0	2.2	16.1	16.3	4.0	16.1	5.0	2	0.15	-0.05	2.1	0.0	0.0	33			Y
PRD	6328	4.530	CP	24	24	40	PRO	0	0	4.8	11	10	HC_HC	5.37	11.25	2.0	0	N	SC	13.75	2.0	2.2	15.3	15.8	7.2	15.1	7.7	2	0.05	-0.45	6.3	0.0	0.0	42			Y
PRD	6352	6.830	CP	48	48	44	PRO	0	30	5.8	13	14	HC_HC	5.37	9.75	4	0.0	N	SC	12.05	4	5.1	16.2	16.5	4.8	15.9	6.9	2	0.45	0.15	5.2	0.0	0.0	69			Y
PRD	6402	20.639	CP	60	60	58	MIT	0	0	4.5	9	9	HC_HC	5.30	13.3	5	0	N	LC_B	15.7	5.0	5.5	20.6	21.4	6.8	20.3	6.8	2	0.70	-0.10	4.1	0.0	0.0	111			Y
PRD	6420	1.538	CP	48	48	40	PRO	0	0	1	5	12	HC_HC	5.30	8.08	4.2	0	0	LG	10.52	4.0	5.1	14.84	15.94	11	14.56	20.7	2	1.42	0.32	6.1	-0.2	-5.0	400			Y
PRD	6420	2.419	CP	60	60	44	PRO	0	0	4.4	6	9	HC_HC	5.30	7.82	5.1	0	0	SC	9.14	5.2	6.3	14.56	14.86	7.2	13.3	9.8	2	0.52	0.22	3.0	-0.1	-2.0	114			Y
PRD	6428	1.697	CP	60	60	40	PRO	0	0	4.5	2	7	HC_HC	5.30	8.64	5	0	0	LG_SC	9.26	5.0	7.4	17.06	16.72	2	15.24	10	2	2.46	2.80	1.6	0.0	0.0	111			Y
PRD	6428	5.139	CP	36	36	48		0	5	2.5	6	5	HC_HC	5.30	15.9	3.6	0	N	SC	16.28	3.0	4.95	21.12	21.92	1.5	20.76	6.95	2	2.64	1.84	0.8	-0.6	-20.0	120			Y
PRD	6436	0.162	CP	24	24	44	PRO	0	0	2.60	8	4	HC_HC	4.95	9.98	1.9	0	N	FG	10.32	2.0	4	14.16	14.26	3.6	13.54	6.7	2	1.94	1.84	0.8	0.1	5.0	77			Y
PRD	6319	10.379	CP	36	36	48	PRO	0	0	3.1	7	6	HC_MM	5.37	9.4	3	0	N	CG	12.75	3	4.5	15.9	16.1	6.3	15.2	12.4	2	0.35	0.15	7.0	0.0	0.0	97			Y
PRD	6235	15.785	CP	60	60	34	PRO	0	0	2.6	11	8	HC_NT	5.55	8.60	5.0	0	N	SC	8.40	5.0	5.7	14.30	14.55	4.4	12.80	5.8	2	1.15	0.90	-0.6	0.0	0.0	192			Y
PRD	6415	17.045	CP	18	18	40	PRO	0	0	2.40	3	12	MM_HC	4.95	9.76	1.5	0	N	S_ORG	10.94	1.5	2.1	12.58	13.22	2.8	11.9	4.9	2	0.78	0.14	3.0	0.0	0.0	63			Y
PRD	6326	0.909	CP	18	18	28	PRO	0	0	3.7	2	5	MM_MM	5.37	8.50	1.5	0	N	O	9.15	1.5	1.5	9.9	10.4	4.9	9.9	4.9	2	-0.25	-0.75	2.3	0.0	0.0	41			Y
PRD	6327	0.208	CP	24	24	52	PRO	0	0	2.7	5	2	MM_MM	5.37	15.95	2.0	0	N	FG_S	18.15	2.0	2.2	20.3	20.8	2.7	20.0	3.1	2	0.65	0.15	4.2	0.0	0.0	74			Y
PRD	6461	2.685	PA	48	72	40	PRO	0	0	4.8	3	4	MM_MM	5.30	7.4	4.2	0.0	N	SC	8.8	4.2	4.9	13.2	13.4	5.9	12.4	9.6	2	0.40	0.20	3.5	-0.2	-5.0	125			Y
PRD	6407	2.725	CP	18	18	30	PRO	0	0	2.50	4	0	MM_PA	5.55	6.3	1.6	0	N	CG_O	6.64	1.5	1.9	8.4	8.76	2.5	7.96	2.9	2	0.62	0.26	1.1	-0.1	-6.7	60			Y
PRD	6235	19.290	AR3	40	60	44	PRO	0	0	18.3	2	2	MM1_MM1	5.55	12.72	3.6	0	N	CG_SC	9.55	3.6	4.3	13.10	14.00	7.1	8.30	24.2	2	0.85	-0.05	-7.2	-0.3	-8.0	27			Y
PRD	6352	0.431	AR	72	96	44	PRO	0	0	7.5	1	45	PA_HC	4.95	7.64	6.1	0	N	0	7.66	6.4	7.9	14.70	15.72	5.2	12.85	14.3	2	1.66	0.64	0.0	-0.1	-1.7	107			Y
PRD	6416	0.290	CP	36	36	40		0	0	4	2	7	PA_HC	5.3	7.42	3	0	N	ORG_LC	7.8	3.0	5.9	14.12	14.68	3.3	13.36	5.03	2	3.88	3.32	1.0	0.0	0.0	75			Y
PRD	6441	1.296	CP	24	24	24	PRO	0	0	6	3	4	PA_MM	5.30	6.4	2	0.0	N	SC	6.5	2.0	3.2	8.8	9.3	4.9	8.3	10.4	2	0.80	0.30	0.4	0.0	0.0	33			Y
PRD	6327	0.365	CP	24	24	50	PRO	0	Y	3.2	1	2	PA_PA	5.37	9.70	2.0	0	N	O	10.05	2.0	2.0	12.4	12.7	3.4	12.3	4.3	2	0.65	0.35	0.7	0.0	0.0	63			Y
PRD	6407	6.208	CP	24	24	30	PRO	0	0	3.80	5	7		5.55	6.62	2	0	N	O	7.04	1.8	2.6	9.14	9.26	9.08	1.2	4	2	0.42	0.30	1.4	0.0	0.0	53			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
SRD	7500	12.645	CP	24	24	27	PRO	0	0	5	5	5	MC	5	8.65	1.95	0		SC	10.92	2.24	2.38	12.8	13.3	4	11.9	4	2	0.14	-0.36	8.4	0.1	2.5	40			Y
SRD	7500	13.095	CP	18	18	27	PRO	0	0	1	1	1	SWAMP	5	6.82	1.66	0		O	7.2	1.7	2.05	8.9	9.45	8.15	8.61	9.4	2	0.55	0.00	1.4	-0.2	-10.7	150			Y
TRDN	2000000	116.584	CP	36	36	40		0	0	2.0	8	14	HC1	5.4	10.50	2.0	0	NA	O	8.50	2.0	3.1	16.7	17.4	1.6	16.3	2.8	2	6.90	6.20	-5.0	1.0	33.3	150			Y
TRDN	1435000	0.895	CP	72	72	62		0	0	4.0	16	17	HC2	5.40	8.00	6.0	0		LC	19.30	6.0	6.9	32.5	32.8	4.9	31.6	17.9	2	7.50	7.20	18.2	0.0	0.0	150			Y
TRDN	2000000	109.343	CP	36	36	76		0	0	2.0	11	14	HC2	5.6	17.05	3.1	0		CG_FG	25.60	3.0	4.2	30.1	30.1	2.5	29.2	3.5	2	1.50	1.50	11.3	-0.1	-3.3	150			Y
TRDN	2084015	0.215	CP	48	48	54		0	0	3.9	16	15	HC2	5.7	11.00	3.9	0		LC_CG	17.20	4.0	5.7	23.8	23.8	6.4	23.3	7.5	2	2.60	2.60	11.5	0.1	2.5	103			Y
TRDN	2720000	0.451	CP	36	36	40		0	15	6.0	9	8	HC2	6.0	5.90	3.0	0		LC_CG	7.50	3.0	3.8	10.7	11.0	7.9	10.7	8.2	2	0.50	0.20	4.0	0.0	0.0	50			Y
TRDN	1445310	1.237	CP	24	24			0	0	2.0	9	5	HCS	5.40	11.00	2.0	0		CG	12.70	2.0	3.2	15.5	15.6	6.6	15.1	9.6	2	0.90	0.80	####	0.0	0.0	100			Y
TRDN	2077000	0.297	CP	84	84	62		0	0	18.3	6	5	MC2	5.6	13.00	7.1	0		LC_B	15.15	7.0	7.3	18.9	19.5	20.7	18.1	23.8	2	-2.65	-3.25	3.5	-0.1	-1.4	38			Y
TRDN	2720000	0.213	CP	18	18	40		0	0	2.0	8	3	MM	6.0	7.10	1.5	0		O	7.60	1.5	2.3	9.0	9.7	3.8	8.7	5.6	2	0.60	-0.15	1.3	0.0	0.0	75			Y
TRDN	1525200	1.342	CP	36	36	32		0	0	2.3	4	3	MM1	5.7	7.40	3.0	0		FG_CG	8.80	3.0	3.2	12.0	12.7	3.9	11.6	3.8	2	0.90	0.20	4.4	0.0	0.0	130			Y
TRDN	1445310	0.849	CP	24	24	40		0	0	2.0	9	2	MM1	5.40	8.60	1.9	0		CG	8.10	2.0	2.3	11.5	12.0	1.4	10.7	3.2	2	1.90	1.40	-1.3	0.1	5.0	100			Y
TRDN	2900000	4.046	CP	24	24	30		0	0	2.4	4	12	MM1	5.6	8.35	2.0	0		FG_CG	9.40	2.0	2.2	11.6	12.1	5.2	11.6	5.2	2	0.70	0.20	3.5	0.0	0.0	83			Y
TRDN	2000860	0.659	CP	36	36	32		0	0	6.5	4	6	MM1	5.7	6.80	3.2	0		CG_SC	7.00	3.0	3.8	10.3	10.5	9.4	9.6	11.2	2	0.50	0.30	0.6	-0.2	-6.7	46			Y
TRDN	1500000	2.356	CP	72	72	44		0	10	25.3	1	1	PA1	5.6	8.23	6.1	0		S	8.40	6.1	6.4	14.5	16.5	13.8	12.7	23.4	2	2.00	0.00	0.4	-0.1	-1.7	24			Y
TRDN	2900000	3.871	CP	24	24	30		0	0	2.8	10	2	PA5	5.6	9.00	2.0	0		O	9.60	2.0	2.5	11.7	12.1	2.9	11.6	5.4	2	0.50	0.10	2.0	0.0	0.0	71			Y
TRDS	2000644	0.030	CP	24	24	30	PRO	0		2.6	10	13	HC2	5.7	18.60	2.0	0		CG	9.90	2.0	2.3	15.7	16.10	4.1	15.1	4.5	2	4.20	3.80	-29.0	0.0	0.0	77			Y
TRDS	3030100	0.360	CP	48	48	40	PRO	0		3.0	6	13	HC2	5.5	10.83	4.1	0		SC	12.62	4.0	4.6	16.6	17.03	4.6	16.0	10.3	2	0.41	0.01	4.5	-0.1	-2.5	133			Y
TRDS	3017400	0.060	PP	18	18		PRO	0	0	3.3	10	7	HC2	5.0	6.75	1.5	0		CG_O	9.30	1.5	2.1	12.1	12.50	5.1	11.5	6.9	2	1.70	1.30	####	0.0	0.0	45			Y
TRDS	2000000	77.608	CP	60	60	40		0	0	NA	2	6	MM	5.8	10.30	4.2	0		S	10.50	5.0	6.1	16.2	15.90	1.1	15.8	3.3	2	0.40	0.70	0.5	0.8	16.0	####			Y
TRDS	3030100	0.120	CP	18	18		PRO	0		1.5	4	4	MM	5.5	6.53	1.5	0		CG	8.11	1.6	2.1	10.0	10.08	2.7	9.6	7.8	2	0.37	0.32	####	0.0	0.0	100			Y
TRDS	2000644	0.230	CP	18	18	30	PRO	0		1.6	2	10	MM1	5.7	7.20	1.5	0		O	7.20	1.5	2.0	10.1	10.20	1.7	9.5	3.8	2	1.50	1.40	0.0	0.0	0.0	94			Y
TRDS	3015600	3.110	CP	24	24		PRO	0	0	2.6	3	11	MM1	5.6	7.30	2.0	0		S_CG	7.30	1.9	2.6	9.7	9.80	3.1	9.3	6.4	2	0.60	0.50	####	0.0	0.0	77			Y
TRDS	2000648	0.530	CP	24	24	38	PRO	0		4.3	4	5	MM1	5.7	8.80	2.0	0		FG	8.60	2.0	3.3	10.9	11.70	4.9	10.6	5.6	2	1.10	0.30	-0.5	0.0	0.0	47			Y
TRDS	2058000	1.420	CP	48	48	40	PRO	0		1.9	2	3	MM1	5.6	9.00	4.2	0		CG	9.95	3.5	3.8	13.6	14.10	2.1	13.2	4.8	2	0.65	0.15	2.4	-0.2	-5.0	211			Y
TRDS	3030100	1.530	CP	24	24	30	PRO	0		2.5	6	4	MM1	5.7	8.00	2.0	0		O	7.90	2.0	2.8	10.7	10.90	3.9	10.4	4.3	2	1.00	0.80	-0.3	0.0	0.0	80			Y
TRDS	3030300	0.780	CP	36	36	30	PRO	0		2.4	1	1	PA1	5.7	6.80	3.1	0		O	6.90	3.0	4.1	10.6	11.00	7.0	10.0	8.6	2	1.10	0.70	0.3	-0.1	-3.3	125			Y
TRDS	2057000	2.090	CP	24	24	40	PRO	0		1.9	7	12		5.0	7.60	1.9	0		SC	12.20	2.0	2.4	14.4	106.00	4.2	14.2	5.9	2	91.80	0.20	11.5	0.1	5.0	105			Y
WRD	6265	2.899	cp	48	48	32		0	5	6.3	19	12	hc	4.75	4.75	4	0	0	lc	9.65	4	4.6	13.7	14.3	5.6	12.9	7.1	2	0.65	0.05	15.3	0.0	0.0	63			Y
WRD	6265	1.568	cp	36	36	40		0	0	7.8	30	29	hc	4.75	6.75	2.15	0	0	lc	16.15	3	2.8	18.2	19	5.1	17.5	7	2	-0.15	-0.95	23.5	0.9	28.3	38			Y
WRD	52031	0.247	CP	48	48	30		0	0	8.4	4	6	HC	5.00	6.20	3.9	0		SC	6.65	4.0	4.1	9.90	10.45	9.3	9.50	13.1	2	-0.20	-0.75	1.5	0.1	2.5	48			Y
WRD	6590	14.085	PA	88	144	59	STB	0	999	20.6	5	6	MC	5.00	12.90	7.6	0		LC_BO	15.80	7.3	8.0	23.00	24.80	16.6	21.40	19.8	2	1.70	-0.10	4.9	-0.3	-3.6	58			Y
WRD	52031	0.463	CP	24	24	28		0	0	2	5	13	MM	5.00	6.60	2.8	0		S	6.80	2.0	3.0	10.30	10.60	1.8	9.50	4.0	2	1.80	1.50	0.7	-0.8	-40.0	100			Y
WRD	52031	0.615	CP	24	24	30		0	5	8	6	2	MM	5.00	5.60	2.5	0		S	6.90	2.0	2.6	8.85	9.20	2.5	8.70	2.8	2	0.30	-0.05	4.3	-0.5	-25.0	25			Y
TRDN	2084000	0.670	CP	18	18			0	0	1.0	18	15	HC2	5.7	6.50	1.6			CG_SC	9.50	1.5	2.0	12.7	12.7	1.6	12.4	2.9	2	1.70	1.70	####	-0.1	-6.7	150			Y
TRDN	3000000B	89.221	CP	48	48	60		0	0	3.4	3	4	MM1	5.8	16.00	2.6				17.00	3.7	3.65	20.7	20.5	6.0	20.0	6.9	2	-0.20	0.00	1.7	1.4	35.0	118			Y
PRD	6402	9.614	CP	24	24	30	PRO	0	20	1.00	13	11	HC_HC	4.95	6.18	1.5	100	CG	O	7.1	1.6	1.3	9.12	9.36	2.9	8.9	5.5	2	0.66	0.42	3.1	0.5	25.0	200			Y
TRDS	3015600	0.950	CP	36	36	46	PRO	0	0	4.7	5	2	MM1	5.5	8.80	3.0	100	CG	CG_SC	9.30	2.4	2.4	12.2	12.30	4.0	11.8	4.6	2	0.60	0.50	1.1	0.0	0.0	64			Y
PRD	6425	0.207	CP	48	48	34	PRO	0	10	4.8	4	6	HC_HC	4.75	9.12	2.9	90	LC	SC_O	10.22	2.9	3.0	16.24	16.54	2.20	15.8	4.5	2	3.42	3.12	3.2	1.1	27.5	83			Y
PRD	6402	18.604	CP	48	48	38	PRO	0	0	3.5	5	4	MM_MM	5.30	7.6	4	75	CG	CG	8.4	3.6	3.8	13	13.3	6.3	12.9	7	2	1.30	1.00	2.1	0.0	0.0	114			Y
PRD	6040	15.221	CP	36	36	39	PRO	0	0	5.4	9	7	HC_HC	5.37	10.40	3.0	40	SC	SC	10.85	3.0	7.4	17.6	18.5	5.6	17.1	7.1	2	4.65	3.75	1.2	0.0	0.0	56			Y
TRDS	2000000	71.333	CP	36	36	36		0	0	3.5	4	35	HC	5.8	8.60	2.5	40	CG	SC	9.10	3.0	4.3	15.6	16.00	4.3	14.6	6.2	2	3.90	3.50	1.4	0.5	16.7	86			Y
TRDS	3030000	18.800	CP	24	24	38	PRO	0		2.1	7	12	HC	5.4	11.60	2.0	30	LG	O	12.80	1.8	1.9	18.0	18.30	1.2	17.6	3.2	2	3.70	3.40	3.2	0.0	0.0	95			Y
TRDN	1530000	1.348	CP	24	24	40		0	0	3.4	8	9	HC2	6.1	12.20	1.8	15	SC	CG_FG	12.90	1.9	3.1	15.4	15.7	3.7	15.2	4.8	2	0.90	0.60	1.8	0.2	10.0	59			Y
HRD	8578	3.218	CP	24	24	40	PRO	0	0	2.5	10	15	HC	5	13.2	1.71	10	SC	CG	14.5	2	2.6	19.05	19.15	6	17.46	6.8	2	2.65	2.55	3.3	0.3	14.5	80			Y
PRD	6032	1.289	CP	60	60	69	PRO	0	0	6.5	12	13	HC_HC	5.37	9.9	4.6	10	LC	LC	12.8	5	5.4	24.5	24.8	8.1	23.8	12.9	2	7.00	6.70	4.2	0.4	8.0	77			Y
PRD	6319	10.975	CP	36	36	34	PRO	0	0	2.6	8	8	HC_HC	5.37	8.05	3	10	SC	SC	8.65	3	4.1	12	12.6	3.8	11.5	7.3	2	0.95	0.35	1.8	0.0	0.0	115			Y
TRDN	1430315	0.254	CP	36	36	40		0	0	3.2	7	9	HC1	5.40	12.20	3.0	10	SC	SC_LG	13.10	3.0	4.1	16.7	16.8	4.8	16.2	7.7	2	0.70	0.60	2.3	0.0	0.0	94			Y
TRDN	2000000	118.976	CP	24	24	70		0	0	2.6	5	17	MM1	5.4	9.30	2.0	10	CG	FG	14.90	1.7	1.8	17.1	17.6	1.3	16.3	3.5	2	1.00	0.50	8.0	0.0	0.0	77			Y
TRDN	2000000	111.321	CP	36	36	40		0	0	4.3	6	6	MM1	5.6	9.00	2.8	5	CG	SC_CG	9.55	2.8	2.8	13.0	13.1	3.4	12.5	4.7	2	0.75	0.65	1.4	0.2	6.7	70			Y
TRDN	1525200	0.991	CP	36	36	42		0	0	3.7	6	8	HC2	5.7	11.20	3.0	5	SC	CG_SC	12.30	3.0	5.0	19.0	19.2	5.1	18.7	5.7	2	3.90	3.70	2.6	0.0	0.0	81			Y
TRDS	3000000	49.660	CP	24	24	30	PRO	0		1.8	1	3	HC2	5.4	6.89	2.0	5	SC		7.38	2.0	3.0	9.9	10.23	2.6	9.6	6.6	2	0.89	0.56	1.6	0.0	1.6	111			Y
TRDS	2000000	77.820	CP	60	60	40		0	0	2.0	3	3	MM	5.8	10.85	5.0	3	SC	O	11.80	5.0	5.2	18.9	18.80	1.7	18.3	4.9	2	2.00	2.10	2.4	0.0	0.0	250			Y
TRDN	2085000	0.646	CP	18	18	36		0	0	2.9	10	7	HC2	5.7	7.20	1.5	0		CG_SC	8.30	1.3	1.4	10.0	10.1	1.6	9.3	4.2	2	0.50	0.40	3.1	0.0	0.0	52			Y
TRDN	1525200	0.870	CP	24	24	28		0	10	4.1	4	2	MM1	5.7	7.70	2.0	0		O_SC	7.70	2.0	3.2	11.6	12.0	6.3	11.3	6.5	2	2.30	1.90	0.0	0.0	0.0	49			Y
TRDN	1445000	3.302	CP	18	18	31		0	35	2.0	9	8	N	5.4	9.40	0.9	0		O	11.30	1.3	1.6	13.7	14.0	1.5	13.6	1.6	2	1.40	1.10	6.1	0.6	40.0	75			Y
TRDS	2054000	7.310	pp	24	24	40		0	0	2.0	8	17	hc1	5.0	8.65	2.1	0		o_cg	13.15	2.0	2.5	17.8	18.30	2.7	17.4	5.8	2	3.15	2.65	11.3	-0.1	-5.0	100			Y
TRDS	3015105	0.910	CP	36	36	40	PRO	0	0	3.2	17	16	HC5	5.6	11.10	3.1	0		CG_SC	12.55	3.0	4.6	19.6	19.70	5.2	18.9	8.6	2	4.15	4.05	3.6	-0.1	-3.3	94			Y
TRDS	3015600	0.210	CP	24	24	41	PRO	0	20	2.9	3	4	MM1	5.6	10.30	1.8	0		CG_FG	11.50	2.0	2.3	14.3	14.40	1.5	13.7	3.6	2	0.90	0.80	2.9	0.2	10.0	69			Y
TRDS	2050300	2.850	CP	24	24	31	PRO	0		3.2	3	13	MM1	5.6	9.70	2.0	0	CG	CG	10.35	2.0		13.3	13.50	4.9	13.1	6.2	2	1.15	0.95	2.1	0.0	0.0	63			Y
HRD	8578	3.168	CP	24	24	38	PRO	0	0	1.5	8	15	HC	5	10.1	1.66	0	NA	CG	12.37	2	2.6	15.24	16.25	3	15.87	3.5	2	1.88	0.87	6.0	0.3	17.0	133			Y
HRD	8578	3.532	CP	36	36	40	PRO	0	0	2.9	15	13	HC	5	12.3	3.5	0	NA	CG	14.5	3	3.1	18.12	18.50	5.5	17.5	7	2	1.00	0.62	5.5	-0.5	-16.7	103			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
HRD	8578	0.608	CP	24	24	34	PRO	0	0	2.5	6	16	HC2	5	5.31	1.94	0	NA	CG	8.55	2	2	12.7	12.90	3.5	12.49	4.5	2	2.35	2.15	9.5	0.1	3.0	80			Y
HRD	8578	2.906	CP	48	48	40	PRO	0	0	6.0	8	12	HC2	5	8.3	3.7	0	NA	SC	11.8	4	5.2	17.9	18.10	7.6	17.4	8.6	2	2.30	2.10	8.8	0.3	7.5	67			Y
HRD	8578	3.764	CP	36	36	34	PRO	0	0	4.0	8	4	MM	5	9.65	3.1	0	NA	CG	12.11	3	3.5	15.6	16.03	6.5	15.52	7.5	2	0.92	0.49	7.2	-0.1	-3.3	75			Y
PRD	40000	3.129	CP	24	24	40	PRO	0	0	1.8	6	6	AF_AF	5.55	9.40	2.4	0	N	FG	9.85	2.0	3.5	13.20	14.30	4.5	11.80	11.6	2	2.45	1.35	1.1	-0.4	-20.0	111			Y
PRD	6204	6.092	CP	36	36	35	PRO	0	0	3.6	6	11	AF_HC	5.55	8.66	3.0	0	N	S_LC	9.74	3.0	5.6	14.70	15.70	5.0	13.66	15.0	2	2.96	1.96	3.1	0.0	0.0	83			Y
PRD	6235	0.740	CP	24	24	38	PRO	0	0	3.1	17	7	HC_AF2	5.55	9.90	2.0	0	N	FG	14.50	2.0	3.2	16.90	17.40	3.7	16.00	6.4	2	0.90	0.40	12.1	0.0	0.0	65			Y
PRD	6031	11.707	CP	36	36	46	PRO	0	0	4.2	10	18	HC_HC	5.37	11.2	3	0	N	CG	14.6	3	4.4	18.1	18.7	4.3	18.1	9.1	2	1.10	0.50	7.5	0.0	0.0	71			Y
PRD	6204	3.579	CP	60	60	40	PRO	0	0	5.2	9	12	HC_HC	5.55	7.51	5.0	0	N	LC_SC	9.76	5.0	5.1	15.26	15.11	2.5	14.61	2.6	2	0.35	0.50	5.6	0.0	0.0	96			Y
PRD	6204	4.476	CP	36	36	50	PRO	0	0	4.9	8	9	HC_HC	5.55	13.21	3.0	0	N	LC_SC	16.81	3.0	3.5	23.21	23.56	3.7	22.76	5.8	2	3.75	3.40	7.2	0.0	0.0	61			Y
PRD	6212	0.106	CP	72	72	30	PRO	0	0	8.6	9	10	HC_HC	5.37	7.80	6.0	0	0	SC	8.80	6.0	7.3	16.90	17.40	9.5	13.40	13.4	2	2.60	2.10	3.3	0.0	0.0	70			Y
PRD	6212	0.753	CP	36	36	30	PRO	0	0	4.3	8	11	HC_HC	5.37	8.30	3.0	0	N	FG_S	10.50	3.0	4.2	19.00	19.30	4.1	18.50	5.3	2	5.80	5.50	7.3	0.0	0.0	70			Y
PRD	6235	1.209	CP	48	48	48	PRO	0	0	5.8	13	14	HC_HC	5.55	8.72	3.8	0	N	SC	11.40	4.0	4.7	18.56	19.57	5.7	18.20	14.6	2	4.17	3.16	5.6	0.2	5.0	69			Y
PRD	6235	12.932	CP	36	36	72	PRO	0	0	2.5	4	7	HC_HC	3.25	16.20	3.0	0	N	S	19.60	3.1	4.6	24.40	25.00	3.3	23.70	4.1	2	2.30	1.70	4.7	0.0	0.0	120			Y
PRD	6241	4.155	CP	36	36	40	PRO	0	0	6.2	13	13	HC_HC	5.55	11.97	3.2	0	N	LC_S	14.00	3.0	3.4	16.80	18.50	11.1	16.50	15.9	2	1.50	-0.20	5.1	-0.2	-6.7	48			Y
PRD	6245	1.256	CP	36	36	50	PRO	0	0	2.7	7	14	HC_HC	5.55	12.00	3.7	0	N	O	14.30	3.0	5.1	19.88	20.10	1.3	19.40	6.0	2	2.80	2.58	4.6	-0.7	-23.3	111			Y
PRD	6245	1.503	CP	36	36	40	PRO	0	0	4.4	9	5	HC_HC	5.55	11.00	3.0	0	N	SC_LC	12.40	3.0	4.9	17.32	18.00	10.6	16.40	20.3	2	2.60	1.92	3.5	0.0	0.0	68			Y
PRD	6245	1.505	CP	36	36	40	PRO	0	0	4.4	9	5	HC_HC	5.55	11.60	3.0	0	N	SC_LC	12.10	3.0	4.5	17.32	18.00	10.6	16.40	20.3	2	2.90	2.22	1.3	0.0	0.0	68			Y
PRD	6317	4.717	CP	24	24	30	PRO	0	0	3.0	12	7	HC_HC	5.37	10.36	1.9	0	N	SC	13.72	2.0	2.4	16.62	17.36	4.5	15.90	6.7	2	1.64	0.90	11.2	0.1	5.0	67			Y
PRD	6317	5.699	CP	24	24	30	PRO	0	0	2.3	9	9	HC_HC	5.37	7.42	2.0	0	N	SC	9.16	2.0	4.6	12.44	13.06	3.4	11.92	6.5	2	1.90	1.28	5.8	0.0	0.0	87			Y
PRD	6319	7.383	CP	24	24	24	PRO	0	0	1.9	24	13	HC_HC	5.37	6.1	2	0	N	CG	6.9	1.6	2	10.2	11.1	3.0	9.5	6.0	2	2.60	1.70	3.3	0.0	0.0	105			Y
PRD	6319	7.642	CP	48	48	48	PRO	0	0	6.3	9	13	HC_HC	5.37	12.3	4	0	N	CG	16.9	4	6.2	22.9	23.3	8.4	22.5	10.5	2	2.40	2.00	9.7	0.0	0.0	63			Y
PRD	6319	8.709	CP	36	36	30	PRO	0	0	3	8	10	HC_HC	5.37	6.75	3	0	N	CG	8.45	3	4.5	12.6	13	3.0	12	4.2	2	1.55	1.15	5.7	0.0	0.0	100			Y
PRD	6323	5.294	CP	48	48	36	PRO	0	0	5.3	15	20	HC_HC	5.37	10.5	4	0	N	SC	14.35	4	7	25.3	26.3	9.0	24.2	16.5	2	7.95	6.95	10.8	0.0	0.0	75			Y
PRD	6350	1.146	CP	48	48	40	PRO	0	0	2.3	50	22	HC_HC	4.95	9.50	3.9	0	N	B	14.08	4.0	5.5	20.12	20.20	1.8	19.62	4.2	2	2.12	2.04	11.5	0.1	2.5	174			Y
PRD	6350	11.746	CP	60	60	40	PRO	0	0	8.5	18	10	HC_HC	4.95	6.64	5.1	0	N	SC_SB	10.20	5.1	6.2	16.28	16.54	2.3	15.24	8.9	2	1.24	0.98	8.9	-0.1	-2.0	59			Y
PRD	6350	14.070	CP	60	60	55	PRO	0	0	6.0	12	10	HC_HC	4.95	7.50	5.0	0	N	LC	13.40	5.0	6.9	19.80	20.04	5.8	18.84	15.4	2	1.64	1.40	10.7	0.0	0.0	83			Y
PRD	6350	15.768	CP	36	36	40	PRO	0	0	2.8	18	8	HC_HC	4.95	8.94	3.0	0	N	FG_CG	12.76	3.0	4.2	17.06	17.70	3.5	15.84	8.2	2	1.94	1.30	9.6	0.0	0.0	107			Y
PRD	6357	0.140	CP	36	36	33	PRO	0	0	6.4	13	9	HC_HC	5.37	7.4	3	0.0	N	SC_LC	10.6	3	3.4	13.9	14.6	5.8	13.6	6.3	2	1.00	0.30	9.7	0.0	0.0	47			Y
PRD	6358	0.726	CP	36	36	41	PRO	0	10	3.9	17	11	HC_HC	4.95	9.00	3.1	0	N	LC	13.14	2.7	3.2	16.24	16.36	1.5	15.54	5.8	2	0.52	0.40	10.1	-0.1	-3.3	77			Y
PRD	6358	1.135	CP	48	48	52	PRO	0	0	3.3	19	20	HC_HC	4.95	9.54	3.0	0	N	B_SC	15.06	4.0	5.8	19.96	20.30	4.3	19.12	11.3	2	1.24	0.90	10.6	1.0	25.0	121			Y
PRD	6367	0.853	CP	24	24	40	PRO	0	0	2.1	10	23	HC_HC	5.37	9.85	2.0	0	N	SC	11.50	2.0	3.3	16.6	17.0	2.5	16.6	6.0	2	3.50	3.10	4.1	0.0	0.0	95			Y
PRD	6402	2.215	CP	36	36	30	PRO	0	0	4.20	12	8	HC_HC	4.95	5.88	3	0	N	FG	6.92	3.0	3.3	11.66	11.72	3.4	10.68	6.2	2	1.80	1.74	3.5	0.0	0.0	71			Y
PRD	6402	9.862	CP	24	24	40	PRO	0	25	2.30	9	14	HC_HC	4.95	6.84	1.6	0	N	CG	10.4	2.0	4	14.4	14.5	4.5	13.88	5.1	2	2.10	2.00	8.9	0.4	20.0	87			Y
PRD	6402	11.170	CP	36	36	64	PRO	0	0	5.20	4	10	HC_HC	4.95	7.8	2.8	0	N	CG	9.04	3.0	4.9	13.58	14.38	6.1	13.44	6.7	2	2.34	1.54	1.9	0.2	6.7	58			Y
PRD	6402	11.523	CP	48	48	40	PRO	0	0	7.00	7	7	HC_HC	4.95	7.68	4	0	N	LC	11.6	4.0	4.4	17.16	17.66	14.9	16.64	16.9	2	2.06	1.56	9.8	0.0	0.0	57			Y
PRD	6407	1.161	CP	48	48	81	PRO	0	0	4.8	22	12	HC_HC	5.30	15.4	4	0	N	CG	25.7	4.0	5.6	34.9	35.2	7	34.1	9.4	2	5.50	5.20	12.7	0.0	0.0	83			Y
PRD	6407	1.198	CP	48	48	100	PRO	0	75	11	8	6	HC_HC	5.30	21.9	4	0	N	LC	32.7	3.9	4.8	36.7	37.3	5	35.7	12.5	2	0.70	0.10	10.8	0.0	0.0	36			Y
PRD	6415	0.833	CP2	48	48	40	PRO	0	0	5.30	5	8	HC_HC	5.55	12.1	4	0	N	CG_FG	14.1	4.0	4.6	18.5	18.8	7.7	17.8	12.9	2	0.70	0.40	5.0	0.0	0.0	75			Y
PRD	6415	0.835	CP2	48	48	40	PRO	0	0	5.30	5	8	HC_HC	5.55	11.6	4	0	N	CG_FG	14.2	3.9	4.5	18.5	18.8	7.7	17.8	12.9	2	0.70	0.40	6.5	0.0	0.0	75			Y
PRD	6415	1.008	CP2	48	48	40	PRO	0	0	3.20	8	6	HC_HC	5.55	6.95	4	0	N	CG_LC	9.25	4.0	5.3	15.05	15.4	10.6	14.6	12.7	2	2.15	1.80	5.8	0.0	0.0	125			Y
PRD	6415	2.118	CP2	48	48	50	PRO	0	0	3.50	9	7	HC_HC	5.55	8.75	3.5	0	N	CG_BC	12.1	4.0	5.2	17.05	17.3	4.2	16.6	6.2	2	1.20	0.95	6.7	0.5	12.5	114			Y
PRD	6415	3.450	CP	24	24	40	PRO	0	10	2.40	9	13	HC_HC	5.55	7.75	1.7	0	N	FG	9.3	2.0	2.7	11.9	12.05	1.2	11.6	1.2	2	0.75	0.60	3.9	0.3	15.0	83			Y
PRD	6415	4.483	CP3	18	18	48	PRO	0	0	1.20	7	8	HC_HC	5.55	9.35	1.6	0	N	O	11.3	1.6	2.7	14.1	14.1	1.3	13.9	2.8	2	1.20	1.20	4.1	-0.1	-6.7	125			Y
PRD	6415	6.117	CP2	48	48	88	PRO	0	5	5.20	12	11	HC_HC	5.55	22.1	3.8	0	N	BO_LC	29.45	4.0	4.8	34.75	34.95	8.3	34.3	9.8	2	1.50	1.30	8.4	0.2	5.0	77			Y
PRD	6415	6.349	CP	48	48	58	PRO	0	0	3.60	7	14	HC_HC	5.55	14.9	4	0	N	BO_LC	19.05	4.0	5.1	26.52	27.12	6.9	25.77	10.7	2	4.07	3.47	7.2	0.0	0.0	111			Y
PRD	6415	7.198	CP	60	60	48	PRO	0	0	6.70	5	7	HC_HC	5.55	6.15	5.1	0	N	LC_CG	8.3	5.1	5.8	14.75	14.95	16.6	14.6	19.2	2	1.55	1.35	4.5	-0.1	-2.0	75			Y
PRD	6415	7.280	PA	48	60	50	PRO	0	0	3.60	6	10	HC_HC	4.95	6.28	4	0	N	CG_LC	8.3	4.1	5	13.48	14	4.5	12.18	13.5	2	1.60	1.08	4.0	0.0	0.0	139			Y
PRD	6420	1.081	CP	48	48	60		0	10	3.5	10	4	HC_HC	5.30	15	4.2	0	0	LG_SC	18.4	4.0	6.8	24	24.26	5.9	23.94	8	2	1.86	1.60	5.7	-0.2	-5.0	114			Y
PRD	40000	3.337	CP	60	60	52	PRO	0	0	7.2	11	6	HC_HC	5.55	8.05	4.9	0	N	SC	9.90	5.0	6.0	15.50	16.20	5.4	14.90	7.5	2	1.30	0.60	3.6	0.1	2.0	69			Y
PRD	46041	0.864	CP	48	48	36	PRO	0	0	2.5	6	7	HC_HC	5.30	10.2	4.1	0	N	LG_SC	12.96	4.0	6.3	20.44	20.7	2.1	20.16	9.1	2	3.74	3.48	7.6	-0.1	-2.5	160			Y
PRD	6402	19.492	CP	48	48	50	PRO	0	0	6.3	8	10	HC_-HC	5.30	9.4	4	0	N	SC	11.3	4.0	5	18.75	19.2	7.4	18.1	11.7	2	3.90	3.45	3.8	0.0	0.0	63			Y
PRD	6030	0.512	CP	48	48	66	PRO	0	0	6.4	6	3	HC_MC	5.37	15.45	4.0	0	N	CG	16.35	4.0	5.2	20.7	21.0	7.3	20.1	9.8	2	0.65	0.35	1.4	0.0	0.0	63			Y
PRD	6319	7.778	CP	36	36	34	PRO	0	0	2.1	8	7	HC_MM	5.37	8.05	3	0	N	CG	10.2	3	4	14.5	14.7	6.2	14	11.0	2	1.50	1.30	6.3	0.0	0.0	143			Y
PRD	6415	3.740	CP	36	36	30	PRO	0	5	2.60	7	3	HC_MM	5.55	6.3	2.9	0	N	LC	7.7	3.0	5	11.7	11.85	3.9	11.05	5.8	2	1.15	1.00	4.7	0.1	3.3	115			Y
PRD	6420	1.886	CP	48	48	40		0	0	5	12	7	HC_MM	5.30	7.28	4.05	0	0	SC	10.36	4.2	6	18.3	18.64	10.9	18.12	14.6	2	4.08	3.74	7.7	0.0	-1.3	80			Y
PRD	6420	1.914	CP	24	24	44	PRO	0	0	3.5	8	1J0	HC_MM	5.30	10.4	2	0	0	LG_SC	12.74	2.0	3.2	15.48	16.14	4.3	15.22	17.2	2	1.40	0.74	5.4	0.0	0.0	57			Y
PRD	40000	3.194	CP	48	48	50	PRO	0	0	5.9	13	3	HC_MM	5.55	13.16	3.6	0	N	SC_SB	15.60	3.7	4.3	19.70	20.40	5.3	18.60	11.8	2	1.10	0.40	4.9	0.4	10.0	68			Y
PRD	6367	0.742	CP	36	36	40	PRO	0	0	4.6	5	9	MC_HC	5.37	9.75	2.6	0	N	CG	11.35	3.0	5.1	16.6	17.3	4.6	15.9	5.3	2	2.95	2.25	4.0	0.4	13.3	65			Y
PRD	45601	1.961	CP	36	36	36	PRO	0	0	3.6	7	9	MC_HC	5.37	7.85	3.0	0	N	CS	8.55	3.0	3.6	12.6	12.9	6.1	12.5	6.6	2	1.35	1.05	1.9	0.0	0.0	83			Y
PRD	6040	14.771	CP	48	48	42	PRO	0	0	5.2	7	4	MC_MC	5.37	8.70	4.0	0	0	SC	10.40	4.0	4.5	15	15.2	4.8	14.5	7.6	2	0.80	0.60	4.0	0.0	0.0	77			Y
PRD	6407	0.117	CP2	48	48	38	PRO	0	0	8	4	6	MC_MC	5.30	9.6	4	0	N	LC	10.8	4.1	5.5	15.1	15.7	8.9	14.8	16.7	2	0.80	0.20	3.2	0.0	0.0	50			Y
PRD	6407	0.119	CP2	48	48	38	PRO	0	10	8	4	6	MC_MC	5.30	9.3	4	0	N	LC	10.8	4.0	4.5	15.1	15.7	8.9	14.8	16.7	2	0.90	0.30	3.9	0.0	0.0	50			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
PRD	45601	2.095	CP	18	18	28	PRO	0	0	2.4	7	4	MC_MC	5.37	7.20	1.5	0	N	O_FS	8.05	1.5	2.4	10.1	10.6	5.9	9.8	11.2	2	1.05	0.55	3.0	0.0	0.0	63			Y
PRD	6212	0.708	CP	60	60	30	PRO	0	0	7.9	6	8	MM_HC	5.37	12.50	5.0	0	N	CG_FG	14.75	5.0	10.1	23.80	24.30	8.3	23.10	14.2	2	4.55	4.05	7.5	0.0	0.0	63			Y
PRD	6415	4.223	CP	36	36	40	PRO	0	0	5.60	4	4	MM_HC	5.55	6.55	3	0	N	CG	7.55	3.0	4.5	10.9	11.1	6.3	10.45	8.7	2	0.55	0.35	2.5	0.0	0.0	54			Y
PRD	6235	19.287	CP3	48	48	48	PRO	0	55	18.3	2	2	MM_MM	5.55	7.90	4.0	0	N	CG_SC	9.10	3.9	3.9	13.10	14.00	7.1	8.30	24.2	2	1.00	0.10	2.5	0.0	0.0	22			Y
PRD	6319	8.413	CP	36	36	32	PRO	0	0	4.7	8	6	MM_MM	5.37	7	3	0	N	CG	7.9	3	4.8	12.1	12.6	5.1	11.1	8.2	2	1.70	1.20	2.8	0.0	0.0	64			Y
PRD	6350	8.482	CP	24	24	32	PRO	0	0	2.3	4	5	MM_MM	4.95	6.88	1.5	0	N	FG	8.56	1.5	2.9	11.44	11.74	2.4	11.14	3.7	2	1.68	1.38	5.3	0.5	25.0	87			Y
PRD	6367	0.657	PA	48	75	42	PRO	0	0	5.9	3	5	MM_MM	5.37	9.25	4.0	0	N	CG	10.70	4.0	5.3	15.6	16.1	5.8	15.0	9.3	2	1.40	0.90	3.5	0.0	0.0	106			Y
PRD	6402	7.872	CP	48	48	40	PRO	0	5	7.90	1	1	MM_MM	4.95	8.96	3.9	0	N	LC_CG	9.82	4.0	4	14.18	14.18	7.3	12.52	8	2	0.36	0.36	2.2	0.1	2.5	51			Y
PRD	6402	15.797	CP	36	36	36	PRO	0	0	6.6	4	7	MM_MM	5.30	8.72	3	0	N	SC	10.34	2.4	2.4	12.22	13.16	6	12.02	6.7	2	0.42	-0.52	4.5	0.0	0.0	45			Y
PRD	6402	17.894	CP	48	48	48	PRO	0	0	5	3	6	MM_MM	5.30	8.6	4	0	N	CG	10.9	4.0	4.6	15.4	15.6	3.6	14.9	8.2	2	0.70	0.50	4.8	0.0	0.0	80			Y
PRD	6405	0.408	CP	48	48	40	PRO	0	0	2.50	3	3	MM_MM	5.55	8.16	4	0	N	CG	8.76	4.0	5.3	14.24	15.1	6.5	13.6	9.3	2	2.34	1.48	1.5	0.0	0.0	160			Y
PRD	6407	3.432	CP	48	48	34	PRO	0	N	9	4	5	MM_MM	5.30	5.8	4	0	N	SC	5.8	4.0	8.1	12.1	12.6	3.8	11.2	12	2	2.80	2.30	0.0	0.0	0.0	44			Y
PRD	6410	2.415	CP	48	48	40	PRO	0	0	3.5	3	3	MM_MM	5.30	9.16	4.45	0	N	LG_SC	10.16	4.0	6.2	15.12	15.9	4.3	14.78	6.1	2	1.74	0.96	2.5	-0.5	-11.3	114			Y
PRD	6415	2.339	CP2	48	48	46	PRO	0	0	5.90	3	8	MM_MM	5.55	8.4	4.3	0	N	SC	9.7	4.0	5.4	14.2	15.25	7.5	13.4	10	2	1.55	0.50	2.8	-0.3	-7.5	68			Y
PRD	6415	2.341	CP2	48	48	46	PRO	0	0	5.90	3	8	MM_MM	5.55	9.15	3	0	N	SC	10.25	4.0	5	14.95	15	4.2	14.05	9.6	2	0.75	0.70	2.4	1.0	25.0	68			Y
PRD	6415	3.366	CP	24	24	32	PRO	0	0	3.50	2	2	MM_MM	5.55	6.8	2	0	N	O_FG	8	2.0	2.9	11.7	11.9	3.4	11.3	6.2	2	1.90	1.70	3.8	0.0	0.0	57			Y
PRD	6416	2.349	CP2	48	48	60	PRO	0	0	5	4	4	MM_MM	5.3	13.94	4	0	N	LG_SC	15.78	4.0	5.7	20.44	21.02	4.9	19.54	9.2	2	1.24	0.66	3.1	0.0	0.0	80			Y
PRD	6438	0.074	CP	36	36	36	PRO	0	0	3.3	3	6	MM_MM	5.30	7.3	3	0.0	N	CG	8.6	3.0	4.2	12.1	12.3	2.3	11.6	3.7	2	0.70	0.50	3.6	0.0	0.0	91			Y
PRD	6235	19.289	AR3	40	60	44	PRO	0	0	18.3	2	2	MM1_MM1	5.55	8.55	3.9	0	N	CG_SC	9.30	3.6	4.0	13.10	14.00	7.1	8.30	24.2	2	1.10	0.20	1.7	-0.6	-17.0	27			Y
PRD	6415	5.669	PA	240	115	56	MIT	0	0	8.20	3	3	MM2_MM2	5.55	9.4	7.5	0	N	LC	11	7.6	8	19.15	20.05	6.9	18.4	13.9	2	1.45	0.55	2.9	12.5	62.5	117			Y
PRD	6350	4.612	CP	18	18	30	PRO	0	25	4.6	3	3	N	5.37	7.82	1.5	0.0	N	FS	7.88	1.3	3.2	10.18	10.46	6.3	9.34	8.1	2	1.28	1.00	0.2	0.0	0.0	33			Y
PRD	6212	0.182	CP	36	36	41	PRO	0	0	2.7	6	12	N_HC	5.37	6.55	3.0	0	0	FG	9.15	3.0	4.7	18.30	18.60	2.3	7.00	7.0	2	6.45	6.15	6.3	0.0	0.0	111			Y
PRD	6402	23.039	CP	18	18	32	PRO	0	0	2	4	16	N_N	5.30	9.3	1.5	0	N	CG	9.9	1.5	2.4	13.5	14	1	12.8	1.4	2	2.60	2.10	1.9	0.0	0.0	75			Y
PRD	6350	7.368	CP	60	60	36	PRO	0	5	5.1	5	5	NT_MM	4.95	7.24	4.9	0	N	SC_CG	9.28	5.0	6.7	15.46	16.06	4.3	14.64	26.2	2	1.78	1.18	5.7	0.1	2.0	98			Y
PRD	6350	7.372	CP	48	48	34	PRO	0	15	5.1	5	5	NT_MM	4.95	6.12	3.8	0	N	SC_CG	7.46	4.0	7.5	14.24	14.36	3.4	14.64	26.2	2	2.90	2.78	3.9	0.2	5.0	78			Y
PRD	6235	12.361	CP	36	36	46	PRO	0	0	4.9	6	8	NT_NT	5.55	9.10	3.1	0	N	LC/S	11.65	3.2	5.2	15.86	17.44	4.9	14.90	15.3	2	2.59	1.01	5.5	-0.1	-3.3	61			Y
PRD	6350	4.408	CP	24	24	28	PRO	0	0	1.4	3	5	NT_NT	4.95	6.92	2.0	0	N	CG	7.40	2.0	3.4	10.46	10.52	3.4	9.78	8.6	2	1.12	1.06	1.7	0.0	0.0	143			Y
PRD	6350	8.157	CP	24	24	40	PRO	0	0	2.3	9	5	NT_NT	4.95	7.16	2.0	0	N	CG	9.60	2.0	3.3	12.24	12.54	3.9	11.92	6.5	2	0.94	0.64	6.1	0.0	0.0	87			Y
PRD	6350	8.567	CP	36	36	32	PRO	0	20	2.3	6	0	NT_NT	4.95	6.54	2.6	0	N	FG	7.44	2.8	3.8	10.75	11.00	2.7	10.64	3.6	2	0.76	0.51	2.8	0.4	13.3	130			Y
PRD	6358	1.731	CP	36	36	40	PRO	0	0	4.3	24	15	NY_NT	4.95	9.14	3.0	0	N	LC_CG	11.32	3.0	4.8	15.88	16.24	2.8	15.04	5.3	2	1.92	1.56	5.5	0.0	0.0	70			Y
PRD	6323	0.162	CP	18	18	52	PRO	0	25	30	0	9	PA_MM	5.37	11.2	1.5	0	N	0	11.6	1.5	3	14.2	14.5	2.2	14	6.7	2	1.40	1.10	0.9	0.0	0.0	5			Y
PRD	6245	4.962	CP	36	36	40	PRO	0	0	3.5	5	5		5.55	6.52	3.0	0	N	SC	8.03	3.0	5.5	13.20	13.95	16.2	12.90	18.8	2	2.92	2.17	3.8	0.0	0.0	86			Y
PRD	6245	8.562	CP	48	48	40	PRO	0	0	4.1	7	11		5.55	6.70	4.2	0	N	CG_LC	9.37	4.0	4.9	13.80	16.20	10.6	13.10	16.6	2	2.83	0.43	6.7	-0.2	-5.0	98			Y
PRD	6407	4.526	CP	18	18	34	PRO	0	0	1.60	2	4		5.55	7.96	1.6	0	N	O	9.24	1.6	3.9	12.74	12.5	3.1	12.16	3.84	2	1.66	1.90	3.8	-0.1	-6.7	94			Y
SRD	7500	13.522	CP	18	18	24	PRO	0	0	4	2	2	MC	5	6.84	1.59	0		SC	6.9	1.59	3.25	10.2	11.1	9.2	10.3	13.1	2	2.61	1.71	0.3	-0.1	-6.0	38			Y
TRDN	2000000	86.388	CP	48	48	40		0	0	1.5	5	18	HC	5.8	10.90	3.0	0	N	0	12.60	3	7.7	22.4	22.4	3.0	22.4	5.0	2	6.80	6.80	4.3	1.0	25.0	267			Y
TRDN	2080000	0.753	CP	36	36	30		0	0	2.5	10	8	HC	5.0	6.20	3.0	0		B	7.50	3.0	4.1	10.9	11.2	2.9	10.5	3.5	2	0.70	0.40	4.3	0.0	0.0	120			Y
TRDN	2500000	0.832	CP	36	36	34		0	0	3.6	30	20	HC	5.6	4.50	3.0	0		SC_B	7.10	3.0	4.9	13.1	13.6	4.9	12.4	7.6	2	3.50	3.00	7.6	0.0	0.0	83			Y
TRDN	2700000	4.320	CP	48	48	70		0	0	5.0	12	6	HC	6.0	13.10	4.0	0		CG	14.90	4.0	7.7	26.9	27.2	11.0	26.1	18.0	2	8.30	8.00	2.6	0.0	0.0	80			Y
TRDN	2700000	1.747	CP	18	18	31		0	0	3.0	6	12	HC	6.0	7.40	1.5	0		O	8.45	1.5	2.2	12.0	12.1	4.8	11.2	5.0	2	2.15	2.05	3.4	0.0	0.0	50			Y
TRDN	2700000	1.668	CP	36	36	38		0	0	6.0	6	5	HC	5.0	8.00	3.0	0		CG	9.25	3.0	6.2	14.1	14.6	10.0	13.2	10.5	2	2.35	1.85	3.3	0.0	0.0	50			Y
TRDN	2000000	103.703	CP	36	36	62		0	0	1.5	6	5	HC1	5.6	9.40	3.0	0	NA	O_BO	10.90	3.0	3.6	15.0	15.3	3.9	14.7	4.5	2	1.40	1.10	2.4	0.0	0.0	200			Y
TRDN	1430310	0.121	CP	18	18	28		0	0	1.7	5	6	HC1	5.40	6.90	1.5	0		O	7.70	1.5	2.4	9.8	9.9	1.9	9.5	2.1	2	0.70	0.60	2.9	0.0	0.0	88			Y
TRDN	1530000	0.520	CP	72	72	48		0	0	4.5	12	5	HC2	0.0	3.30	6.0	0		LG_BC	6.10	6.0	7.8	12.6	12.9	7.5	11.6	20.0	2	0.80	0.50	5.8	0.0	0.0	133			Y
TRDN	3000578	0.141	CP	24	24	40		0	0	2.6	12	16	HC2	5.6	9.70	2.6	0		S_FG	10.90	2.0		15.4	15.4	1.2	14.8	2.0	2	2.50	2.50	3.0	-0.6	-30.0	77			Y
TRDN	2000000	103.769	CP	48	48	40		0	0	5.2	5	15	HC2	5.6	12.60	4.0	0	NA	LC_CG	13.60	4.0	5.6	19.0	19.3	1.0	18.6	5.1	2	1.70	1.40	2.5	0.0	0.0	77			Y
TRDN	2085000	0.830	CP	36	36	32		0	0	4.1	14	4	HC2	5.7	7.80	3.0	0		SC_CG	8.70	3.0	3.8	12.2	12.3	4.3	11.8	7.0	2	0.60	0.50	2.8	0.0	0.0	73			Y
TRDN	2084016	0.058	CP	24	24	40		0	0	3.2	13	8	HC2	5.7	11.30	2.0	0		BO_SC	12.80	2.0	4.6	19.5	19.6	4.1	19.0	5.0	2	4.80	4.70	3.8	0.0	0.0	63			Y
TRDN	2000000	120.309	CP	60	60	50		0	0	9.5	12	28	HC2	5.6	9.50	5.0	0	NA	CG	12.20	5.0	8.6	18.3	19.1	6.3	17.3	9.3	2	1.90	1.10	5.4	0.0	0.0	53			Y
TRDN	2000780	0.303	CP	60	60	40		0	0	11.4	9	10	HC2	5.8	8.80	5	0	NA	SC_BC	8.90	4.9	6.5	14.7	14.9	4.3	13.8	16.2	2	1.10	0.90	0.2	0.0	0.0	44			Y
TRDN	2000000	111.885	CP	48	48	43		0	0	2.9	24	10	HC5	5.6	9.35	4.2	0	NA	SC_CG	11.65	3.7	5.5	18.2	18.3	5.9	18.1	6.9	2	2.95	2.85	5.3	-0.2	-5.0	138			Y
TRDN	2000000	110.740	CP	60	60	94		0	0	8.1	31	14	HC5	5.6	24.50	5.0	0		BO_LC	32.70	5.0	8.8	44.8	45.4	8.5	45.0	13.0	2	7.70	7.10	8.7	0.0	0.0	62			Y
TRDN	2000000	128.878	CP	48	48	40		0	0	6.3	21	13	HC6	5.80	6.25	4.0	0		B_SC	8.75	4.0	5.1	14.3	14.9	6.0	14.5	6.7	2	2.10	1.50	6.3	0.0	0.0	63			Y
TRDN	3000000B	87.077	CP	24	24	40		0	0	2.8	6	6	MC	5.8	7.70	2.0	0		CG_SC	9.20	2.0	6.1	14.0	14.2	3.2	13.0	8.7	2	3.00	2.80	3.8	0.0	0.0	71			Y
TRDN	1445600	0.225	PA	67	83	64	MIT	0	0	4.9	6	4	MC1	5.40	12.80	5.6	0		SC_BC	15.30	5.7	5.8	21.7	21.9	8.5	20.7	15.4	2	0.90	0.70	3.9	0.0	-0.3	141			Y
TRDN	2900000	16.050	CP	24	24	30		0	0	1.9	4	12	MM1	5.80	6.80	2.1	0		FG_S	7.60	2.0	3.1	10.4	10.8	4.0	9.8	5.1	2	1.20	0.80	2.7	-0.1	-5.0	105			Y
TRDN	2000900	0.107	CP	24	24	40		0	0	3.2	2	2	MM1	5.7	7.80	2.8	0		O	9.50	1.8	4.2	15.0	15.6	7.2	14.0	8.9	2	4.30	3.70	4.3	-0.8	-40.0	63			Y
TRDN	1525200	1.275	CP	24	24	34		0	0	3.6	3	2	MM1	5.7	8.60	1.9	0		O_S	9.70	2.0	3.8	13.0	13.3	4.4	12.3	8.0	2	1.60	1.30	3.2	0.1	5.0	56			Y
TRDN	3000000B	86.868	CP	24	24	40		0	100		1	3	PA	5.8	9.10	2	0		O	12.90	2	3.7	17.7	19.3	4.8	18.3	8.8	2	4.40	2.80	9.5	0.0	0.0	####			Y
TRDN	2085000	3.069	CP	24	24	32		0	0	2.0	4	1	PA5	5.7	7.40	2.0	0		O	8.20	2.0	3.1	10.7	11.3	1.6	10.3	4.4	2	1.10	0.50	2.5	0.0	0.0	100			Y
TRDN	2085000	2.248	CP	24	24	40		0	0	2.0	4	2	PA5	5.7	6.30	2.0	0		S_O	7.20	2.0	3.9	10.4	10.7	4.3	9.9	8.3	2	1.50	1.20	2.3	0.0	0.0	100			Y
TRDS	3030000	16.800	CP	24	24	70	PRO	0		3.7	9	30	HC	54.0	17.10	2.0	0		O	28.60	2.0	3.5	32.3	32.50	2.9	31.7	7.2	2	1.90	1.65	16.4	0.0	0.0	54			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
TRDS	3030000	19.070	CP	36	36	36	PRO	0		4.5	8	7	HC2	5.7	8.45	3.0	0	CG	SC	9.90	3.0	4.3	14.6	14.00	7.4	13.3	8.1	2	1.10	1.70	4.0	0.0	0.0	67			Y
TRDS	2054200	0.730	CP	36	36	32	PRO	0		3.2	6	17	HC2	5.0	7.30	3.1	0		S	8.30	3.0	5.2	13.0	13.20	3.2	12.6	5.3	2	1.90	1.70	3.1	-0.1	-3.3	94			Y
TRDS	3017300	0.990	CP	48	48	40	PRO	0	0	5.3	24	22	HC6	5.6	9.30	4.1	0		LC_BO	10.10	4.0	9.6	18.5	18.70	11.2	17.6	12.1	2	4.60	4.40	2.0	-0.1	-2.5	75			Y
TRDS	2054000	2.220	pp	36	36	36		0	0	3.2	2	11	mc	5.0	6.30	3.4	0		cg	7.30	3.0	4.4	11.1	11.40	4.8	10.7	7.4	2	1.10	0.80	2.8	-0.4	-13.3	94			Y
TRDS	2000000	76.267	CP	48	48	50		0	0	3.0	1	3	MM	5.8	9.50	5.0	0		O	12.50	5.0	6.5	19.8	20.30	2.4	19.4	4.9	2	2.80	2.30	6.0	-1.0	-25.0	133			Y
TRDS	2000000	80.713	CP	60	60	72		0	0	3.9	4	6	MM	5.8	16.00	4.8	0		SG	17.80	4.7	6.0	23.5	23.90	1.9	22.6	6.8	2	1.40	1.00	2.5	0.2	4.0	128			Y
TRDS	2050000	5.780	CP	36	36	38	PRO	0		3.4	4	4	MM	5.0	6.40	2.9	0		CG	7.35	2.6	2.8	10.5	10.90	5.8	9.7	9.9	2	0.95	0.55	2.5	0.1	3.3	88			Y
TRDS	3000000	49.760	CP	18	18	40	PRO	0		1.6	1	3	MM1	5.4	8.23	1.4	0		O	8.95	1.4	2.2	11.3	11.45	26.2	11.0	3.9	2	1.08	0.98	1.8	0.1	8.2	91			Y
TRDS	2058000	1.390	CP	48	48	48	PRO	0		4.0	5	8	MM1	5.5	6.50	4.0	0		LC	7.25	4.1	5.0	12.1	12.30	3.0	11.9	6.7	2	0.95	0.75	1.6	0.0	0.0	100			Y
TRDS	2059300	0.190	PP	18	18	31	PRO	0			1	1	PA3	5.6	7.58	1.5	0	O	O	8.15	1.5	1.7	10.1	10.20	2.4	10.8	5.0	2	0.55	0.45	1.8	0.0	0.0	####			Y
TRDS	3030000	13.610	CP	36	36	40	PRO	0		9.8	3	3		4.9	8.20	3.0	0			9.18	3.0	3.4	12.1	12.56	3.8	12.2	5.6	2	0.43	0.00	2.5	0.0	-0.6	30			Y
WRD	6590	28.661	CP	72	72	55.5		0	0	5	13	12		4.75	11.10	5.8	0	0	LC	16.50	6.0	7.1	24.00	24.10	4.8	23.30	5.1	2	1.60	1.50	9.7	0.2	3.3	120			Y
WRD	6590	28.051	CP	48	48	34		0	999	5.1	23	10	HC	4.75	5.55	4.1	0	0	SC_LC	8.75	4.0	5.8	15.80	16.20	7.0	15.30	10.8	2	3.45	3.05	9.4	-0.1	-2.5	78			Y
WRD	6265	6.988	cp	36	36	41		0	0	5.5	21	14	hc	5	9.45	2.5	0	0	lc_sc	16.7	3	4.2	21.4	21.6	9.3	21.1	9.5	2	1.90	1.70	17.7	0.5	16.7	55			Y
WRD	6590	28.528	CP	36	36	30		0	0	4	9	15	HC	4.75	6.55	3.1	0	0	O	9.20	3.0	3.8	13.00	13.20	7.2	12.60	15.4	2	1.00	0.80	8.8	-0.1	-3.3	75			Y
WRD	6265	8.089	cp	72	72	52		0	0	7.5	26	24	hc	5	8	6.4	0	0	b_sc	11.7	5.3	5.3	17.9	17.9	7.4	17.4	8.7	2	0.90	0.90	7.1	-0.4	-6.7	80			Y
WRD	6265	6.287	cp	36	36	35		0	0	2.5	18	22	hc	4.75	7.4	2.8	0	0	lc_s	12.7	3	3.6	16.2	16.3	3.3	15.9	4.4	2	0.60	0.50	15.1	0.2	6.7	120			Y
WRD	6265	7.602	cp	36	36	40		0	0	4.7	16	20	hc	5	7.95	3	0	0	sc_lc	15	3	3.9	18.4	18.5	4	18.1	5.2	2	0.50	0.40	17.6	0.0	0.0	64			Y
WRD	6265	9.365	cp	54	54	46.2		0	0	6.5	13	20	hc	5	9.4	4.6	0	0	sc	11.55	4.5	4.9	16.4	16.5	5.5	15.9	6.2	2	0.45	0.35	4.7	-0.1	-2.2	69			Y
WRD	6265	0.313	cp	48	48	40.4		0	35	12	4		mc	4.75	13.2	3.9	0	0	lc	16.7	4	4.7	20.2	22	13	19.6	16.2	2	1.30	-0.50	8.8	0.1	2.5	33			Y
WRD	6265	0.767	cp	18	18	33		0	0	2	5	32	mm	4.75	7.95	1.9	0	0	fg	9.15	1.5	3	11.9	12.4	2.4	11.2	4.3	2	1.75	1.25	3.6	-0.4	-26.7	75			Y
WRD	52031	0.169	CP	18	18	26		0	0	2.2		9	MM	5.00	6.05	1.8	0		CG	6.60	1.5	3.2	9.30	9.50	3.1	9.10	5.0	2	1.40	1.20	2.1	-0.3	-20.0	68			Y
TRDN	2700000	0.276	CP	18	18	25		0	0	5.5	4	2	MC	5.0	6.80	1.7	40	SC	S	7.10	1.5	2.7	9.7	10.0	4.2	9.3	5.0	2	1.40	1.10	1.2	-0.2	-13.3	27			Y
TRDS	2000640	2.400	CP	24	24	46	PRO	0		4.7	13	17	HC2	5.0	9.00	1.9	0		LG	10.60	2.0	3.6	16.1	16.30	6.0	14.6	6.5	2	3.70	3.50	3.5	0.1	5.0	43			Y
PRD	40000	3.552	CP	24	24	40	PRO	0	0	5.3	9	10	AF_AF	5.55	12.70	2.1	0	N	S	14.83	2.0	3.7	18.56	19.45	3.7	17.30	6.6	2	2.62	1.73	5.3	-0.1	-5.0	38			Y
PRD	40000	3.739	CP	36	36	36	PRO	0	0	7.4	8	8	AF_AF	5.55	9.20	2.9	0	N	LC	11.65	3.0	3.1	15.00	15.23	3.9	14.00	5.9	2	0.58	0.35	6.8	0.1	3.3	41			Y
PRD	6235	2.182	CP	24	24	50	PRO	0	15	4.4	20	24	HC_HC	5.55	11.40	2.5	0	N	SC	15.16	2.0	2.6	17.58	18.56	3.4	17.00	6.1	2	1.40	0.42	7.5	-0.5	-25.0	45			Y
PRD	6326	3.782	CP	36	36	30	PRO	0	20	6.7	13	10	HC_HC	5.37	8.30	3.0	0	N	SC	11.25	3.0	4.8	15.3	15.7	7.0	15.1	8.0	2	1.45	1.05	9.8	0.0	0.0	45			Y
PRD	6333	1.316	CP	24	24	32	PRO	0	0	4.6	14	16	HC_HC	5.37	9.65	2.0	0	N	LC	12.80	2.0	3.0	16	16.4	7.3	15.5	9.2	2	1.60	1.20	9.8	0.0	0.0	43			Y
PRD	6350	14.308	PA	60	72	46	MIT	0	0	18.7	27	20	HC_HC	5.37	7.02	5	0.0	N	LC_BO	13.16	5	6.5	20.16	20.92	11.7	19.1	20	2	2.76	2.00	13.3	0.0	0.0	32			Y
PRD	6353	0.289	CP	60	60	60	58	0	0	10.3	14	26	HC_HC	5.37	11.3	5	0.0	N	LC	18.4	5	7	25.2	25.9	10.5	25.2	11	2	2.50	1.80	11.8	0.0	0.0	49			Y
PRD	6407	1.200	CP	48	48	100	PRO	0	0	11	8	6	HC_HC	5.30	21.8	4	0	0	LC	31.7	3.4	4.6	36.7	37.3	5	35.7	12.5	2	2.20	1.60	9.9	0.0	0.0	36			Y
PRD	6416	1.513	CP	48	48	62	PRO	0	5	8.4	7	5	HC_HC	5.3	17.06	3.94	0	N	B	19.82	4.0	6.6	24.92	25.1	2.9	24.08	9.3	2	1.28	1.10	4.5	0.1	1.5	48			Y
PRD	6436	0.491	CP	48	48	40	PRO	0	0	10.70	5	7	HC_HC	4.95	8.66	4	0	N	SC_CG	9.78	4.0	5.3	15.14	15.56	11.3	13.98	14.9	2	1.78	1.36	2.8	0.0	0.0	37			Y
PRD	6461	2.614	PA	48	46	46	PRO	0	10	9.2	5	5	HC_HC	4.75	15.8	3.9	0	N	CG	17.85	3.9	4.4	22.50	22.90	8.20	20.7	10.0	2	1.15	0.75	4.4	0.1	2.5	42			Y
PRD	40000	3.706	CP	48	48	48	PRO	0	0	11.7	7	9	HC_HC	5.55	13.40	3.7	0	N	LG_SC	17.26	4.0	4.6	21.95	23.00	4.2	20.90	4.7	2	1.74	0.69	8.0	0.3	7.5	34			Y
PRD	6402	30.066	CP	36	36	47	PRO	0	0	6	24	20	HC_-HC	5.30	6.7	3	0	N	BO	12.5	3.0	4.4	17.9	18.3	6.8	17.6	7.3	2	2.80	2.40	12.3	0.0	0.0	50			Y
PRD	40000	3.292	CP	24	24	37	PRO	0	0	4.8	9	2	HC1_NT	5.55	11.66	1.9	0	N	CG	12.10	2.0	2.9	14.85	15.80	3.9	14.30	5.8	2	1.70	0.75	1.2	0.1	5.0	42			Y
PRD	6328	4.580	CP	24	24	28	PRO	0	0	6.0	5	15	MM_HC	5.37	7.25	2.0	0	N	CG_S	7.90	2.0	2.8	12.3	12.8	3.6	12.3	7.4	2	2.90	2.40	2.3	0.0	0.0	33			Y
PRD	6405	1.184	CP	18	18	24	PRO	0	0	3.90	1	2	PA_PA	4.95	6.02	1.4	0	N	O	6.9	1.5	2.6	8.9	9.16	10.4	9	14.7	2	0.76	0.50	3.7	0.1	6.7	38			Y
TRDN	1525200	1.086	CP	18	18	34		0	0	3.5	6	14	MM1	5.7	10.10	1.4	0		FG_CG	11.10	1.5	1.8	14.6	14.8	3.6	14.3	4.9	2	2.20	2.00	2.9	0.1	6.7	43			Y
TRDN	1500000	2.699	CP	18	18	30		0	0	9.4	2	2	MM1	5.6	9.25	1.5	0		S_O	9.90	1.5	1.7	11.9	12.6	5.1	11.2	7.2	2	1.20	0.50	2.2	0.0	0.0	16			Y
TRDS	3000000	54.300	CP	24	24	41	PRO	0		4.9	3	7	HC2	5.4	9.09	2.5	0		CG	11.41	2.6	3.4	14.6	14.66	4.6	14.5	6.2	2	0.66	0.59	5.7	-0.5	-24.6	41			Y
TRDS	2050300	4.670	CP	48	48	40	PRO	0		9.7	15	10	HC2	5.6	9.30	4.0	0		B	12.00	4.0	6.5	19.2	19.50	11.8	18.3	15.3	2	3.50	3.20	6.8	0.0	0.0	41			Y
WRD	6590	26.172	CP	36	36	30		0	0	6.2	11	13	HC	5.00	8.75	2.8	0		SC	11.20	3.0	4.3	15.50	15.80	6.0	16.30	8.0	2	1.60	1.30	8.2	0.2	6.7	48			Y
WRD	52031	0.648	CP	18	18	24		0	10	3.6	5	9	HC	5.00	5.20	1.3	0		S	6.00	1.5	1.8	8.50	8.80	3.0	8.00	5.0	2	1.30	1.00	3.3	0.2	13.3	42			Y
WRD	6265	1.677	cp	24	24	32		0	10	4	21	24	hc	4.75	8.05	2	0		lc	12	2	2.9	14.5	15	6.6	14	7.9	2	1.00	0.50	12.3	0.0	0.0	50			Y
WRD	6265	7.64	cp	48	48	40.5		0	0	17.5	20	24	hc	5	4.15	2.7	0	0	b_sc	10.75	4	4.7	15.2	15.4	11	15.1	12.2	2	0.65	0.45	16.3	1.3	32.5	23			Y
WRD	6265	0.711	cp	18	18	30		0	0	5.6	3	13	mm	4.75	7.85	1.7	0	0	s	8.75	1.5	4.8	13.2	14.1	6.5	12.9	5.5	2	3.85	2.95	3.0	-0.2	-13.3	27			Y
WRD	6265	0.718	cp	18	18	30		0	0	5.6	3	17	mm	4.75	8.3	2	0	0	s	9.55	1.5	1.7	12.5	12.6	2.8	12	4.3	2	1.55	1.45	4.2	-0.5	-33.3	27			Y
WRD	6590	14.046	CP	18	18	31		0	0	3.4	6	10	MM	5.00	9.65	1.6	0		S_FG	11.20	1.5	1.8	13.70	14.00	3.7	14.20	5.2	2	1.30	1.00	5.0	-0.1	-6.7	44			Y
TRDS	3000000	53.850	CP	36	36	40	PRO	0		9.8	18	8	HC2	5.4	10.14	3.0			BO	12.92	3.0	3.9	18.8	19.09	6.2	18.7	8.2	2	3.15	2.85	7.0	0.0	0.0	30			Y
CRD	2100000	18.700	cp	48	48	47				3.9	7	11	hc	5	6.82	4.1	0		sc	9.97	4.1	4.6	14.1	14.2	4.0	13.94	6.7	2	0.10	0.03	6.7	-0.1	-2.5	103			Y
CRD	2100000	1.240	cp	24	24	30				3.3	7	2	mm	5	7.02	2.1	0		o_fg	7.87	1.9	1.9	9.2	9.8	5.8	8.60	13.0	2	0.04	-0.62	2.8	-0.1	-5.0	61			Y
TRDS	2050610	0.600	PP	24	24	50	PRO			1.8	4	6	MM1	5.0	13.35	2.0	0		O	13.60	2.0	2.4	15.7	16.10	2.6	15.4	7.4	2	0.50	0.10	0.5	0.0	0.0	111			Y
TRDS	2050610	0.200	PP	24	24	40	PRO			2.5	20	5	HC	5.0	10.40	1.8			CG	14.20	2.0	2.3	16.4	16.40	5.1	16.1	6.6	2	0.20	0.20	9.5	0.2	10.0	80			Y
CRD	2100000	12.530	cp	108	108	54				18.4	1	2	mc	5	9.51	9.7	0		fg_cg	9.94	9.0	10.2	18.8	19.5	26.2	17.72	27.9	2	0.51	-0.14	0.8	-0.7	-7.8	49			Y
CRD	2014000	3.010	cp		26	30				9.5	5	5	af	5	9.38	2.6	0		sc_lc	9.88	2.6	2.7	12.2	12.5	10.6	11.48	14.7	2	0.06	-0.24	1.6	-2.6	#####	23			Y
CRD	2150000	8.870	cp	48	48	40				4.4	3	4	mm	5	8.56	4.2	0		sc	9.38	4.0	4.4	13.0	14.0	9.2	12.47	11.2	2	0.63	-0.39	2.1	-0.2	-5.0	91			Y
TRDS	2050610	0.630	PP	18	18	30	PRO			2.3	2	4	MM	5.0	7.10	1.5	0		O	7.85	1.5	2.0	0.5	10.60	3.1	10.0	4.7	2	1.25	-8.85	2.5	0.0	0.0	65			Y
CRD	2100000	19.490	cp	24	24	36				3.5	5	5	hc	5	8.17	2.0	0		lc_sc	10.70	2.0	4.6	15.5	17.0	6.1	15.29	7.2	2	4.30	2.76	7.0	0.0	0.0	57			Y
CRD	2100000	2.360	cp	36	36	50				3.6	4	7		5	9.15	3.1	0		cg	10.40	3.0	6.0	16.2	16.5	10.0	15.98	12.0	2	3.07	2.81	2.5	-0.1	-3.3	83			Y

FISH PASSAGE ANALYSIS DATA
GREEN/GREY/RED

DISTRICT	RTE_NO	MP	FEAT	HGT	WID	LEN	ENT	BLK	SD	B_US	U_GD	D_GD	CHT	HI	TC_I	CO_I	BLD_C	BLD_T	U_SB	TC_O	CO_O	PD	WSE	TC	B_TC	OHW_O	OHW_W	VERIFIED	PRCH_TC	PRCH_WSE	CUL_GRD	BDLD_D_I	INV_B_%	CULW_BW	GREEN	GRAY	RED
CRD	2100000	4.420	cp	24	24	30				3.2	18	15	hc	5	7.35	2.0	0		bo	9.48	2.0	3.3	13.6	13.8	3.0	12.47	4.2	2	2.30	2.13	7.1	0.0	0.0	63			Y
CRD	2150000	5.100	cp	36	36	34				5.8	25	19	hc	5	7.05	3.2	0		sc_lc	8.73	3.0	4.3	15.3	15.7	4.8	14.63	8.2	2	3.99	3.59	4.9	-0.2	-6.7	52			Y
CRD	2150000	9.460	cp	36	36	32				4.1	12	24	hc	5	6.69	3.3	0		sc	10.01	3.0	3.9	15.5	15.7	6.2	14.86	7.4	2	2.71	2.45	10.4	-0.3	-10.0	73			Y
CRD	2100000	1.790	cp	24	24	40				3	5	1	mm	5	10.63	2.4	0		cg_s	11.65	2.0	2.6	14.1	15.7	7.2	13.42	8.3	2	2.10	0.46	2.5	-0.4	-20.0	67			Y
CRD	2100000	5.190	cp	24	24	58				3	5	10	hc	5	17.59	2.0	0		o_b	19.91	2.0	6.4	27.1	27.2	7.3	26.80	9.2	2	5.32	5.18	4.0	0.0	0.0	67			Y
CRD	2100000	6.510	cp	36	36	40				4.6	6	20	hc	5	8.33	3.0	0		lc_bo	10.53	3.0	4.2	14.1	14.2	9.0	13.62	11.7	2	0.71	0.54	5.5	0.0	0.0	65			Y
CRD	2100000	19.250	cp	36	36	30				5.6	11	13	hc	5	6.92	3.1	0		sc_lc	7.87	3.0	4.4	12.0	12.1	3.2	11.32	8.6	2	1.20	1.10	3.2	-0.1	-3.3	54			Y
CRD	2150000	0.530	cp	36	36	40				4.6	8	12	hc	5	11.75	3.0	0		lc	14.89	3.0	3.0	18.9	19.1	5.7	18.54	6.6	2	1.17	1.00	7.9	0.0	0.0	65			Y
CRD	2150000	4.000	cp	36	36	40				3.9	10	17	hc	5	6.63	3.1	0		sc_lc	6.99	3.0	3.2	15.2	15.4	5.0	14.40	8.7	2	5.43	5.20	0.9	-0.1	-3.3	77			Y
CRD	2150000	4.410	cp	60	60	50				8	21	18	hc	5	7.55	5.1	0		bo_lc	15.09	5.0	7.2	22.7	23.0	16.0	22.21	17.7	2	2.87	2.58	15.1	-0.1	-2.0	63			Y
CRD	2150000	9.550	cp	60	60	49				7.7	10	14	hc	5	10.50	5.0	0		sc_lc	16.11	5.0	5.4	22.1	22.4	6.5	21.42	9.6	2	1.33	0.97	11.4	0.0	0.0	65			Y
CRD	2014000	0.330	cp		24	30				2.8	4	11	hc_mm	5	8.01	2.0	0		sc	9.65	2.0	2.3	12.0	12.2	2.0	11.48	6.3	2	0.53	0.39	5.5	-2.0	#####	71			Y
CRD	2100000	18.390	cp	36	36	36				3.7	13	7	hc_mm	5	6.59	3.1	0		lc	10.17	3.0	4.1	14.3	14.3	4.0	13.62	7.6	2	1.10	1.13	9.9	-0.1	-3.3	81			Y
CRD	2150000	8.920	cp	36	36	36				3.3	2	7	mm	5	7.87	3.2	0		s_o	8.66	3.0	4.1	12.8	13.3	2.9	12.40	5.5	2	1.59	1.13	2.2	-0.2	-6.7	91			Y
CRD	2100000	4.530	cp	18	18	34				1.2	3	0	mm_pa	5	6.92	1.5	0		s_o	8.66	1.5	1.7	11.0	11.2	0.6	10.43	3.5	2	0.99	0.86	5.1	0.0	0.0	125			Y
WRD	6265	2.414	pa	50	76	38				7.6	8	8	mm	4.75	6.6	4.25	0	0	lc_s	7.85	4	5.7	12.7	13.3	9.6	11.6	10	2	1.45	0.85	3.3	-0.1	-2.0	83			Y
CRD	2100000	20.480	cp	24	24	30				4.4	9	7	hc	5	7.78	4.0	0		lc	8.86	4.0	5.4	14.1	14.3	3.5	13.52	6.5	2	1.48	1.22	3.6	-2.0	-100.0	45			Y
CRD	2150000	7.320	cp	24	24	44				4.5	18	4	hc	5	7.58	2.0	0		sc_lc	9.58	2.0	2.8	12.9	13.1	2.5	28.21	8.6	2	1.51	1.31	4.5	0.0	0.0	44			Y
CRD	2100000	12.740	cp	70	70	108				18.5	1	7	mc	5	10.70	9.5	0		fg_cg	12.89	9.1	9.8	22.3	23.0	15.4	21.00	19.7	2	1.04	0.35	2.0	-3.7	-62.9	32			Y
CRD	2150000	7.280	cp	24	24	34				5.8	7	4	mc	5	7.41	2.1	0		cg_sc	9.12	2.0	2.5	11.8	12.1	6.4	11.38	6.8	2	1.02	0.69	5.0	-0.1	-5.0	34			Y
TRDN	2000000	120.792	CPB	60	60	60		I	I	5.8	9	6	HC2	5.6	13.90	4.3	100	LC_BO	LC_BO	16.80	5.2	5.8	21.121.8		7.8	20.2	10.0	2	-22.00	#####	4.8	0.7	14.0	86		Y	
TRDN	2000000	106.598	CO	216	107	96		0	0	6.0	8	3	MC	5.6	16.20	9.1	100	BO	B	20.40	9.6	9.7	29.3	30.6	8.3	26.6	27.8	2	0.60	-0.70	4.4	8.9	49.4	149		Y	
SRD	7500	13.140	CP	36	36	28	PRO	0	0	4	2	2	MC	5	7.05	2.97	0		SC	7.32	3	2.98	9.96	10.3	6	9.8	8	2	-0.02	-0.36	1.0	0.0	1.0	75		Y	
TRDN	1530000	1.214	CPB	36	36	43		0	0	4.5	7	7	HC2	6.1	12.30	2.9	0	NA	CG_BO	15.80	3.0	3.3	18.7	18.9	4.4	18.5	6.5	2	0.10	-0.10	8.1	0.1	3.3	67		Y	
TRDN	2000000	115.861	CP	60	60	40		0	0	NA	1	1	PA5	5.6	9.70	5.8	100	O	O	9.80	5.8	6.1	12.6	NA	NA	12.4	NA	2	######	-3.00	0.3	-0.8	-16.0	####	Y		
TRDN	1445000	5.455	CP	72	72	62		0	0	NA	1	0	PA5	5.4	9.70	6.0	100	O	O	9.20	5.8	6.1	13.6	NA	NA	NA	NA	2	######	-1.40	-0.8	0.0	0.0	####	Y		
TRDN	2086000	0.650	CP	36	36	40		0	0	NA	1	1	PA5	5.7	7.00	3.4	0		O	7.10	3.0	3.3	7.3	NA	NA	NA	NA	2	######	-2.80	0.2	-0.4	-13.3	####	Y		

FAILURE MECHANISM FOR ROAD SURFACE EROSION

	FAILURE MECHANISM	FREQUENCY
BD	BLOCKED DITCH(obsolete code)	29
BV	BEAVER ACTIVITY	9
CS	CULVERT IS TOO SHORT	28
CSC	CUT-SLOPE SLUMPING OR SLIDING INTO CULVERT	40
CSD	CUT-SLOPE SLUMPING OR SLIDING INTO DITCH	328
DF	DEBRIS FLOW	3
EC	HYDRAULIC FLOW EXCEEDED CAPACITY	44
FS	FILL SLUMP OR SLIDE	108
IB	IMPROPER INSTALLATION	3
MDB	MISSING OR INADEQUATE DITCH(blasting required)	16
MDD	MISSING OR INADEQUATE DITCH(diggable material)	288
MI	MISSING STRUCTURE	4
MP	MECHANICAL DAMAGE OR JOINTS PARTING	2
MT	MATERIAL INADEQUATE FOR DESIGNED USE	5
OS	OVERSTEEPENED SLOPES	366
OT	OTHER(specify in notes)	66
RF	ROAD FILL(pushed off road by grader)	3
RG	ROAD GRADE NEEDS CROWNING/SHAPING	94
SC	SIDECAST MATERIAL CRACKING OFF ROADWAY	4
SD	STREAM IN DITCH	5
SDC	SEDIMENT ACCUMULATION IN CULVERT	13
SDD	SEDIMENT ACCUMULATION IN DITCH	88
SS	SUBSIDENCE	29
WDC	WOODY DEBRIS IN CULVERT	7
WDD	WOODY DEBRIS IN DITCH	10
WX	WEATHERING	4

VERIFIED FISH CULVERTS WITH OUTLET EROSION REQUIRING CORRECTIVE ACTION

District	RTE_NO	MP	SYS	FEAT	HGT	WID	LEN	IE	OE	BLK	AHMU	HAB
CRD	2000210	0.690	TR	CP	48			N	D	20	2	D
CRD	2000210	0.900	TR	CP	48			N	D	0	2	D
CRD	2000210	0.970	TR	CP	36			N	D	0	2	D
CRD	2000210	1.390	TR	CP	18			N	F	15	2	B
CRD	2013000	0.081		cp		60	40	I	f		1	b
CRD	2013000	0.100		cp		48	33	f	f		3_1	d
CRD	2013100	0.010		cp		18 -24?		I	f_o	50	1	b
CRD	2014000	0.330	TR	CP	24		30	N	B	0	2	B
CRD	2014000	3.010		cp		26	30	n	f		2	b
CRD	2025000	0.500	20MI	CP	18			N	F	0	2	B
CRD	2026000	1.990	20MI	CP	36		30	N	F	0	2	D
CRD	2100000	2.070	TR	CP	72		52	N	B	0	1	D
CRD	2100000	2.360		cp	36		50	n	f		2	b
CRD	2100000	5.190		cp	24		58	f	f		2	b
CRD	2100000	5.190	TR	CP	24			N	F	0	2	B
CRD	2100000	5.710		cp	36		36	n	f	0	1	b
CRD	2100000	5.710	TR	CP	36			N	F	15	1	B
CRD	2100000	6.510		cp	36		40	n	o		3_2	d
CRD	2100000	12.530		cp	108		54	n	b		2	b
CRD	2100000	12.530	PK	CP	108		54	N	B	0	2	B
CRD	2100000	12.740	PK	CP	108		70	N	F	0	2	B
CRD	2100000	14.380	PK	CP	108		54	I	D	0	1	B
CRD	2100000	15.270	PK	CP	36			N	F	0	1	D
CRD	2100000	19.490		cp	24		36	n	b_o		2	b
CRD	2100000	19.490	PK	CP	24			I	B	0	2	B
CRD	2100000	20.480		cp	24		30	n	o		2	b
CRD	2100000	20.480	PK	CP	48			N	O	0	2	B
CRD	2100000	20.570	PK	CP	72			I	F	0	2	B
CRD	2120000	0.210	12MI	CP	48		30	N	O	0	2	B
CRD	2135000	0.210	PK	CP	36			N	D	10	2	B
CRD	2135000	0.430	PK	CP	108		86	I	F	15	1	D
CRD	2150000	0.530		cp	36		40	f	f		2	b
CRD	2150000	2.940		pa_ar	122	163	81	n	b		1	b
HRD	8508	4.306	HH	CP	48		36.2	N	Y	0	2	B
HRD	8508	4.540	HH	CMP	48	62		N	Y	0	2	B
HRD	8530	4.130	HH	CP	24		48	N	D	10	1_1	B
HRD	8578	0.129	HH	CP	24	24	30	N	O	100	2	D
HRD	8578	0.608	HNH	CP	24	24	34	N	D	0	2	B
HRD	8578	1.020	HNH	CP	24	24	37	N	F	20	2	B
HRD	8580	2.019	EF	CP	24			N	D	0	4_2	D
HRD	8580	2.035	EF	CP	24		44	N	D	0	2_2	B
HRD	8580	2.089	EF	PA	42	54		N	D	0	2_2	B
HRD	8580	2.112	EF	CP	36			N	D	0	2_2	B
HRD	8580	2.166	EF	CP	36		48	N	D	0	2_2	B
HRD	8580	2.657	EF	CP	36		51	N	D	0	2_2	B
HRD	8580	3.251	EF	CP	48		38	F	F	0	2_2	B
HRD	85811	3.909	EF	CP	18.0			N	D	0	2_2	B

VERIFIED FISH CULVERTS WITH OUTLET EROSION REQUIRING CORRECTIVE ACTION

District	RTE_NO	MP	SYS	FEAT	HGT	WID	LEN	IE	OE	BLK	AHMU	HAB
JRD	8553	0.406	CV	CP	54	54	40	N	D	0	1_1	B
JRD	8553	11.695	CV	CP	24		37	N	F	0	1_1	B
PRD	6030	8.947	KK	CP	36	36	38	N	B	0	2_2	B
PRD	6030	11.712	KK	CP	48	72	57	I	O	75	2_2	B
PRD	6040	8.525	KK	CP	36	36	44	N	F	25	2_2	B
PRD	6040	15.221	KK	CP	36	36	39	I	D	0	2_2	B
PRD	6212	0.106	MT	CP	72	72	30	N	F	0	2_2	B
PRD	6317	2.112	PB	CP	72	72	44	N	F	15	2_2	B
PRD	6319	7.778	PB	CP	36	36	34	M	M	0	2_2	B
PRD	6326	1.191	KK	CP	48	48	40	N	F	0	2	B
PRD	6350	15.318	TK	CP	36	36	30	N	F	0	2_2	B
PRD	6366	0.105	KK	PA	48	72	38	I	F	95	2_2	B
PRD	6407	3.432	RB	CP	48	48	34	N	F	0	2_2	B
PRD	6407	3.432	RB	CP	48	48	34	N	F	0	2_2	B
PRD	6407	4.526	RB	CP	18	18	34	N	F	0	2_2	B
PRD	6415	2.339	RB	CP	48	48	45	N	F	0	2_2	B
PRD	6415	2.341	RB	CP	48	48	45	N	F	0	2_2	B
PRD	6415	7.198	RB	CP	60	60	50	F	F	0	2	B
PRD	6416	0.767	RB	CP	48	48	50	N	F_B	0	1_1	B
PRD	6416	1.841	RB	CP2	48	48	40	N	F	50	2	B
PRD	6416	1.842	RB	CP2	48	48	40	N	F	15	2	B
PRD	6420	1.886	RB	CP	48	48	40	F	F	0	3_2	B
PRD	6434	2.568	RB	CP	48	48	50	N	F	0	2_2	B
PRD	6441	1.296	RB	CP	24	24	24	N	F	0	2_2	B
PRD	45001	0.185	KK	CP	36	36	49	N	F	0	1	B
PRD	45001	0.185	KK	CP	36	36	50	N	B	0	1_1	B
SRD	7540	2.024	FI	CP	18		32	N	O	0	1_1	B
SRD	7540	3.615	FI	CP	36		41	N	F	0	2_2	U
SRD	7540	3.615	FI	CP	36		41	N	F	0	2_2	U
SRD	7540	3.955	FI	CP	36		36		F	0	1_1	B
SRD	7540	3.955	FI	CP	36		36		F	0	1_1	B
TRDN	1445630	1.527	HC	CP	24.0		27	N	OT	0	1	B
TRDN	2000000	123.830	WP	CP	36		30	N	O	0	1	B
TRDN	2000900	0.634	LB	CP	36		30	N	F	0	2	B
TRDN	3000000B	81.438	WP	CP	48		50	Y	Y	100	1	U
TRDN	3000000B	86.868	WP	CP	24		40	N	O	0	2	U
TRDS	2000530	0.260	ST	CP	48		48	N	F	80	2	B
TRDS	2050000	2.320	ST	CP	24		30	N	F	0	2	B
TRDS	2050000	3.890	ST	CP	24		26	F	F	0	2	B
TRDS	2050000	4.310	ST	CP	48		38	N	F	0	2	B
TRDS	2050000	4.640	ST	CP	36		26	N	F	0	2	B
TRDS	2050000	5.390	ST	CP	60		38	F	F	0	2	B
TRDS	2050220	0.590	ST	CP	48			I	O	100	1	D
TRDS	2050610	0.200	WH	PP	24		40	N	F		2	B
TRDS	2050610	0.370	WH	PP	36		40	I	F		2	B
TRDS	2050800	1.140	WH	CP	24		33	N	O	0	2	B
TRDS	2050800	2.690	WH	CP	48		40	B	B	0	2	B

VERIFIED FISH CULVERTS WITH OUTLET EROSION REQUIRING CORRECTIVE ACTION

District	RTE_NO	MP	SYS	FEAT	HGT	WID	LEN	IE	OE	BLK	AHMU	HAB
TRDS	2051050	1.330	WH	CP	36		34	N	O	95	1	
TRDS	2054000	0.020	st	cpb	48	48	120	n	f	0	1	b
TRDS	2054000	7.310	st	pp	24	24	40	n	ot	0	2	b
TRDS	2054200	0.730	ST	CP	36		32	N	D	0	2	B
TRDS	2054300	0.460	st	pa	67	95	40	i	f	0	1	b
TRDS	3000000	17.700	TB	CP	48			N	B	0	2	B
TRDS	3000000	19.480	TB	CP	18		40	I	O	20	2	B
TRDS	3000000	21.900	TB	CP	48			I	O	0	2	B
TRDS	3030600	0.030	CC	CP	36		35	F	F	20	2	B
WRD	6265	0.711	wg	cp	18	18	30	n	b	0	2_2	u
WRD	6265	0.767	wg	cp	18	18	33	n	b	0	2_2	b
WRD	6265	2.414	wg	pa	50	76	38	n	b		2_2	b
WRD	6585	11.447	ZA	CP	72	90	48.5	B	F	0	1	BT
WRD	6590	1.700	ZA	CP	24	24		F	F	0	1	AUS
WRD	6590	1.719	ZA	CP	36	36		N	O	33	1	AUS
WRD	6590	10.545	ZA	CO	37	72	38	N	O	45	1	AUS
WRD	6590	11.197	ZA	CP	48	48	40.2	B	B	0	1	AUS
WRD	6590	11.597	ZA	AR	108	174	58	B	B	0	1	AUS
WRD	6590	11.607	ZA	AR	108	174	48	N	B	0	1	AUS
WRD	6590	17.168	ZA	CP	36	36	30	N	O	0	1	B
WRD	6590	26.172	ZA	CP	36	36	30	F	F	0	2	B
WRD	6590	26.624	ZA	CP	18	18	28	I	O	100	2	B
WRD	6590	27.907	ZA	CO	3.2	6.33	33	N	F	15	2	B
WRD	6590	28.051	ZA	CP	48	48	34	N	F	0	2	D
WRD	6590	28.661	ZA	CP	72	72	55.5	N	B	0	2	D
WRD	6590	28.661	ZA	CP	72	72	62	F	F	0	2	RDS
WRD	6590	28.778	ZA	CP	48	48	40	N	F	0	2	D
WRD	6590	31.556	ZA	AR	7	9.7	54	N	F	0	2	RBT
WRD	6590	34.427	ZA	CP	72	72	48	N	F	0	2	RUS
WRD	6590	36.079	ZA	CP	48	48	40.5	N	B	0	2	RUS
WRD	6590	37.255	ZA	CP	36	36	57	N	B	0	2	RUS
WRD	6590	37.256	ZA	CP	36	36	57	N	B	0	2	RUS
WRD	6597	2.610	ZA	CP	36	36	25	F	F	35	2	RBS
WRD	52031	0.169	ZA	CP	18	18	26	O	F	0	2_2	B
WRD	52031	0.247	ZA	CP	48	48	30	F_B	F	0	2_2	B
WRD	52031	0.463	ZA	CP	24	24	28	O	OE	0	2_2	B
WRD	52031	0.615	ZA	CP	24	24	30	B_I	B	0	1_1	B
WRD	52031	0.648	ZA	CP	18	18	24	F_B	F_B	0	1_1	B

VERIFIED FISH CULVERTS WITH INLET EROSION REQUIRING CORRECTIVE ACTION

District	RTE_NO	MP	SYS	FEAT	PRM	HGT	WID	LEN	IE	OE	BLK	AHMU	HAB
CRD	2000210	1.370	TR	CP	SC	24			F	N	0	2	B
CRD	2013000	0.081		cp	sc		60	40	I	f		1	b
CRD	2013000	0.100		cp	sc		48	33	f	f		3_1	d
CRD	2013100	0.010		cp	sc_se	18 -24?			I	f_o	50	1	b
CRD	2100000	4.600		cp	c_se_fe_h	24		30	f_b	n		2	b
CRD	2100000	5.190		cp	sc	24		58	f	f		2	b
CRD	2100000	12.740		cp	sc	70		108	f	n		2	b
CRD	2100000	12.940	PK	CP	SC	36			B	N	0	2	B
CRD	2100000	14.380	PK	CP	SC	108		54	I	D	0	1	B
CRD	2100000	19.490	PK	CP	SC	24			I	B	0	2	B
CRD	2100000	20.570	PK	CP	SC	72			I	F	0	2	B
CRD	2120000	9.580	12MI	CP	SC	60		46	B	N	0	2	B
CRD	2135000	0.430	PK	CP	SC	108		86	I	F	15	1	D
CRD	2135500	3.680	PK	CP	SC	72			F	N	0	2	D
CRD	2150000	0.530		cp	sc	36		40	f	f		2	b
CRD	2150000	7.280		cp	sc	24		34	f	n		2	b
HRD	8530	3.077	HH	CP	SC	48		36	F	N	0	1_1	B
HRD	8530	3.090	HH	PA	SC	46	72	30	F	N	0	1_1	B
HRD	8530	3.527	HH	CP	SC	48		32	F	N	0	1_1	B
HRD	8530	4.158	HH	CP	SC	60		38	F	N	N	1_1	B
HRD	8579	1.162	SL	CP	SC	48		32.5	Y	N	0	2	B
HRD	8580	3.251	EF	CP	SC	48		38	F	F	0	2_2	B
HRD	8580	4.318	EF	CP	NS	18			F	N	0	5_1	D
JRD	8553	4.238	CV	CP	SC	36		35	F	N	20	1_1	B
JRD	8555	2.941	CV	CP	SC	18			I	N	0	1_1	B
JRD	85532	0.198	CV	PA	SC	66	76	54	F	N	0	2_2	B
PRD	6030	9.223	KK	CP	SC	48	48	40	F	N	0	2_2	B
PRD	6030	11.712	KK	CP	SC	48	72	57	I	O	75	2_2	B
PRD	6031	2.823	PB	PA	SC	66	84		F	N	0	1_1	B
PRD	6031	4.340	PB	CP	SC	48	48	38	F	N	0	1_1	B
PRD	6031	5.840	PB	CP	SC	36	36	40	F	N	0	1_1	B
PRD	6031	6.631	PB	CP	SC	24	24	40	F	N	0	1_1	B
PRD	6031	11.707	PB	CP	SC	36	36	46	F	N	0	2_2	B
PRD	6032	0.133	PB	CP	SC	36	36	34	I	N	0	1_1	B
PRD	6040	11.336	KK	PA	SC	82	126	42	I	N	40	1_1	B
PRD	6040	15.221	KK	CP	SC	36	36	39	I	D	0	2_2	B
PRD	6206	1.748	MT	CP	SC	60	60	30	F		40	2	B
PRD	6314	4.283	KK	CP	SC	36	36	48	B	N	0	1_1	B
PRD	6317	4.453	PB	CP	SC	72	72		F	N	0	2_2	B
PRD	6317	5.841	PB	CP	SC	36	36	30	F	N	0	2_2	B
PRD	6319	8.709	PB	CP	SC	36	36	30	I	N	0	2_2	B
PRD	6319	10.379	PB	CP	SC	36	36	48	F	N	0	2_2	B
PRD	6319	10.975	PB	CP	SC	36	36	34	F	N	0	2_2	B
PRD	6333	0.062	KK	CP	SC	18	18	40	I	N	0	1_1	B
PRD	6333	1.069	KK	CP	SC	36	36	36	I	N	60	2_2	B
PRD	6350	7.372	TK	CP	SC	48	48	34	F	N	0	2_2	B
PRD	6352	7.000	TK	CP	SC	36	36	50	I	N	50	2_2	B
PRD	6366	0.105	KK	PA	SC	48	72	38	I	F	95	2_2	B
PRD	6402	13.202	RB	CP	SC	36	36	32	F	N	35	1_1	B

VERIFIED FISH CULVERTS WITH INLET EROSION REQUIRING CORRECTIVE ACTION

District	RTE_NO	MP	SYS	FEAT	PRM	HGT	WID	LEN	IE	OE	BLK	AHMU	HAB
PRD	6405	1.184	RB	CP	SC	18	18	24	F	N	0	2	B
PRD	6410	0.513	RB	CP	SC	36	36	50	B	N	15	2_2	B
PRD	6415	1.008	RB	CP	SC	48	48		F	N	0	2	B
PRD	6415	2.118	RB	CP	SC	48	48	50	F	N	0	2	B
PRD	6415	7.198	RB	CP	SC	60	60	50	F	F	0	2	B
PRD	6420	1.419	RB	CP	SC	72	72		F	N	15	2_2	B
PRD	6420	1.578	RB	CP	SC	48	48	30	F	N	20	2_2	B
PRD	6420	1.886	RB	CP	SC	48	48	40	F	F	0	3_2	B
PRD	6441	0.613	RB	CP	SC	48	48	30	F	N	70	2	B
PRD	6441	0.613	RB	PA	SC	48	48	30	F	N	90	2_2	B
PRD	46095	2.409	RB	CP	SC	48	48	40	F	N	10	2	B
SRD	7500	6.859	IR	CP	SC	48	48		I	N	0	1	N
SRD	7500	7.506	IR	CP	SC	60	60	32	I_F	N	60	1	B
SRD	7502	4.345	IR	CP	SC	48	48		I	N	0	2	
SRD	7540	4.363	FI	CP	SC	48		30	F	N	0	2_I	B
SRD	7540	5.536	fi	cp	sc	72	72	53	f	n	0	1	b
TRDN	1425000	0.341	HEC	CP	SC	18		32	I	F	10	2	B
TRDN	1480000	4.090	MAR	CP	SC	36		29	I	N	30	2	B
TRDN	2085000	2.659	LB	CP	SC	48		40	F	N	5	2	B
TRDN	2500000	0.677	WP	CP	SC	48		38	I	B	0	2	B
TRDN	2700000	0.710	WP	CP	SC	48		40	F	N	0	1	B
TRDN	2700000	5.673	WP	CP	SC	36		36	F	B	0	1	B
TRDS	2030120	1.300	TB	CP		84		40	F		0	2	B
TRDS	2030120	1.680	TB	CP		84		52	F		0	2	D
TRDS	2050000	3.890	ST	CP	SC	24		26	F	F	0	2	B
TRDS	2050000	5.050	ST	CP	SC	36		30	F	N	5	2	B
TRDS	2050000	5.390	ST	CP	SC	60		38	F	F	0	2	B
TRDS	2050000	5.780	ST	CP	SC	36		38	F	N	0	2	B
TRDS	2050220	0.590	ST	CP	SC	48			I	O	100	1	D
TRDS	2050300	8.100	ST	CP	SC	60		40	O	N	100	2	B
TRDS	2050400	0.560	ST	CP	SC	48		41	I	N	0	1	B
TRDS	2050610	0.300	WH	PP	SC	36		40	F	N	5	2	B
TRDS	2050610	0.370	WH	PP	SC	36		40	I	F		2	B
TRDS	2050800	2.690	WH	CP		48		40	B	B	0	2	B
TRDS	2054000	2.030	st	cp	sc	60	60	46	f_b	n	0	1	b
TRDS	2054000	2.220	st	pp	sc	36	36	36	i	n	0	2	b
TRDS	2054000	4.600	st	cp	sc	84	84	58	f	n	0	2	b
TRDS	2054300	0.460	st	pa	sc	67	95	40	i	f	0	1	b
TRDS	3000000	19.320	TB	CP	SC	18			I	N	60	2	B
TRDS	3000000	19.480	TB	CP	SC	18		40	I	O	20	2	B
TRDS	3000000	21.900	TB	CP	SC	48			I	O	0	2	B
TRDS	3000000	37.140	RZ	CP	SC	36		30	B	N	0	1	B
TRDS	3000000	47.290	CC	CP	SC	48		40	B	N	50	2	B
TRDS	3000000	48.610	CC	CP	SC	18		25	I	N	50	1	D
TRDS	3000000	57.730	CC	CP	SC	96		60	B	N	0	1	B
TRDS	3000000	58.490	CC	CP	SC	24			I	N	100	2	B
TRDS	3000000	58.630	CC	CP	DR	18			I	N	100	2	D
TRDS	3000000	58.860	CC	CP	SC	24		32	I	N	80	1	B
TRDS	3000000	58.950	CC	CP	SC	48		40	B	N	0	2	B

VERIFIED FISH CULVERTS WITH INLET EROSION REQUIRING CORRECTIVE ACTION

District	RTE_NO	MP	SYS	FEAT	PRM	HGT	WID	LEN	IE	OE	BLK	AHMU	HAB
TRDS	3000000	62.780	CC	CP	SC	36		40	I	N	40	2	B
TRDS	3000000	62.890	CC	CP	SC	48		60	I		70	2	D
TRDS	3000200	2.120	TB	CP	SC	72		38	B	N	0	2	B
TRDS	3000272	0.130	TB	PA	SC	67	95	46	B	N	0	1	B
TRDS	3015000	11.130	TB	CP	SC	72		51	F	N	0	2	D
TRDS	3018000	0.031	TB	PA	SC	4.5	6	66	B	N	0	2	B
TRDS	3018000	0.490	TB	CP	SC	84		54	B	N	0	2	B
TRDS	3018000	0.740	TB	CP	SC	72		66	B	N	0	2	B
TRDS	3018000	4.281	TB	CP	SC	48		40	B	N	0	2	B
TRDS	3020000	0.730	TB	CP	SC	60		40	B	N	0	1	B
TRDS	3020000	0.740	TB	CP	SC	60		40	B	N	0	2	B
TRDS	3030000	0.050	CC	PA	SC	91	141	47.5	B	N	10	2	B
TRDS	3030000	18.410	CC	CP	SC	36		40	B	N	0	2	B
TRDS	3030000	19.070	CC	CP	SC	36		36	B	N	0	2	B
TRDS	3030600	0.030	CC	CP	SC	36		35	F	F	20	2	B
WRD	6265	2.524	wg	cp	sc	24	24	30.5	r	n	0	2_2	b
WRD	6265	6.988	wg	cp	sc	36	36	41	I	n	0	1_2	b
WRD	6265	7.602	wg	cp	sc	36	36	40	b	n	0	3_2	b
WRD	6265	7.64	wg	cp	sc	48	48	40.5	i_f	n	0	3_2	b
WRD	6265	7.693	wg	cp	sc	48	48	48	i	n	60	3_2	b
WRD	6265	8.089	wg	cp	sc	72	72	52	f_i	n	0	2_2	b
WRD	6585	7.968	ZA	CP	SC	90	120	52.5	F	N	0	1	BT
WRD	6585	11.447	ZA	CP	SC	72	90	48.5	B	F	0	1	BT
WRD	6590	1.700	ZA	CP	DR	24	24		F	F	0	1	AUS
WRD	6590	11.197	ZA	CP	SC	48	48	40.2	B	B	0	1	AUS
WRD	6590	11.597	ZA	AR	SC	108	174	58	B	B	0	1	AUS
WRD	6590	26.172	ZA	CP	SC	36	36	30	F	F	0	2	B
WRD	6590	26.624	ZA	CP	SC	18	18	28	I	O	100	2	B
WRD	6590	26.858	ZA	AR	SC	70	90	39	O	N	85	1	B
WRD	6590	28.661	ZA	CP	SC	72	72	62	F	F	0	2	RDS
WRD	6590	33.096	ZA	AR	SC	69	99	48	F	N	0	2	RUS
WRD	6590	34.367	ZA	CP	SC	60	60	56	R	N	0	2	RUS
WRD	6590	35.632	ZA	CP	SC	60	60	48	B	N	0	2	RUS
WRD	6597	2.610	ZA	CP	SC	36	36	25	F	F	35	2	RBS
WRD	52008	0.491	ZA	PA	SC	36	36	32	F			2	RBS
WRD	52031	0.169	ZA	CP	SC	18	18	26	O	F	0	2_2	B
WRD	52031	0.247	ZA	CP	SC	48	48	30	F_B	F	0	2_2	B
WRD	52031	0.463	ZA	CP	SC	24	24	28	O	OE	0	2_2	B
WRD	52031	0.615	ZA	CP	SC	24	24	30	B_I	B	0	1_1	B
WRD	52031	0.648	ZA	CP	SC	18	18	24	F_B	F_B	0	1_1	B

VERIFIED FISH CULVERTS WITH BLOCKAGES BY DISTRICT

AHMU	DISTRICT	RTE_NO	MP	SYS	FEAT	FAIL	HGT	WID	LEN	BLK	CHT	SSC	A_REQ	PRI
1	CRD	2013100	0.010		cp	_ib_cs_sd_rf		18		50	hc	fh	h	c
2	HRD	8578	0.129	HH	CP	SDC	24	24	30	100	HC	DR	H	C
2	HRD	8578	3.490	HH	CP	SDC	18	18	37	50	HC	N	L	N
2	HRD	8578	0.111	HH	CP	MP	24	24	32	20	HC	FH	N	N
2	HRD	8578	1.020	HNH	CP	N	24	24	37	20	HC2	N	X	N
2	HRD	8578	3.020	HH	CP	N	24	24	36	20	HC2	N	N	N
2	HRD	8578	0.887	HNH	CP	N	36	36	36	15	HC2	BDL	H	N
2	HRD	8578	2.445	HH	CP	N	18	18	25	10	MM	N	N	N
2	HRD	8578	2.360	HH	CP	SDC	18	18	29	10	MM	N	N	N
2	HRD	8578	0.219	HH	CP	N	36	36	30	5	HC	FH	N	N
2	HRD	8578	0.928	HNH	CP	N	24	24	30	5	HC2	N	H	N
2	HRD	8578	3.386	HH	CP	N	18	18	36	5	HC2	N	N	N
2	HRD	8578	3.511	HH	CP	N	36	36	30	5	HC2	N	N	N
1	PRD	6415	10.455	RB	PA2	BV	60	84	40	100	PA_PA	BVB	H	N
1	PRD	6415	10.458	RB	PA2	BV	60	84	40	100	PA_PA	BVB	H	N
1	PRD	6235	17.334	MT	CP3	SDC	36	36	44	50	PA_PA	BVD	M	N
1	PRD	6040	11.336	KK	PA	BV_SI	82	126	42	40	MM_MM	BVB_SI	M	C
1	PRD	6402	13.202	RB	CP	N	36	36	32	35	MM_PA	BVD	N	N
1	PRD	6420	0.783	RB	CP	RF	60	60	80	25	HC_MM	N	N	N
1	PRD	6420	2.087	RB	CP	O	48	48	40	15	MM_MM	N	M	N
1	PRD	6415	8.762	RB	CP	RF	48	48	40	15	MM_MM	N	N	N
1	PRD	6314	2.176	KK	CP	RF	36	36	48	10	NT_NT	N	N	N
2	PRD	6441	0.613	RB	PA	BVB	48	48	30	90	PA_PA	BVB	H	N
2	PRD	6402	18.149	RB	CP	SDC_WDC	48	48	34	90	PA_PA	BVB	H	C
2	PRD	6402	19.280	RB	CP	WDC	18	18	30	90	PA_PA	BVD	M	
2	PRD	6410	1.565	RB	CP	WDC	36	36	72	80	PA_HC	BV	H	N
2	PRD	6235	17.579	MT	CP	WDC_SDC	36	36	34	80	PA_NT	N	M	N
2	PRD	6030	11.712	KK	CP	SDC_DF_S	48	72	57	75	MM_MM	BDL_SF_S	X	C
2	PRD	6333	1.069	KK	CP	SS_CSC	36	36	36	60	HC_HC	BDL_SF_S	H	N
2	PRD	6435	0.942	RB	CP	WDC	48	48	32	60	MM_PA	BVB	M	N
2	PRD	6352	7.000	TK	CP	FS_DF	36	36	50	50	HC_HC	WDR_SF	X	C
2	PRD	6319	7.736	PB	CP	N	24	24	38	50	HC_HC	N	N	
2	PRD	6416	1.841	RB	CP2	WDC_MP	48	48	40	50	HC_HC	N	H	N
2	PRD	6416	2.348	RB	CP2	N	48	48	62	30	MM_MM	N	N	N
2	PRD	6430	1.173	RB	CP	RF	24	24	46	30	NT	N	N	N
2	PRD	6402	22.952	RB	CP	SDC	48	48	40	30	MM_MM	N	H	N
2	PRD	6402	19.268	RB	CP	WDC	36	36	44	30	MM_PA	BVB	M	N
2	PRD	6407	7.338	RB	CP	N	48	48	54	29		N	N	N
2	PRD	6434	4.497	RB	CP	O	36	36	34	28	MM_MM	N	N	N
2	PRD	6040	8.525	KK	CP	N	36	36	44	25	MC_HC	SF_SI_DR	H	C
2	PRD	6430	1.013	RB	CP	N	24	24	30	25	MM_MM	N	N	N
2	PRD	6438	0.385	RB	CP	SDC	24	24	40	25	MM_PA	BVD	N	N
2	PRD	6407	6.976	RB	CP	N	48	48	34	22		N	N	N
2	PRD	6420	1.578	RB	CP	MP	48	48	30	20	HC_HC	N	X	N
2	PRD	6317	2.112	PB	CP	MP_RF	72	72	44	15	HC_MM	N	N	N
2	PRD	46041	0.831	RB	PA	N		78	38	15	MM_MM	N	N	N
2	PRD	6407	1.743	RB	CP	N	24	24	37	15	MM_MM	N	N	
2	PRD	6434	4.716	RB	CP	O	36	36	40	15	MM_MM	N	N	N
2	PRD	6410	0.513	RB	CP	SDC	36	36	50	15	HC_HC	N	N	N
2	PRD	6416	1.842	RB	CP2	SDC_FP	48	48	40	15	HC_HC	N	H	N
2	PRD	6326	5.861	KK	CP	N	24	24	32	10	HC_HC	N	N	
2	PRD	6402	10.048	RB	CP	RF	24	24	30	10	HC_HC	N	N	N
2	PRD	6423	0.071	RB	CP	RF	48	48	40	10	PA_PA	BVU	N	N
2	PRD	6317	5.880	PB	CP	SDD	36	36	30	10	HC_HC	N	L	N
1	SRD	7624	0.106	CB	CP	SDC	36	36	40	100	FP			
1	SRD	7500	7.506	IR	CP	N	60	60	32	60	AF	N	N	N

VERIFIED FISH CULVERTS WITH BLOCKAGES BY DISTRICT

AHMU	DISTRICT	RTE_NO	MP	SYS	FEAT	FAIL	HGT	WID	LEN	BLK	CHT	SSC	A_REQ	PRI
1	SRD	7544	1.634	fi	CP	mp	24	24	26	25	fp	n	n	n
1	SRD	7624	0.712	CB	CP	N	48	48	36	2	MC	OT	X	C
2	SRD	7540	107.755	CB	CP	IB	36	36	47	100	N	OT	X	C
1	TRDN	3000000B	81.438	WP	CP	WX	48	48	50	100	ES	OT	H	EC
1	TRDN	1505300	0.215	KO	CP	BV	60	60	44	90	PA5	BVU	H	C
1	TRDN	1445000	3.123	HC	CP	BV	72	72	40	70	PA5	BVB	H	N
1	TRDN	3000000B	86.646	WP	CP	WDC	72	72		30	MM	OT	H	N
1	TRDN	1530000	2.249	KO	CPA	N	83	128	50	20	MM1	WDR	H	N
1	TRDN	2085000	3.147	LB	CP	N	36	36	44	5	AF1	N	N	N
2	TRDN	1445000	3.826	HC	CP	WDC	18	18		100	PA	N	H	N
2	TRDN	2086000	1.221	LB	CP	BV	48	48		75	PA5	BVB	H	C
2	TRDN	1500000	0.375	KO	CP	MP	36	36	40	75	ES	N	H	N
2	TRDN	2000860	1.828	LB	CP	MP	36	36	60	70	MM1	OT	H	N
2	TRDN	2000860	1.405	LB	CP	IB	36	36	40	60	MM1	OT	M	C
2	TRDN	2000900	0.474	LB	CP	BV	24	24	30	50	PA5	BVB	N	N
2	TRDN	2000000	134.694	LB	CP	MP	36	36	40	50	HC2	N	H	N
2	TRDN	2000810	0.300	LB	CP	MP	36	36	30	30	HC	N	N	N
2	TRDN	1480000	4.090	MAR	CP	RF	36	36	29	30	HC2	N	M	N
2	TRDN	2079000	7.488	LB	CP	WDC	36	36	30	25	MM1	N	M	N
2	TRDN	2085000	1.123	LB	CP	N	48	48	40	20	MM1	N	N	N
2	TRDN	3000000B	92.743	WP	CP	N	120	120	70	20	MC	N	N	N
2	TRDN	2084015	0.133	LB	CP	N	72	72	54	20	HC2	N	N	N
2	TRDN	1445700	1.102	HEC	CP	N	24	24	42	20	MM1	WDR	N	N
2	TRDN	2000810	1.107	LB	CP	N	36	36	40	15	PA	BVD	N	N
2	TRDN	2000000	108.011	WP	CP	N	36	36	48	15	HC2	BVD	N	N
2	TRDN	2085000	3.019	LB	CP	N	60	60	40	15	AF1	N	N	N
2	TRDN	2000000	125.242	WP	CP	N	48	48	60	15	MM1	N	M	N
2	TRDN	1470000	7.225	TUX	CP	SDC	60	60	85	15	PA5	BVB	H	N
2	TRDN	2000860	1.069	LB	CP	BV	48	48	40	10	PA	BVU	N	N
2	TRDN	2085000	2.649	LB	CP	N	60	60	38	10	AF1	N	N	N
2	TRDN	2085000	1.856	LB	CP	N	48	48	40	10	MM1	N	N	N
2	TRDN	2085000	1.168	LB	CP	BV	48	48	40	5	MM1	BVD	N	N
2	TRDN	2000850	0.392	LB	CP	BV	24	24	32	5	PA5	BVD	N	N
2	TRDN	2000860	0.715	LB	CP	N	36	36	40	5	MM1	N	N	N
2	TRDN	2085000	3.115	LB	CP	N	36	36	36	5	AF1	N	N	N
2	TRDN	2085000	2.659	LB	CP	N	48	48	40	5	AF1	N	N	N
1	TRDS	2000000	76.978	CC	CP	BV	60	60	56	80	PA	BVB	H	C
1	TRDS	3000000	58.860	CC	CP	SD	24	24	32	80	PA1		H	
1	TRDS	3015600	2.890	TB	CP	SDC	36	36	40	80	MM1	SD_FH	H	N
1	TRDS	3000000	48.610	CC	CP	MP	18	18	25	50	PA5		H	
1	TRDS	3030000	14.570	CC	CP	N	72	72	46	10	MM		N	
1	TRDS	3030000	8.310	CC	CP	N	48	48	35	10			N	
1	TRDS	3000000	47.630	CC	CP	WDC	48	48	30	10	MM1	N	H	
1	TRDS	2050610	0.700	WH	CP	N	60	60	40	5	MM1	FH	H	N
2	TRDS	2050300	7.000	ST	CP	SDC	24	24	30	100	MM	N	H	
2	TRDS	2050300	8.100	ST	CP	WDC	60	60	40	100	HC2	DR	H	
2	TRDS	3030000	5.830	CC	PA		72	95	46	60				
2	TRDS	3030000	11.200	CC	CP	SD	18	18	32	50	MM	N	N	
2	TRDS	2050400	3.350	ST	CP	SDC	36	36	40	40	HC2	N		C
2	TRDS	3030000	15.540	CC	CP	N	48	48	44	25	MM	N	N	
2	TRDS	3030000	19.020	CC	CP	FS	24	24	40	20	HC		H	
2	TRDS	3030600	0.030	CC	CP		36	36	35	20	MM1	N	H	N
2	TRDS	3000000	53.180	CC	PA	MP	24	30	36	15	HC2	N	H	
2	TRDS	3030000	0.050	CC	PA	EC	91	141	48	10				C
2	TRDS	2050050	0.820	ST	CP	MP	108	108	80	10	HC3		H	
2	TRDS	3030000	6.010	CC	PA	N	72	87	44	10			N	

VERIFIED FISH CULVERTS WITH BLOCKAGES BY DISTRICT

AHMU	DISTRICT	RTE_NO	MP	SYS	FEAT	FAIL	HGT	WID	LEN	BLK	CHT	SSC	A_REQ	PRI
2	TRDS	2050610	0.300	WH	PP	EC	36	36	40	5	MM1	N	H	N
2	TRDS	3030000	9.250	CC	CP	N	72	72	40	5	MM	N	N	
2	TRDS	3030100	0.250	CC	CP	N	18	18	30	5	HC2	SD		
2	TRDS	2050000	5.050	ST	CP	SDC	36	36	30	5	HC2	BDL		
2	TRDS	2057000	2.140	NA	CP		18	18	45	5	MM1	N	N	
2	TRDS	3030000	16.420	CC	CP	N	24	24	36	2	HC		H	
1	WRD	6590	26.858	ZA	AR	DC_BV_W	70	90	39	85	PA	B_WDR_FH	M	N
2	WRD	6590	26.624	ZA	CP	_SDC_WD	18	18	28	100	PA	BVB_FH_SI	X	N
2	WRD	6590	26.544	ZA	CP	C_WDC_A	36	36	38	60	PA	BVB_SI_SD	H	C
2	WRD	6265	7.693	wg	cp	c_wdd_sdc	48	48	48	60	hc	vdr_bdl_sf_s	m	c
2	WRD	6265	4.516	wg	cp	sdc	48	48	41	25	mm	n	n	n
2	WRD	6265	2.515	wg	cp	n	48	48	30	20	mm	n	n	n
2	WRD	6590	27.907	ZA	CO	WDC	38	76	33	15	HC	O	M	N

Planned Replacements

Sites depicted by orange stars: In an agreement to be replaced in 2020

2050400-3.79, 2050300-2.93, 3012000-0.235 and 3012000-0.283 to be completed by Klawock Cooperative Association

2000440-0.13 to be completed by Hydaburg Cooperative Association

Sites depicted by blue stars: The Forest Service secured funding and will be placed in a contract in 2019 for replacement in 2020.

3000000-84.181, 2051000-5.49 and 2050070-0.15

Sites depicted by yellow stars: funding opportunities are still being pursued

2050300-4.67 may be placed into KV plan for Twin Mountain Timber Sale

Survey and design work is ongoing for additional high value fish streams, which will ensure continued opportunities for the Forest Service to partner with Tribal associations to restore fish passage at road-stream crossings.

Road Wrecked:

Why the $10 Billion Forest Service Road Maintenance Backlog Is Bad for Taxpayers

Taxpayers for Common Sense
Washington, DC

March 2004

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Overview

The U.S. Forest Service's road building and road maintenance programs waste millions of taxpayer dollars every year, the result of inefficient spending programs, outdated policies, and lack of accountability. The agency has recently attempted to repair its reputation for fiscal mismanagement, but entrenched programs and political influence have stymied this progress by allowing special interests to exert significant influence over agency objectives.

Road Wrecked is a case study of industry influence trumping the interests of American taxpayers. Taxpayers for Common Sense spent the past year collecting information from government publications, communicating directly with former and current agency staff, and analyzing Forest Service data obtained through a series of Freedom of Information Act requests.

This investigation has uncovered the following:

- The maintenance and capital improvement backlog on the national forest road system has surpassed $10 billion.[1]
- California, Alaska, Montana, Oregon, Idaho, New Mexico, Arizona, Colorado, Washington and Utah account for over $7 billion[2] of the $10 billon backlog.
- Between fiscal years 1998 and 2002, the timber industry received more than $140 million in subsidies for timber road construction[3] and most of the roads the Forest Service maintained were for use only by timber vehicles for timber extraction.[4]

Instead of creating performance and accountability goals for the Forest Service in an attempt to reduce the current backlog, Congress manipulates federal funds for political gain, which ultimately interferes with agency performance. According to former Forest Service Chief Jack Ward Thomas:

> The Forest Service has consistently put in the budget for maintenance of roads - and at high standard. The Administration or the Congress or both had consistently not honored those requests and gave the Forest Service money for new roads that they did not ask for and refused money to maintain roads that were asked for. The Forest Service must spend the dollars it is allocated exactly as allocated in the budget. This [road backlog] doesn't have a thing to do with "capability" - it has to do with political priorities of those that control the purse strings.[5]

The federal deficit is expected to reach $521 billion[6] in fiscal year 2004, and separate and independent analyses by Goldman Sachs, the Brookings Institution, and the Center for Budget and Policy Priorities estimate deficits between $5 and $5.5 trillion over the next ten years.[7] This grim fiscal picture makes it crucial that wasteful spending be eliminated, and the national forest road program is an excellent place to start. Instead of spending funds on new road construction, Congress and the administration should require that the Forest Service determine how the national forest road program can be of the greatest benefit to taxpayers.

National Forest Road System

At the end of fiscal year 2002 (the most recent year for which complete data is available), the national forest road system contained over 436,000 miles of "official" and "unofficial" roads to access 192 million acres of National Forests and grasslands managed by the U.S. Forest Service.[8] Forest Service lands cover an area roughly the size of Texas but contain a system of roads that is more than twice as long as the entire National Highway System (see Table 1).

Table 1. Road System Mileage Comparison, 2002

Road System	Miles
U.S. Forest System	383,112[9]
U.S. Highway System	161,537[10]

Forest roads are divided into two categories: classified or "official" roads and unclassified or "unofficial" roads; these classifications define the Forest Service's management and maintenance role. Classified roads lie entirely or partially within or adjoining the National Forest System, and are designated by the Forest Service as necessary for long-term motor vehicle access. The Forest Service assumes full management of these roads itself or shares management responsibilities with state or county entities or private citizens.

The Forest Service does not consider unclassified roads to be part of the forest transportation system and therefore does not maintain these roads.[11] Examples include unplanned roads, all-terrain vehicle tracks, and roads originally permitted or authorized by the Forest Service but not decommissioned upon expiration.[12]

Table 2. Forest Service Road System, FY1998-FY2002[13]

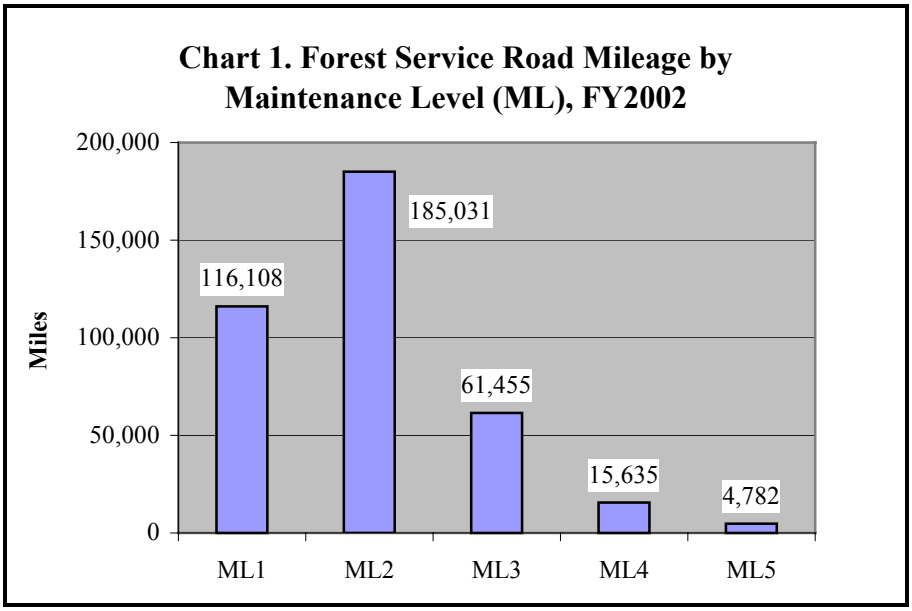
Fiscal Year	Classified Roads	Unclassified Roads	Total Road Miles
1998	383,518	51,903	435,421
1999	385,572	52,330	438,902
2000	384,219	23,919	408,138
2001	382,388	50,421	432,809
2002	383,112	52,920	436,032

A primary purpose of the Forest Service is to supply the nation's timber, and the national forest road system was created to provide lumber companies convenient access to timber stands. Although the agency's mission has evolved over the years to include management of lands for multiple uses, there has been no similar shift in road-building policies. A century-long preoccupation with road building and an ever-increasing strain on federal funds have together resulted in the Forest Service's failure to adequately maintain its transportation infrastructure.

Road Maintenance and Capital Improvement Backlog

A 2004 White House Office of Management and Budget evaluation of the Forest Service's Capital Improvement and Maintenance program found the agency failing in a number of critical program areas. It concluded that overall, the Forest Service "has been unable to demonstrate that it can maintain its current infrastructure needs."[14]

Forest Service roads are categorized along a gradient scale according to maintenance needs and operational status. They range from maintenance level (ML) 1 roads, which are impassable and closed to all vehicular traffic, to ML5 roads, which are in good working condition and open to all passenger cars (see Chart 1).[15] Most forest roads are currently designated as ML2, which are open for use by high-clearance vehicles such as logging trucks, but not by passenger cars.[16] Roads open to all passenger vehicles—ML5 roads—make up the smallest percentage of forest roads.[17]



The Forest Service estimates there to be a nearly $8 billion backlog for road and bridge capital improvement and maintenance needs.[18] When indirect agency costs and administrative costs are factored in, the backlog stands at a staggering $10.3 billion.[19] A Taxpayers for Common Sense (TCS) analysis of Forest Service road data found that national forests in ten states account for nearly 70 percent of the overall road maintenance backlog. California and Alaska lead the pack with backlogs in excess of $1.1 billion and $900 million, respectively (see Table 3).[20]

Table 3. Ten Largest Forest Road Maintenance Backlogs by State[21,22] (in 2002 Dollars)					
State	Deferred Maintenance		Capital Improvement Needs		Total
	Critical	Non-Critical	Critical	Non-Critical	
California	$283,163,081	$612,024,687	$45,077,770	$195,662,821	$1,135,928,359
Alaska	$20,381,539	$80,739,112	$0	$800,223,129	$901,343,780
Montana	$98,826,658	$390,853,423	$13,143,622	$166,368,819	$669,192,522
Oregon	$101,880,457	$462,546,543	$77,375,050	$22,206,341	$664,008,391
Idaho	$129,547,529	$410,232,582	$31,499,387	$89,020,853	$660,300,351
New Mexico	$136,896,223	$344,204,393	$8,524,549	$22,109,317	$511,734,482
Arizona	$74,918,590	$166,645,936	$15,544,269	$27,749,117	$284,857,912
Colorado	$50,496,088	$148,371,472	$21,997,711	$11,247,028	$232,112,299
Washington	$20,429,867	$156,816,906	$1,657,016	$18,939,726	$197,843,515
Utah	$27,109,594	$93,852,101	$370,289	$62,098,013	$183,429,997
TOTALS	**$943,649,626**	**$2,866,287,155**	**$215,189,663**	**$1,415,625,164**	**$5,440,751,608**

In addition, every state in the top ten for maintenance backlogs also contains greater than one million acres of roadless areas (see Table 4). If these unroaded lands are opened to road construction sometime in the future, as has already happened in Alaska (see Tongass National Forest Case Study below), the backlog problem will be further compounded. Until the Forest Service takes the steps necessary to deal with the current backlog, it should not be building new roads that will only increase the future backlog problem.

Table 4. States with 1 Million or More Roadless Acres[23]		
State	Total NFS Land (acres)	Roadless Area Land (acres)
Alaska	22,083,000	14,779,000
Idaho	20,458,000	9,322,000
Montana	16,893,000	6,397,000
Colorado	14,509,000	4,433,000
California	20,698,000	4,416,000
Utah	8,179,000	4,013,000
Wyoming	9,238,000	3,257,000
Nevada	5,833,000	3,186,000
Washington	9,214,000	2,015,000
Oregon	15,658,000	1,965,000
Arizona	11,255,000	1,174,000
New Mexico	9,327,000	1,597,000

In addition to the direct costs of maintaining the massive forest transportation network, improper road maintenance adds to the price of these roads by contributing to erosion, declining water quality, spread of invasive species, increased risk of human-caused forest fires, and hazardous road conditions, none of which have been quantified in this report but all of which do or have the potential to increase the burden of the current road backlog on taxpayers.

Timber Road Subsidies

The Forest Service spends tens of millions of dollars each year subsidizing timber companies for the cost of new timber road construction. These subsidies cost taxpayers almost $140 million for fiscal years 1998 through 2002 (see Table 5).[24] By absorbing these costs, the federal government shields the timber industry from the true cost of doing business. Specified and Temporary Road Credits are two programs that currently provide these subsidies.

Specified Road Credits: Specified Road Credits (SRC) "compensate" timber companies for the cost of road design and construction by reducing the price the company pays for federal timber. When construction costs exceed initial estimates, the difference can still be deducted from the price of timber, providing no incentive for companies to minimize road construction costs.

SRCs were created through a subsidy trade-off in the Interior Appropriations Act of 1999 that terminated Purchaser Road Credits (PRC) in exchange for SRCs.[26] The primary difference between the two programs is that PRCs were applied to future timber sales, while SRCs are granted only for use on current sales. Although PRCs are no longer being issued, the government still spends millions each year on these subsidies because credits issued prior to its expiration must be honored. At the same time, the amount spent on SRCs continues to increase by tens of millions of dollars annually.[27]

Table 5. National Forest Road Subsidies, FY1998-2002[25]

Road Subsidy Program	Total Subsidies FY1998-2002
Specified Road Credits	$ 77,502,869
Purchaser Road Credits	$ 45,862,066
Temporary Road Credits	$ 16,582,532
TOTAL ROAD SUBSIDIES	**$ 139,947,467**

Temporary Road Credits: Temporary Road Credits (TRC) are little known timber industry subsidies that help defer costs for building temporary logging roads. Temporary roads are typically constructed for limited use during one or two seasons. These subsidies are not tracked through the Forest Service Capitol Improvement and Maintenance program because TRCs are used to build roads that will not ultimately become part of the Forest Service's permanent road network. Like SRCs, TRCs are deducted directly from the appraised timber price. The TRC program cost taxpayers more than $16 million for fiscal years 1998 through 2002.[28]

While taxpayers continue to spend tens of millions of dollars each year for new road construction, there is little or no public benefit from these programs. A 1997 study by the Congressional Research Service found that timber access was the primary purpose for 97 percent of new roads and 87 percent of road reconstruction from 1990 through 1997.[30] In addition, as of fiscal year 2002, 60 percent of forest roads were managed only for "high clearance" vehicles, including logging trucks and sport utility vehicles (see Table 6).[31] The funds spent by the Forest Service on road construction and maintenance in the publicly-owned national forests benefit private timber companies, not the American public.

Table 6. Forest Service Road Mile Estimates by Type of Vehicle Access, 2004[29]

Passenger Cars	80,000
High-Clearance Vehicles	220,000
Closed	81,000
TOTAL MILES	**≈ 381,000**

Tongass National Forest - A Case Study

The Tongass National Forest is an icon of the National Forest System. Unfortunately, fiscal irresponsibility and the long-standing entrenchment of federal timber and road-building programs in the Tongass have also made it a significant drain of taxpayer funds.

The Tongass currently has approximately 4,900 miles of roads, 3,579 miles of which are classified as "official" forest roads.[32] A TCS analysis of information obtained through a Freedom of Information Act request found that deferred road maintenance and capital improvement needs in the Tongass are approximately $900 million (see Table 3). Further, the Forest Service has awarded timber companies with $24.4 million worth of taxpayer-funded subsidies for construction and maintenance of Tongass logging roads over the past five years.[33] Opening the Tongass to additional road building will only add to the taxpayer burden.

Of the 3,579 miles of "official" Tongass forest roads, only 818 miles, or 23 percent, are open to passenger cars.[34] A Tongass roads analysis prepared for the Forest Service in January 2003 found that, "the availability of maintenance level 3, 4, and 5 roads (those open to passenger cars) in Southeast Alaska is sufficient to satisfy local demand for roaded recreation, subsistence, and community connectivity needs and demands in most districts."[35] The push to open the Tongass to increased road construction is based on the administration's intention to develop logging roads to subsidize the cost of doing business for timber companies but offers little benefit to most taxpayers.

Table 7. Official Tongass Road Miles by Operational Maintenance Level	
Maintenance Level 1 & 2	2,761
Maintenance Level 3, 4 & 5	818
Total Miles	**3,579**

Furthermore, the Tongass timber program is estimated to lose more than $30 million annually through non-competitive and vastly under-valued timber sales.[36] In 2002, the Forest Service estimated market demand at 150 million board feet (MMBF) of timber,[37] but actual harvest levels were only 33.8 MMBF, less than 30 percent of the projected value.[38] This indicates a significant decline in the program's present economic value. A recent analysis estimates that American taxpayers spent $170,000 for every direct timber job created by logging in the Tongass National Forest in 2002[39]—more than four times the average U.S. household income for the same year.[40]

Despite the poor financial history of the Forest Service timber program and a significant road maintenance backlog, the Bush administration released its decision on December 30, 2003[41] to exempt the Tongass National Forest from the Roadless Area Conservation Rule.[42] As a result, the Forest Service has already begun laying the groundwork for 50 timber sales on the Tongass.[43] This decision will cost taxpayers twice—first by allowing subsidized timber sales and again by opening the door for additional road construction subsidies and maintenance.

Recommendations

The U.S. Forest Service's outdated policies and fiscal mismanagement have a detrimental effect on federal taxpayers. The public continues to subsidize corporate access to timber stands and the maintenance backlog continues to expand. Unfortunately, the expense of the forest roads program and the waste it produces are often left out of the annual Forest Service funding debate. Forest road priorities must be reorganized and agency accountability increased or forest road construction will continue to waste taxpayer dollars. TCS advocates the following changes to the national forest road system:

- **Reprioritize timber road system spending.** The Forest Service should determine how the national forest road program can be better managed and federal taxpayer dollars better utilized. All options should be considered, including on-going maintenance, decommissioning, and upgrading where applicable. Congress and the administration should encourage maintenance of the system with the best interest of taxpayers in mind.

- **Focus on road maintenance before construction.** Instead of spending money on new road construction, the Forest Service should instead implement a "fix it first" strategy that addresses problems with current infrastructure rather than adding to the taxpayer burden by building new roads, with reasonable exceptions for public health and safety, resource protection, and access to private lands.

- **Eliminate federal subsidies for timber road construction.** Timber companies should pay for design, construction, and maintenance of roads to access timber stands. These roads are a cost of doing business that should not be incurred by federal taxpayers.

- **Limit road construction on national forest lands by codifying the Roadless Area Conservation Rule of 2001.** This rule contains numerous exceptions that allow for wildfire management, resource protection, human health and safety, and industry access for approved natural resource extraction. Failure to establish more stringent parameters for road construction will increase the road maintenance crisis in our national forests and continue to cost taxpayers millions of dollars.

- **Acknowledge that certain stands of federal timber are too expensive to access.** Sections of our national forests have remained roadless because the cost of building roads in these areas is prohibitive and timber sales are unlikely to generate enough revenue to break even on the costs of road construction and long-term maintenance. If these areas are developed, taxpayers will pay tens of millions of additional dollars annually.

These changes would be a real signal from Washington of its concern for the long-term fiscal health of our nation and its intent to improve oversight of federal tax dollars. Reducing subsidies to timber companies for road building will be a tremendous benefit to federal taxpayers by reducing spending on road building, making money available to reduce the current backlog, and minimizing the future backlog growth. The needs of the timber industry should not be placed before the needs of American taxpayers.

Appendix A: Forest Service Road Maintenance Policy Terms[44]

Maintenance Level: Defines the level of service provided by, and maintenance required for, a specific road, consistent with road management objectives and maintenance criteria.

Maintenance Level 1: Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed 1 year. Basic custodial maintenance is performed to keep damage to adjacent resource to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate". Roads receiving level 1 maintenance may be of any type, class or construction standard, and may be managed at any other maintenance level during the time they are open for traffic. However, while being maintained at level 1, they are closed to vehicular traffic, but may be open and suitable for non-motorized uses.

Maintenance Level 2: Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either (1) discourage or prohibit passenger cars or (2) accept or discourage high clearance vehicles.

Maintenance Level 3: Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

Maintenance Level 4: Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.

Maintenance Level 5: Assigned to roads that provide a high degree of user comfort and convenience. Normally, roads are double-lane, paved facilities. Some may be aggregate surfaced and dust abated. The appropriate traffic management strategy is "encourage."

Deferred Maintenance: Maintenance that was not performed when it should have been or when it was scheduled and which, therefore, was put off or delayed for a future period. When allowed to accumulate without limits or consideration of useful life, deferred maintenance leads to deterioration of performance, increased costs to repair, and decrease in asset value. Deferred maintenance needs may be categorized as critical or non-critical at any point in time. Continued deferral of non-critical maintenance will normally result in an increase in critical deferred maintenance. Code compliance (e.g. life safety, ADA, OSHA, environmental, etc.), Forest Plan Direction, Best Management Practices, Biological Evaluations other regulatory or Executive Order compliance requirements, or applicable standards not met on schedule are considered deferred maintenance. (Financial Health – Common Definitions for Maintenance and Construction Terms, July 22, 1998)

Capital Improvement: The construction, installation, or assembly of a new fixed asset, or the significant alteration, expansion, or extension of an existing fixed asset to accommodate a change of purpose. (Financial Health – Common Definitions for Maintenance and Construction Terms, July 22, 1998)

Appendix B: Road Mileage by Maintenance Level and State, FY2002

State	Forest Service Road Mileage by Maintenance Level, FY2002				
	ML1	ML2	ML3	ML4	ML5
Alabama	457.02	871.62	463.47	118.54	29.18
Alaska	938.74	1,629.86	1,050.94	28.65	1.88
Arizona	2,188.94	23,148.84	2,532.08	351.91	165.03
Arkansas (includes OK)	4,159.09	5,705.32	1,233.22	88.97	48.95
California	6,460.56	26,886.79	8,163.95	1,841.36	917.50
Colorado (includes KS)	3,987.56	13,734.38	4,327.28	1,177.32	98.25
Florida	10.60	2,985.26	919.36	152.95	31.01
Georgia	114.11	786.12	453.95	161.29	22.52
Idaho	12,607.75	14,460.74	6,458.12	783.34	304.16
Illinois	263.19	253.59	121.83	13.10	3.30
Indiana	382.16	45.03	62.08	4.50	0.00
Kentucky	308.28	575.19	236.32	168.48	38.07
Louisiana	292.98	1,823.74	494.35	138.78	47.92
Michigan	3,234.05	5,822.54	727.37	705.43	191.76
Minnesota	1,089.30	2,577.03	602.08	440.95	78.76
Mississippi	834.53	1,041.88	742.89	225.94	4.56
Missouri	41.90	1,914.82	338.25	44.65	0.00
Montana	10,986.71	12,442.56	7,804.87	1,067.84	229.34
Nebraska	2.50	884.91	109.96	15.30	0.60
Nevada	338.36	4,851.79	1,052.65	87.57	14.84
New Hampshire (includes ME)	237.19	139.32	137.19	19.92	3.26
New Mexico	3,880.34	16,299.04	1,889.02	283.88	23.11
North Carolina	596.22	1,011.78	572.54	298.36	92.41
North Dakota	0.20	1,944.64	582.51	77.87	9.00
Ohio	36.60	14.09	27.71	8.78	5.99
Oregon	18,100.31	43,019.43	7,488.57	1,613.78	729.37
Pennsylvania	37.55	629.63	379.04	119.32	30.62
Puerto Rico	0.00	6.83	0.15	0.00	0.00
South Carolina	526.33	88.99	868.30	122.99	3.36
South Dakota	871.91	3,272.38	476.09	169.68	18.11
Tennessee	183.35	853.09	437.93	63.51	21.53
Texas	442.03	1,188.15	621.10	67.64	25.97
Utah	864.08	8,285.46	1,809.53	412.15	251.61
Vermont (includes NY)	69.18	101.74	34.45	41.33	2.50
Virginia	332.07	1,689.22	817.25	140.51	9.02
Washington	5,809.65	11,253.51	3,856.70	642.04	230.16
West Virginia	228.21	821.72	399.85	226.47	41.53
Wisconsin	646.07	1,676.20	1,184.62	1,146.48	181.42
Wyoming	971.27	2,558.34	731.19	287.47	3.61
NATIONAL TOTALS	**82,530.89**	**217,295.57**	**60,208.76**	**13,359.05**	**3,910.21**

Appendix C: Road Backlogs by State, FY2002

(Figures account for direct projects costs and do not include agency indirect costs or program management costs)

State	Deferred Maintenance		Capital Improvements		Totals
	Critical	Non-Critical	Critical	Non-Critical	
Alabama	$1,028,766	$14,216,427	$20,215	$2,315,481	$17,580,889
Alaska	$20,381,539	$80,739,112	$0	$800,223,129	$901,343,780
Arizona	$74,918,590	$166,645,936	$15,544,269	$27,749,117	$284,857,912
Arkansas (includes OK)	$11,469,671	$78,442,969	$0	$1,201,156	$91,113,796
California	$283,163,081	$612,024,687	$45,077,770	$195,662,821	$1,135,928,360
Colorado (includes KS)	$50,496,088	$148,371,472	$21,997,711	$11,247,028	$232,112,299
Florida	$2,899,658	$33,471,395	$34,305	$0	$36,405,358
Georgia	$10,051,177	$37,835,282	$3,254,669	$1,895,175	$53,036,303
Idaho	$129,547,529	$410,232,582	$31,499,387	$89,020,853	$660,300,351
Illinois	$1,115,294	$2,132,254	$0	$0	$3,247,548
Indiana	$6,729,047	$7,965,513	$1,338,838	$0	$16,033,398
Kentucky	$828,408	$7,899,668	$0	$1,278,240	$10,006,316
Louisiana	$2,757,993	$19,309,602	$0	$1,244,586	$23,312,181
Michigan	$34,912,632	$33,927,726	$184,440	$7,405,042	$76,429,840
Minnesota	$1,459,264	$14,614,474	$465,138	$3,117,555	$19,656,431
Mississippi	$2,290,670	$16,760,597	$4,378,231	$2,309,283	$25,738,781
Missouri	$703,309	$11,391,602	$5,041	$4,115,380	$16,215,332
Montana	$98,826,658	$390,853,423	$13,143,622	$166,368,819	$669,192,522
Nebraska	$2,022,369	$3,219,908	$317,579	$62,621	$5,622,477
Nevada	$5,716,466	$10,850,549	$708,511	$43,575,315	$60,850,841
New Hampshire (includes ME)	$691,421	$9,924,884	$0	$0	$10,616,305
New Mexico	$136,896,223	$344,204,393	$8,524,549	$22,109,317	$511,734,482
North Carolina	$19,064,106	$18,518,392	$3,472,311	$238,943	$41,293,752
North Dakota	$1,712,722	$81,098,931	$2,793,896	$3,085,347	$88,690,896
Ohio	$611,979	$748,969	$0	$113,183	$1,474,131
Oregon	$101,880,457	$462,546,543	$77,375,050	$22,206,341	$664,008,391
Pennsylvania	$860,539	$16,459,971	$141,032	$2,165,377	$19,626,919
Puerto Rico	$38,335	$30,872	$24,408	$27,088	$120,703
South Carolina	$3,403,865	$32,758,547	$0	$2,947,273	$39,109,685
South Dakota	$9,246,485	$47,505,178	$22,802,605	$8,428,010	$87,982,278
Tennessee	$2,179,523	$16,961,372	$1,628,113	$14,953,822	$35,722,830
Texas	$14,310,572	$58,315,298	$8,194,407	$52,228,411	$133,048,688
Utah	$27,109,594	$93,852,101	$370,289	$62,098,013	$183,429,997
Vermont (includes NY)	$316,665	$2,577,964	$0	$0	$2,894,629
Virginia	$4,200,173	$12,768,965	$606,602	$1,800,443	$19,376,183
Washington	$20,429,867	$156,816,906	$1,657,016	$18,939,726	$197,843,515
West Virginia	$1,874,309	$13,737,598	$0	$0	$15,611,907
Wisconsin	$753,864	$42,744,764	$69,325	$271,693	$43,839,646
Wyoming	$13,870,347	$55,154,840	$4,319,642	$553,339	$73,898,168
NATIONAL TOTALS	**$1,100,769,255**	**$3,567,631,666**	**$269,948,971**	**$1,570,957,927**	**$6,509,307,819**

Appendix D: Road Construction Subsidies by Region, FY1998-2002[45]

(These figures do not include costs for road maintenance)

Forest Service Region	Road Subsidy Programs			Total Subsidies
	Specified Roads	Temporary Roads	Purchaser Road Credits	
Northern (1)	$9,561,433	$1,491,786	$5,054,079	$16,107,298
Rocky Mountain (2)	$5,682,514	$2,152,936	$2,300,520	$10,135,970
Southwestern (3)	$88,568	$0	$96,570	$185,138
Intermountain (4)	$3,488,033	$0	$1,864,697	$5,352,730
Pacific Southwest (5)	$15,863,961	$276,942	$764,335	$16,905,238
Pacific Northwest (6)	$20,228,297	$2,358,565	$16,139,033	$38,725,895
Southern (8)	$7,030,817	$4,552,177	$15,102,048	$26,685,042
Eastern (9)	$9,006	$1,450,045	$1,719,348	$3,178,399
Alaska (10)	$15,550,240	$4,300,081	$2,821,436	$22,671,757
TOTALS	**$77,502,869**	**$16,582,532**	**$45,862,066**	**$139,947,467**

Appendix E: Roadless Area Conservation Rule[46]

The Roadless Area Conservation Rule allows for significant exceptions to limitations otherwise placed on new road construction and reconstruction, including:

- A road needed to protect public health and safety in cases of an imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property;
- A road needed to conduct a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to conduct a natural resource restoration action under CERCLA, Section 311 of the Clean Water Act, or the Oil Pollution Act;
- A road needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty;
- Road realignment necessary to prevent irreparable resource damage that arises from the design, location, use, or deterioration of a classified road and that cannot be mitigated by road maintenance. Road realignment may occur under this paragraph only if the road is deemed essential for public or private access, natural resource management, or public health and safety;
- Road reconstruction for a safety improvement project on a classified road determined to be hazardous on the basis of accident experience or accident potential on that road;
- The Secretary of Agriculture determines that a Federal Aid Highway project, authorized pursuant to Title 23 of the United States Code, is in the public interest or is consistent with the purposes for which the land was reserved or acquired and no other reasonable and prudent alternative exists; or
- A road needed in conjunction with the continuation, extension, or renewal of a mineral lease on lands that are under lease by the Secretary of the Interior as of January 12, 2001 or for a new lease issued immediately upon expiration of an existing lease. Roads constructed or reconstructed for this must be obliterated when no longer needed for the purposes of the lease or upon termination or expiration of the lease, whichever is sooner.
- Maintenance of classified roads is permissible in inventoried roadless areas.

Endnotes:

[1] According to *Fiscal Year 2005 Forest Service Budget Justification*, annual road and bridge maintenance, deferred maintenance, and capital improvement costs total $7,937,308,000. *Fiscal Year 2003 Forest Service Budget Justification* estimates that overall indirect agency costs add 18-20 percent to this total and that a conservative estimate of program management costs is 11 percent. For purposes of this report, we have added 30 percent to the estimated direct Forest Service spending, for a grand total of $10,318,500,400.

[2] This is a total of direct maintenance backlogs, indirect agency costs, and program management costs. This total does not include bridge costs.

[3] Taxpayers for Common Sense analysis of information obtained from the Forest Service through a Freedom of Information Act request (on file with Taxpayers for Common Sense).

[4] United States Department of Agriculture, Forest Service. 2004. *Fiscal year 2005 Forest Service Budget Justification.* p 15-28.

[5] Email conversation between Mr. Thomas and Taxpayers Common Sense staff.

[6] *Budget of the United States Government, Fiscal Year 2005*. 2004. p 10.

[7] Committee for Economic Development, Concord Coalition, and Center on Budget and Policy Priorities. September 29, 2003. *Mid-Term and Long-Term Deficit Projections*. http://www.cpbb.org/9-29-03bud.pdf; The Brookings Institution, February 16, 2004. *The Budget Outlook: Updates and Implications*. William Gale & Peter Orszag. http://www.brook.edu/view/articles/gale/20040216.htm.

[8] Department of Agriculture, Forest Service. *Fiscal Year 2002 Road Accomplishment Report*. 2003.

[9] *Ibid.*

[10] Bureau of Transportation Statistics. *Pocket Guide to Transportation.* 2004.

[11] 36 CFR 212.1.

[12] *Ibid.*

[13] This information was obtained from Forest Service *Road Accomplish Reports* for fiscal years 1998 to 2002.

[14] White House Office of Management and Budget, *Performance Assessment and Rating Tool 2004*, p 21. http://www.whitehouse.gov/omb/budget/fy2005/pdf/ap_cd_rom/part.pdf. p. 21.

[15] *Supra* note 8. This information was obtained by adding together the stated totals for each maintenance level for all nine Forest Service Districts. Appendix A of this report lists maintenance level descriptions as adapted from the Forest Service Transportation System Maintenance Handbook.

[16] *Ibid.*

[17] *Ibid.*

[18] *Supra* note 4.

[19] *Supra* note 1.

[20] These totals do not include indirect and management costs.

[21] *Supra* note 3.

[22] For a chart containing all 50 states, see Appendix C of this report. These figures are for roads only and do not include indirect or management costs.

[23] United States Department of Agriculture, Forest Service. 2000. *Roadless Area Conservation Final Environmental Impact Statement, Appendix A—Inventoried Roadless Area Acreage Categories of NFS Lands Summarized by State.* http://roadless.fs.fed.us/documents/feis/data/sheets/acres/appendix_state_acres.html

[24] *Supra* note 3.

[25] *Ibid*. Appendix D lists subsidies for road construction and reconstruction by region for fiscal years 1998 through 2002.

[26] See Section 329 of the Department of the Interior and Related Agencies Appropriations Act, 1999 (as contained in section 101(e) of division A of Public Law 105–277). Amends See 16 USC 535a.

[27] *Supra* note 3.

[28] *Ibid.*

[29] *Supra* note 4.

[30] Ross Gorte. 1997. Congressional Report Service, Environment and Natural resources Policy Division. *Forest Roads: Construction and Financing*.

[31] *Supra* note 4.

[32] United States Department of Agriculture, Forest Service, Tongass National Forest. *2003. Fiscal Year 2002 Road Accomplishment Report.*

[33] *Supra* note 3.

[34] Department of Agriculture, Forest Service Region 10. 2003. *Fiscal Year 2002 Tongass National Forest Road Accomplishment Report.*

[35] United States Department of Agriculture, Forest Service, Tongass National Forest. January 2003. *Tongass National Forest Forest-Level Roads Analysis*.

[36] A Taxpayers for Common Sense analysis of the Tongass timber program found that in part, such losses could be attributed to the fact that 98 percent of sales in the Tongass National Forest took place in non-competitive markets. Percentages of non-competitive timber sales can be found by region at www.taxpayer.net/forest.

[37] U.S. Department of Agriculture, Forest Service. February 2003. *Final Supplemental Environmental Impact Statement Roadless Area Evaluation for Wilderness Recommendations.*

[38] Ian Robertson. Volume Harvested in Million Board Feet, Fiscal Year 1980-2002. Information obtained by Southeast Alaska Conservation Council through a Freedom of Information Act request, December 2002.

[39] Based on data from: 1) Guy Robertson, Regional Economist, *U.S. Forest Service Employment in the Wood Products Industry in Southeast Alaska, 1982-2002* provided to Southeast Alaska Conservation Council, May 2003; 2) Guy Robertson, Regional Economist, *R10 Budget Expenditures by Fund Code,* U.S. Forest Service data for Alaska Region obtained by the Southeast Alaska Conservation Council through the Freedom of Information Act, December 2002; and 3) Department of Agriculture, Forest Service, Region 10, *Timber Cut and Sold on National Forests, Region 10 Fiscal 2002 Report.*

[40] Carmen DeNavas-Walt, Robert W. Cleveland and Bruce H. Webster, Jr. September 2003. *Income in the United States: 2002.* http://www.census.gov/prod/2003pubs/p60-221.pdf . Average U.S. household income in FY2002 was $42,409.

[41] United States Department of Agriculture, Forest Service, Tongass National Forest. December 23, 2003. *Press Release: Road Protection Finalized for Tongass.* http://www.fs.fed.us/r10/tongass/management%20news/news_releases/roadless_protection.html

[42] Federal Register Notice. January 12, 2001. 36 CFR 212 et al. *Forest Service Transportation; Final Administrative Policy*. *See also* United States Department of Agriculture, Forest Service. November 2000. *Forest Service Roadless Area Conservation: Final Environmental Impact Statement.* http://roadless.fs.fed.us/documents/feis/.

[43] United States Department of Agriculture, Forest Service. 2002. *Schedule of Proposed Action.*

[44] *Supra* note 11.

[45] *Supra* note 3.

[46] *Supra* note 42.

Wild Salmon in a Warming World

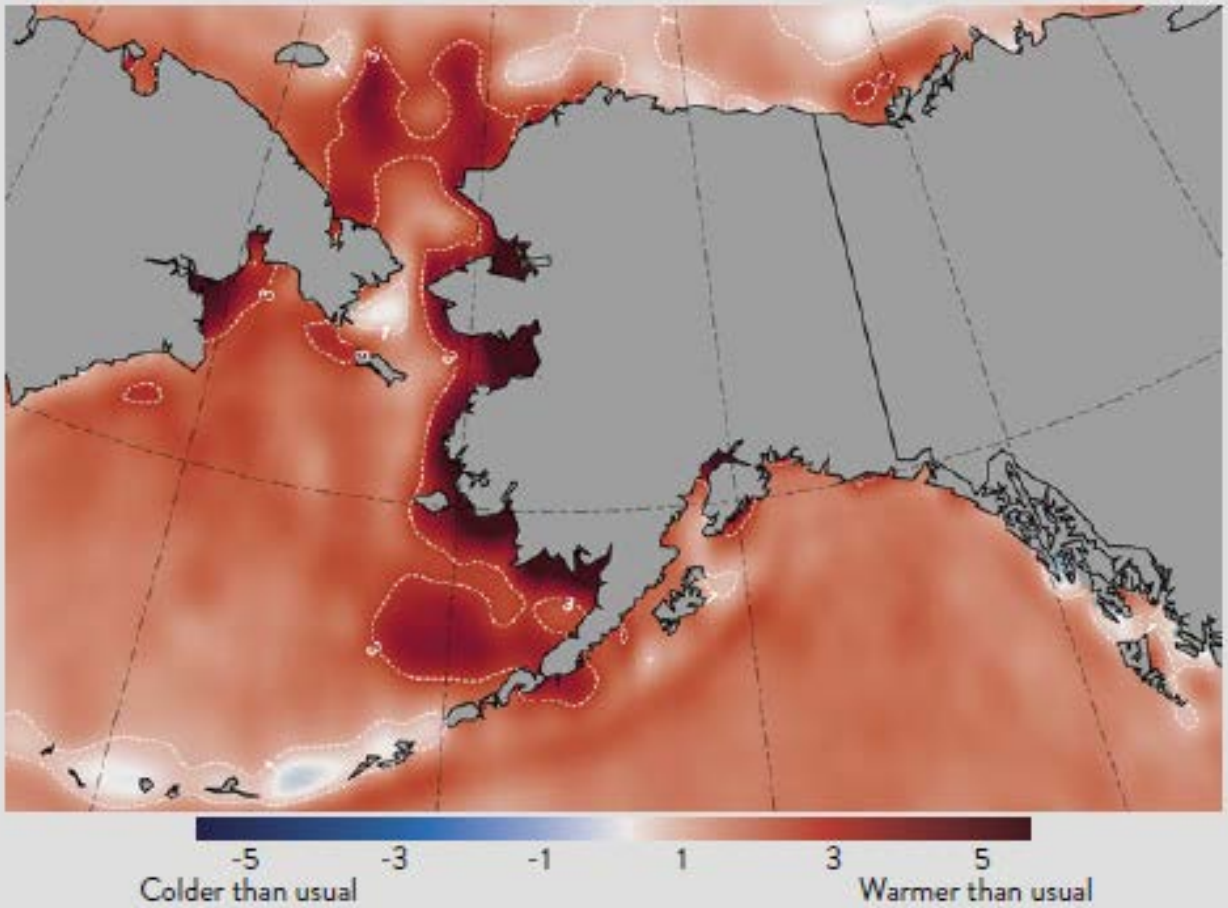
Do we have the tools we need to manage our fisheries during rapid climate change?

Sue Mauger
Science Director, Cook Inletkeeper
sue@inletkeeper.org

WARM SURFACE WATERS

Summer sea surface temperatures in Alaska waters have been much warmer (colored red below) than average (colored white) during 2014–2018, especially along the west coast, where the surface waters were 4–11°F warmer than average in the summer of 2019.

25



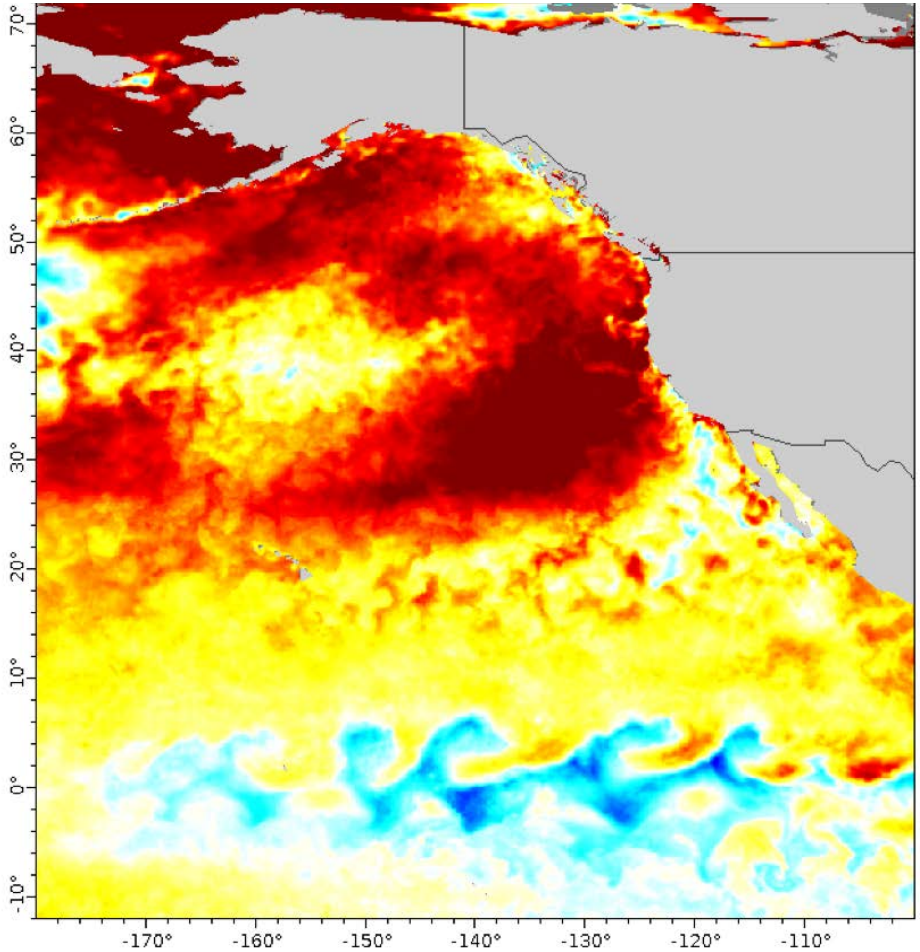
Data source: NOAA/NCEI

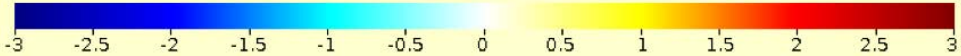
Thoman, R. & J. E. Walsh. (2019). Alaska's changing environment: documenting Alaska's physical and biological changes through observations. H. R. McFarland, Ed. International Arctic Research Center, University of Alaska Fairbanks.

ENVIRONMENT

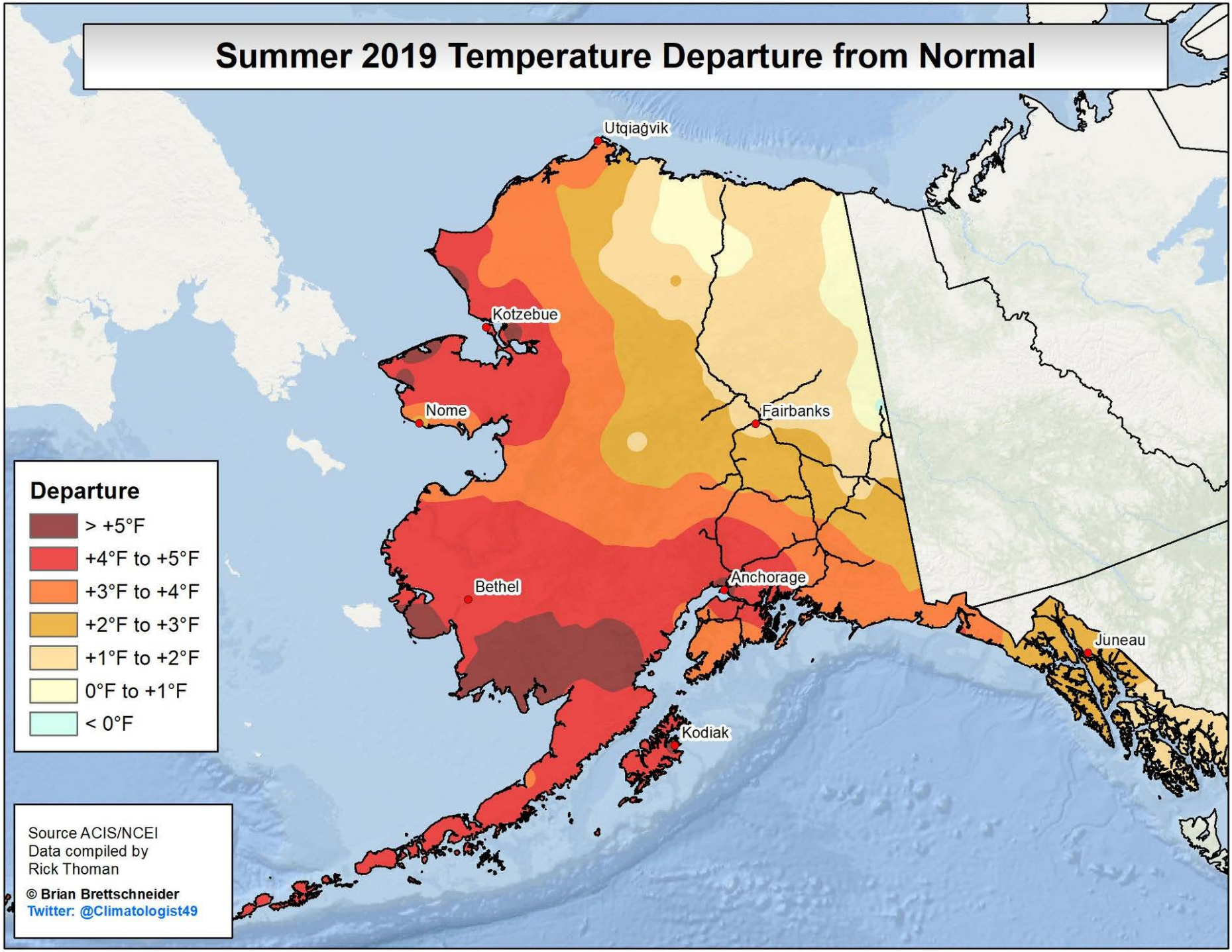
Is 'The Blob' Back? Latest Marine Heat Wave Could Pose New Risks To Sea Life

September 6, 2019 · 4:02 PM ET



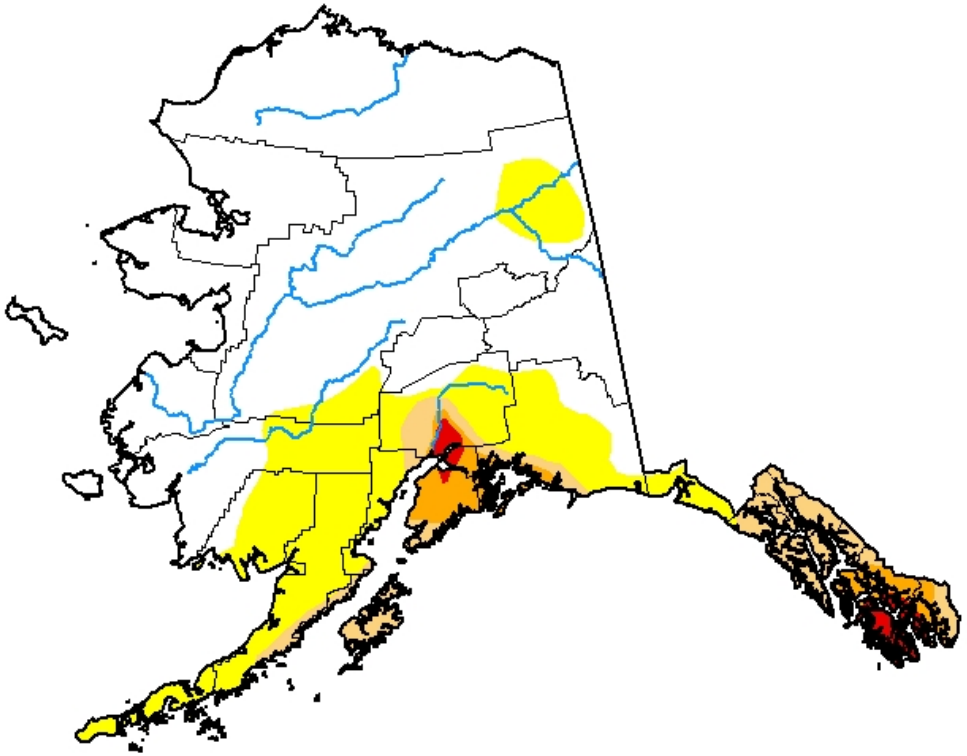


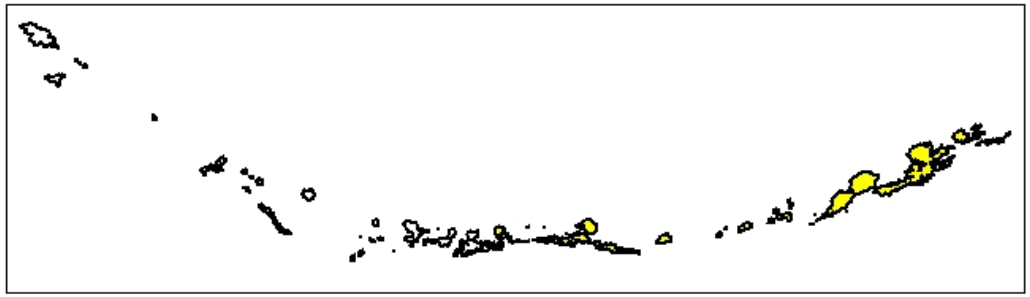
sea surface temperature anomaly (Celsius)
NOAA Global Coral Bleaching Monitoring Products: Daily 5-km
(2019-09-02T12:00:00Z)
Data courtesy of NOAA Coral Reef Watch


Summer 2019 Temperature Departure from Normal
Utqiaġvik
Kotzebue
Nome
Fairbanks
Bethel
Anchorage
Juneau
Kodiak
Departure
> +5°F
+4°F to +5°F
+3°F to +4°F
+2°F to +3°F
+1°F to +2°F
0°F to +1°F
< 0°F
Source ACIS/NCEI
Data compiled by
Rick Thoman
© Brian Brettschneider
Twitter: @Climatologist49

U.S. Drought Monitor

Alaska





August 20, 2019

(Released Thursday, Aug. 22, 2019)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	66.67	33.33	11.19	4.58	1.32	.00
Last Week *08-13-2019*	69.37	30.63	9.63	3.77	0.88	0.00
3 Months Ago *05-21-2019*	94.17	5.83	2.78	1.65	0.88	0.00
Start of Calendar Year *01-01-2019*	94.17	5.83	2.35	1.02	0.00	0.00
Start of Water Year *09-25-2018*	95.65	4.35	2.34	2.06	0.00	0.00
One Year Ago *08-21-2018*	95.65	4.35	2.34	0.00	0.00	0.00

Intensity:

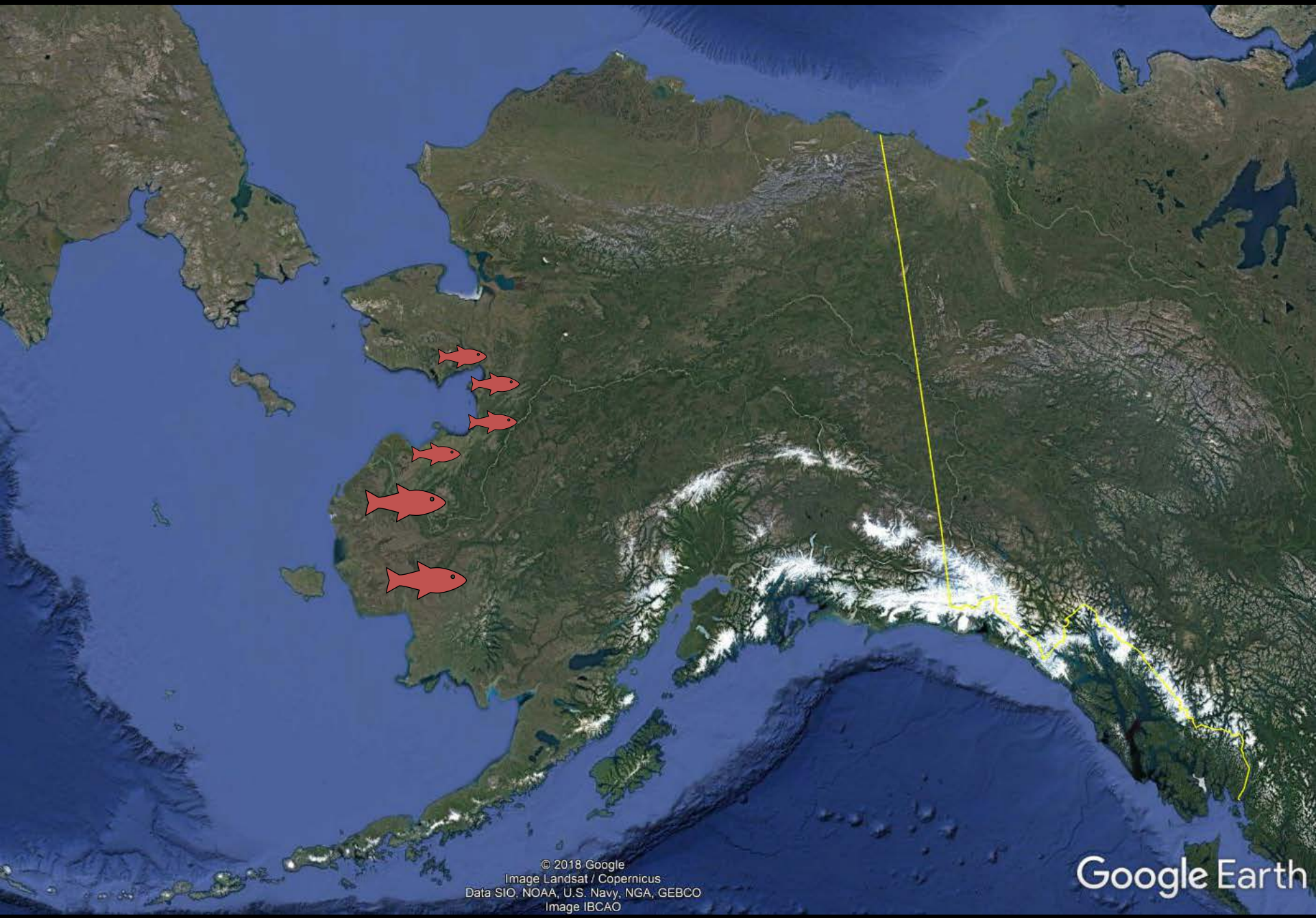
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Jessica Blunden
NCEI/NOAA

droughtmonitor.unl.edu

https://www.drought.gov/drought/states/alaska


© 2018 Google
Image Landsat / Copernicus
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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Google Earth

Photo credit: Stephanie Quinn-Davidson
© 2018 Google
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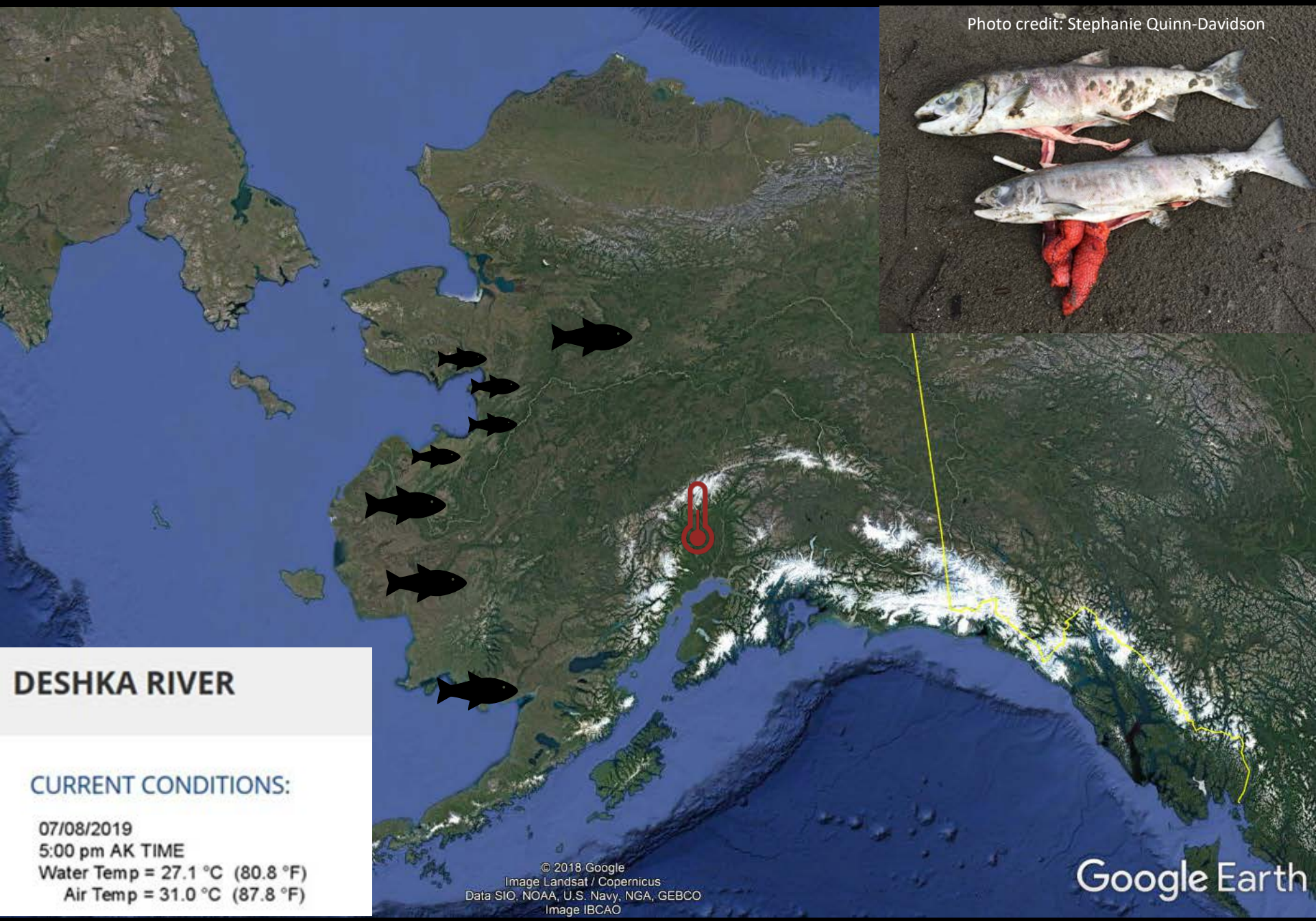
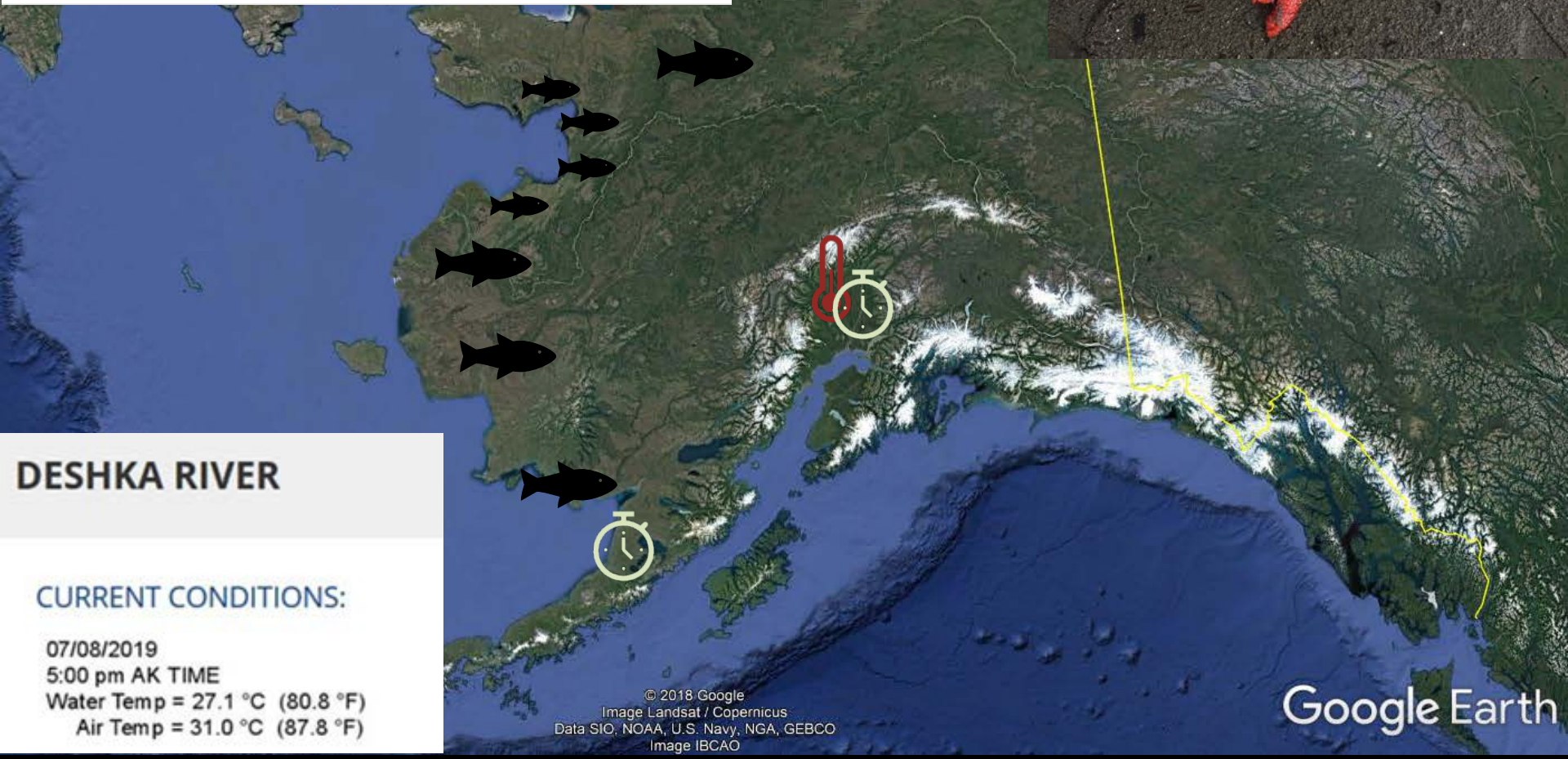


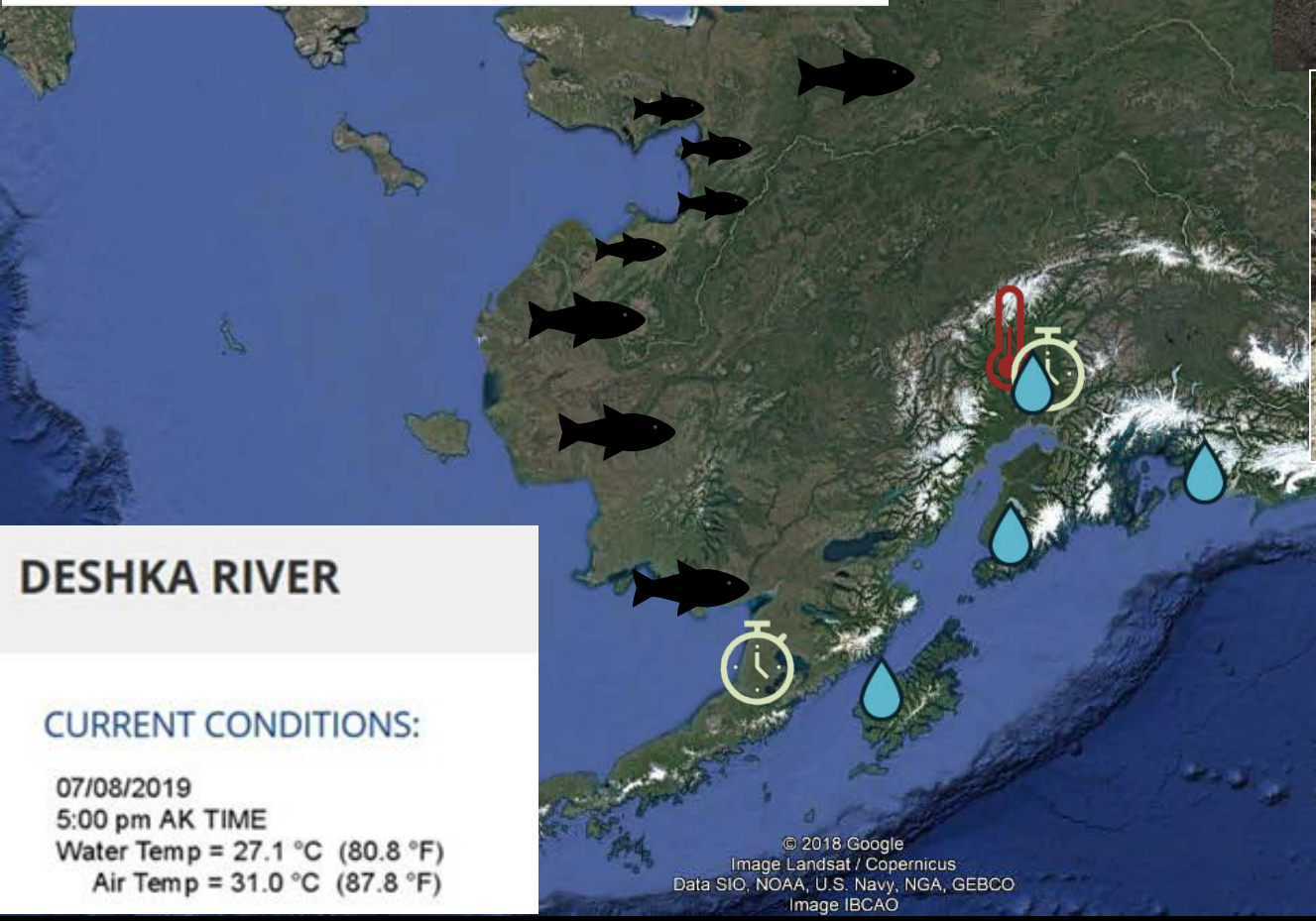
Photo credit: Stephanie Quinn-Davidson
DESHKA RIVER
CURRENT CONDITIONS:
07/08/2019
5:00 pm AK TIME
Water Temp = 27.1 °C (80.8 °F)
Air Temp = 31.0 °C (87.8 °F)
© 2018 Google
Image Landsat / Copernicus
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image IBCAO
Google Earth



DESHKA RIVER

CURRENT CONDITIONS:

07/08/2019
5:00 pm AK TIME
Water Temp = 27.1 °C (80.8 °F)
Air Temp = 31.0 °C (87.8 °F)



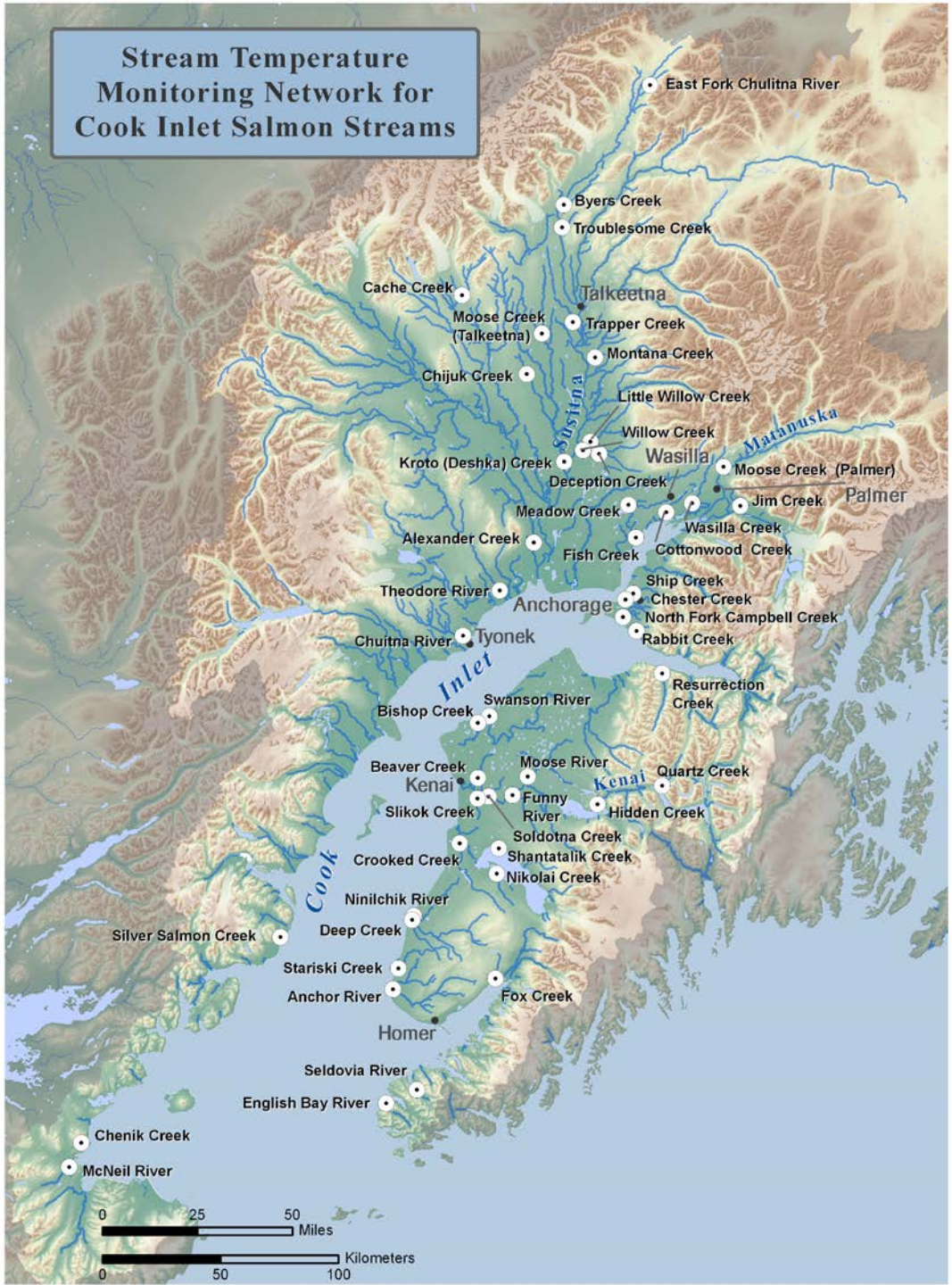
DESHKA RIVER

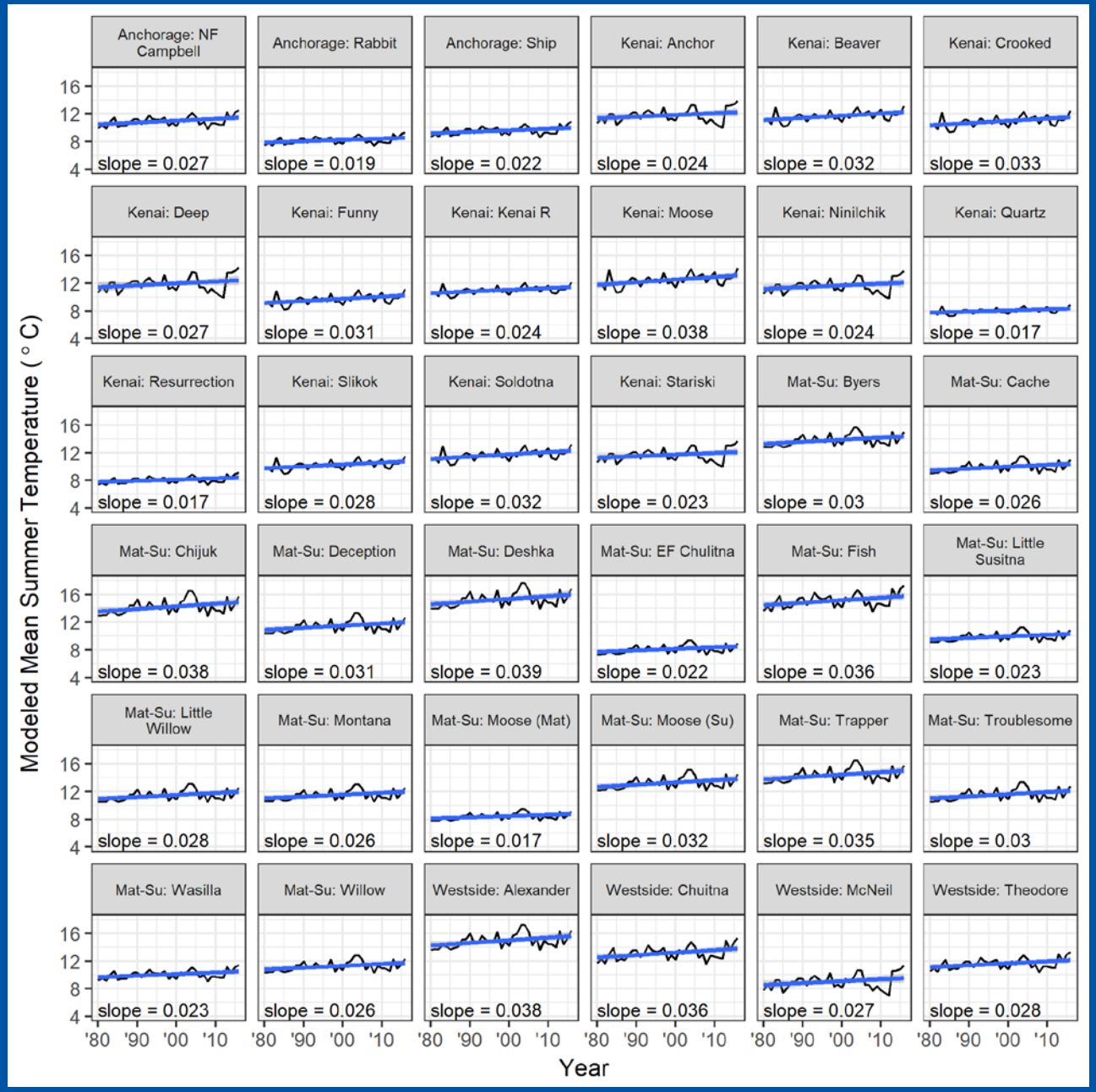
CURRENT CONDITIONS:

07/08/2019
5:00 pm AK TIME
Water Temp = 27.1 °C (80.8 °F)
Air Temp = 31.0 °C (87.8 °F)

Summer of 2019

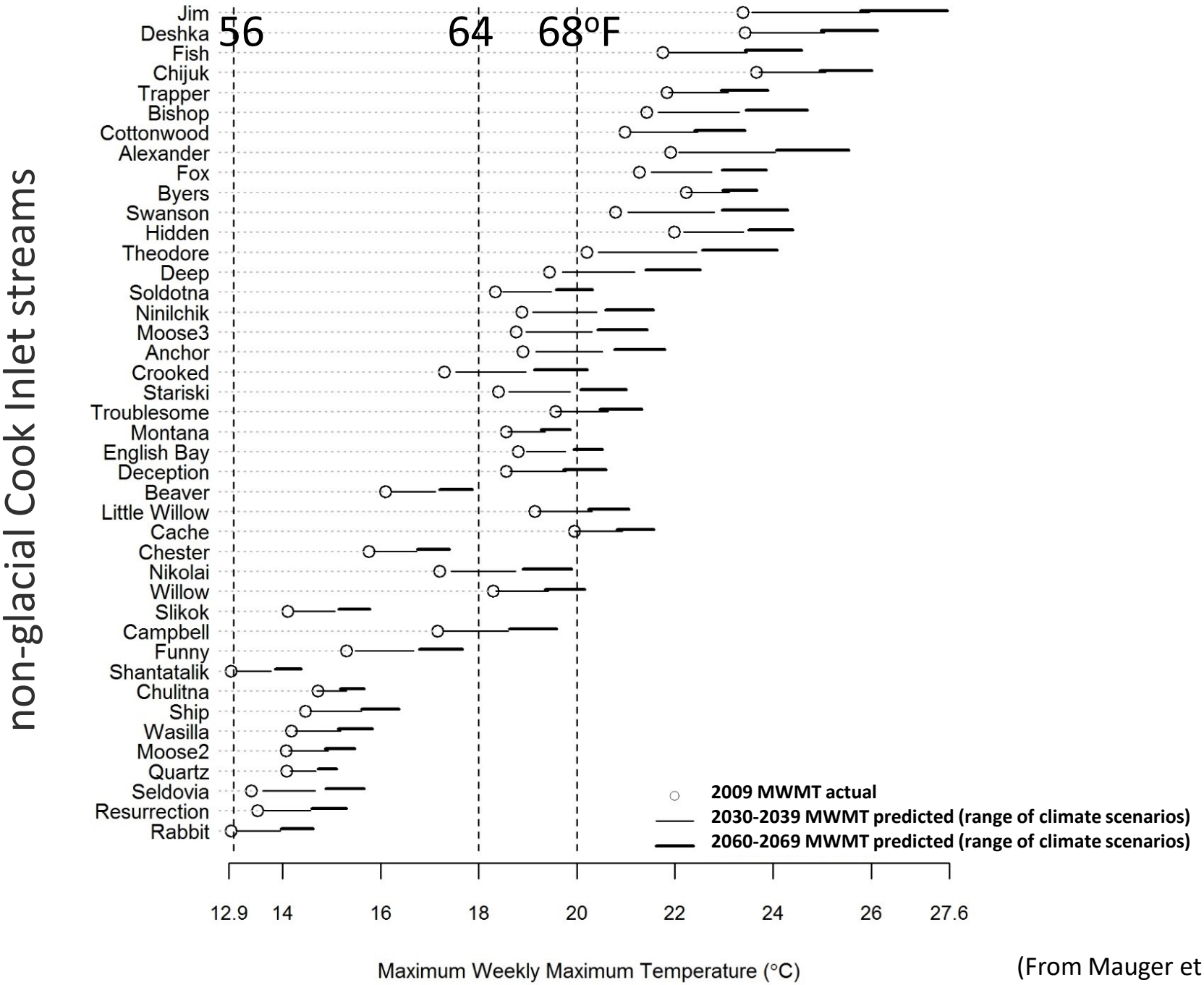
Warm and low freshwater conditions led to both physiological and behavioral responses by adults of all 5 species of wild Alaska salmon around the state and impacted commercial, sport and subsistence fishermen. Impacts to egg and juvenile life stages are unknown.


Stream Temperature Monitoring Network for Cook Inlet Salmon Streams
East Fork Chulitna River
Byers Creek
Troublesome Creek
Cache Creek
Talkeetna
Moose Creek (Talkeetna)
Trapper Creek
Montana Creek
Chijuk Creek
Little Willow Creek
Susitna
Willow Creek
Matanuska
Wasilla
Kroto (Deshka) Creek
Moose Creek (Palmer)
Deception Creek
Palmer
Jim Creek
Meadow Creek
Wasilla Creek
Alexander Creek
Fish Creek
Cottonwood Creek
Ship Creek
Theodore River
Chester Creek
Anchorage
North Fork Campbell Creek
Rabbit Creek
Chuitna River
Tyonek
Inlet
Resurrection Creek
Swanson River
Bishop Creek
Moose River
Beaver Creek
Quartz Creek
Kenai
Kenai
Funny River
Slikok Creek
Hidden Creek
Soldotna Creek
Crooked Creek
Shantatalik Creek
Nikolai Creek
Cook
Ninilchik River
Deep Creek
Silver Salmon Creek
Stariski Creek
Anchor River
Fox Creek
Homer
Seldovia River
English Bay River
Chenik Creek
McNeil River
0 25 50 Miles
0 50 100 Kilometers



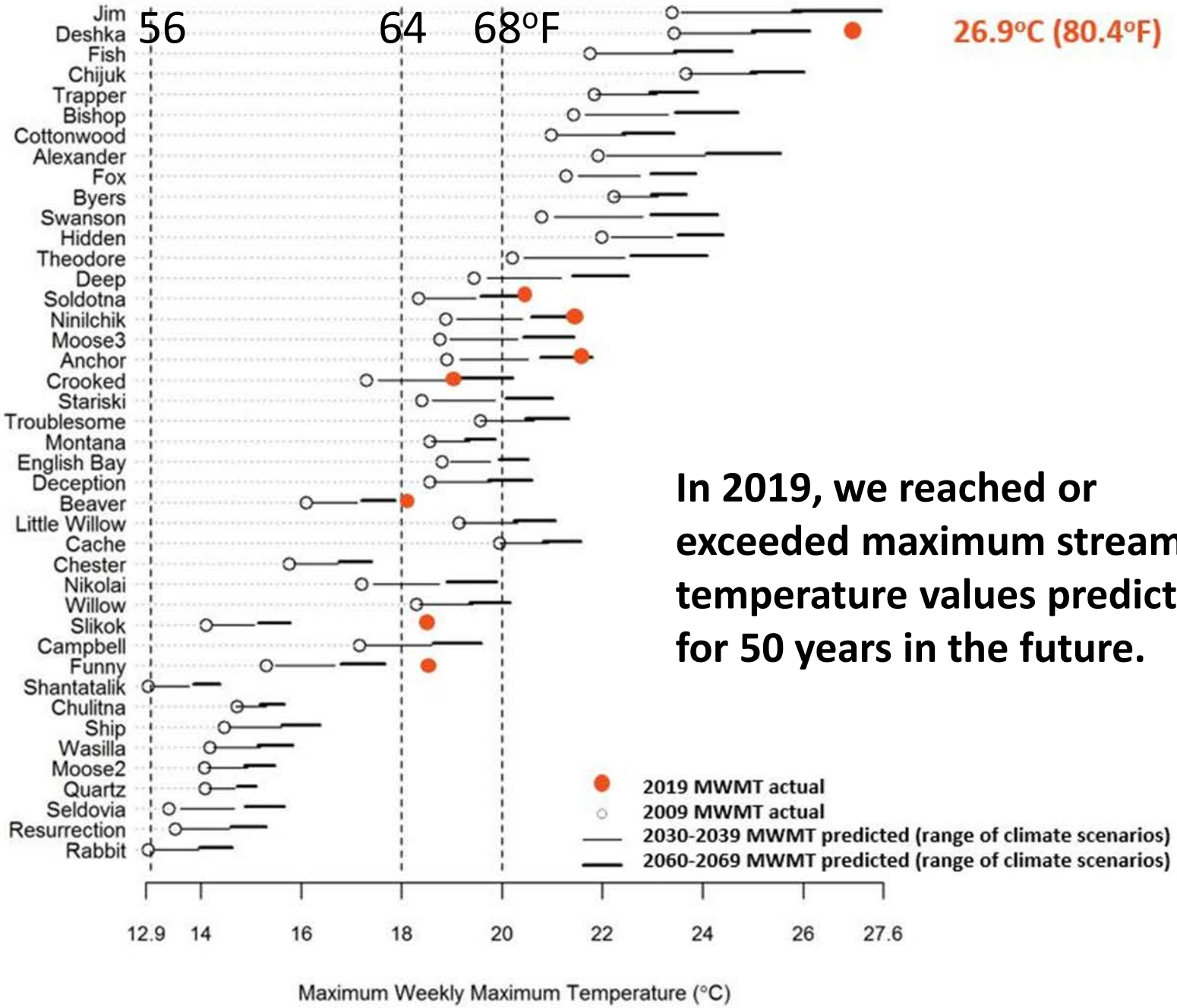
Average summer temperatures have increased by 0.5ºF per decade since 1980 in non-glacial stream of Cook Inlet.

Schoen, E., R. Shaftel, C. Cunningham, L. Jones, S. Mauger, D. Rinella, and A. St. Saviour. 2018. Freshwater drivers of Chinook salmon in Cook Inlet, Alaska. Prepared for the Pacific Marine States Fisheries Commission. Alaska Center for Conservation Science, Anchorage, AK.



(From Mauger et al. 2017)

non-glacial Cook Inlet streams



In 2019, we reached or exceeded maximum stream temperature values predicted for 50 years in the future.

Regional and watershed-scale climate drivers influence Chinook salmon productivity in southcentral Alaska

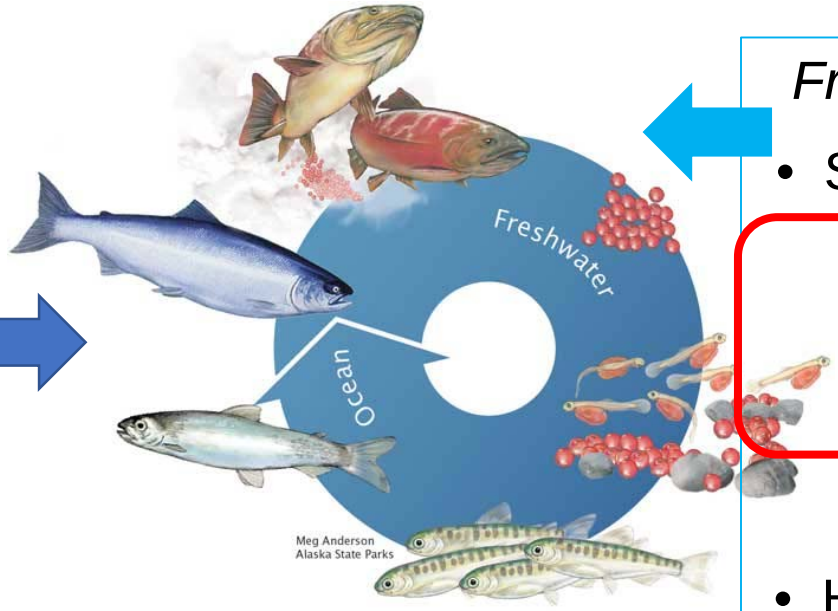
Leslie Jones, Erik Schoen, Rebecca Shaftel, Curry Cunningham, Sue Mauger, Daniel Rinella, and Adam St. Saviour

(*Global Climate Change*, in review)

Chinook salmon populations in Cook Inlet have declined during a period of rapid change

Ocean conditions

- Ocean climate
- Competition with pink salmon
- Predation
- Bycatch



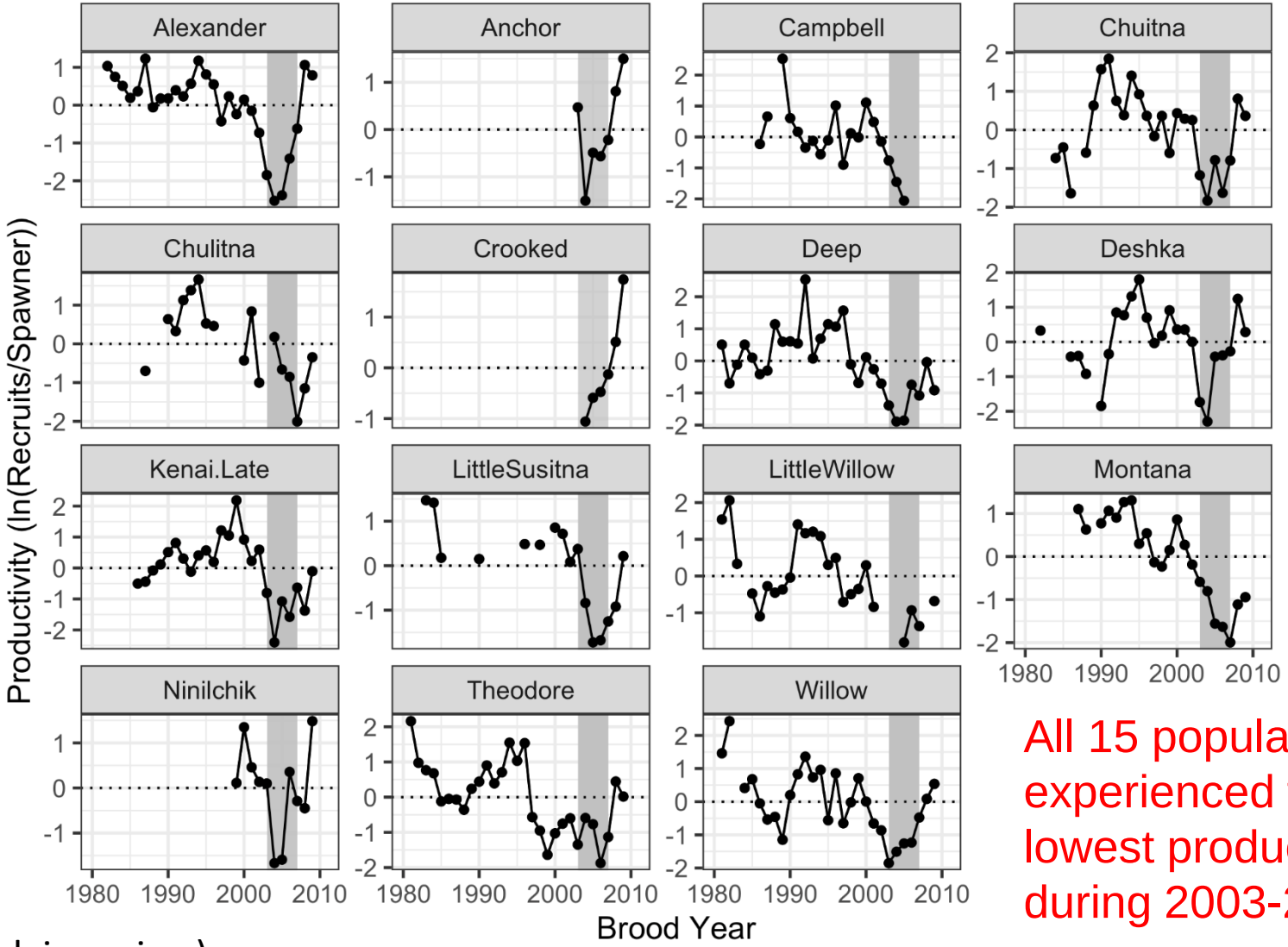
Freshwater conditions

- Spawner abundance
- Warming stream temperatures
- Precipitation
- Invasive species
- Human development

A prominent viewpoint: "Salmon declines are due to problems in the ocean"

Can we rule out freshwater processes as important drivers of Chinook salmon productivity?

How has the **productivity** of each population changed over time?



All 15 populations experienced their lowest productivity during 2003-2007

(Jones et al. in review)

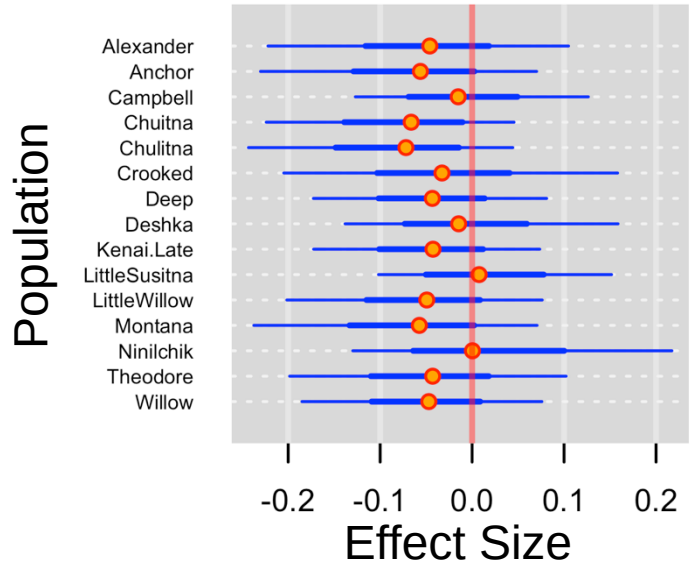
Results: Stream temperature

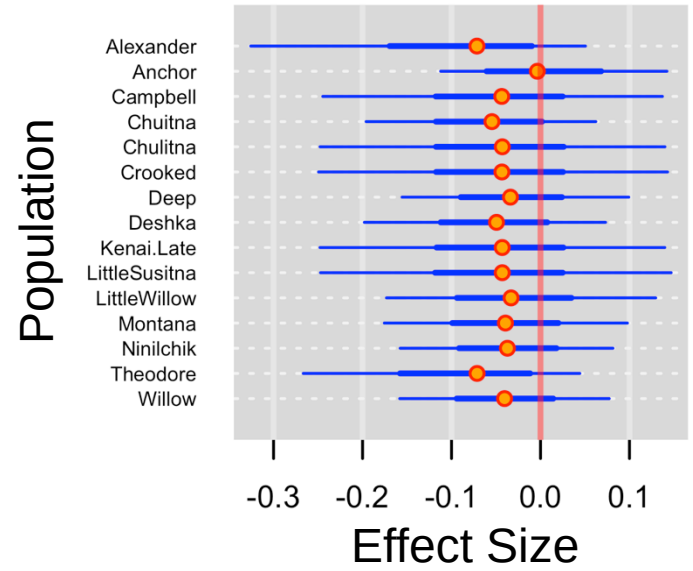
Maximum temperature during spawning had a **moderate negative effect**

- 4% reduction in productivity per 1-SD increase
- High temperatures → increased mortality of migrating adults or eggs

Number of weeks > 15˚C (59ºF) during juvenile rearing had a **moderate negative effect**

- 5% reduction in productivity per 1-SD increase
- High temperatures → reduced juvenile growth → poor survival



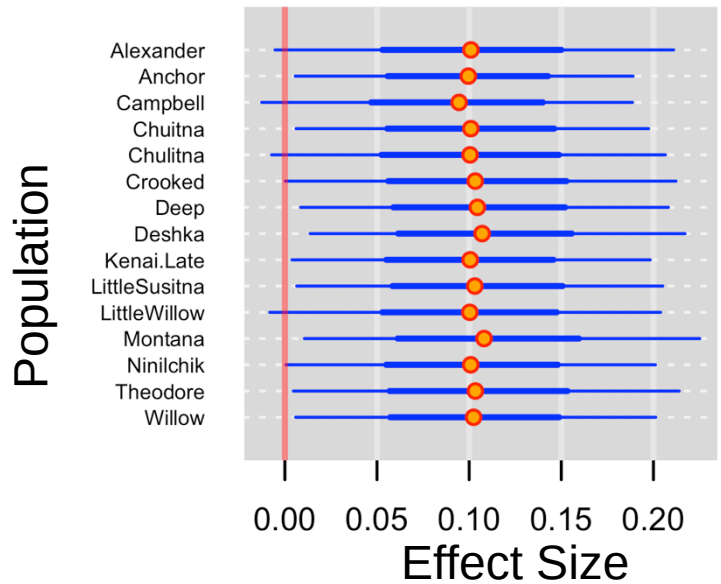


(Jones et al. in review)

Results: Precipitation

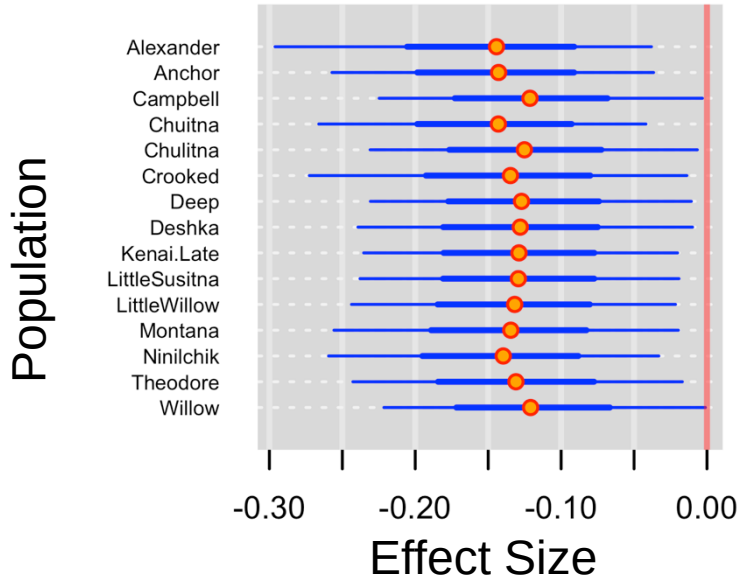
Greater average precipitation during juvenile rearing had a **strong positive effect**

- 10% increase in productivity per 1-SD increase (dome shaped)
- Moderate summer rains → increased habitat connectivity → beneficial for juvenile rearing
- Very high or low rain is harmful



Greater maximum precipitation during spawning / incubation had a **strong negative effect**

- 13% reduction in productivity per 1-SD increase
- Heavy rains → redd scour, siltation, or toxic urban runoff



(Jones et al. in review)

Mitigating adverse freshwater conditions through management and conservation

- Management tools

  real-time temperature stations to support in-season decision making

- Conservation tools

  To build resilience against high temperatures, maintain riparian vegetation for shade and protect cool-water habitats

  To build resilience again high/low flows, support strong wetland protections and riparian buffers and increase green stormwater infrastructure

ANCHORAGE DAILY NEWS

Business/Economy

Warmer waters threaten to make the commercial salmon fishery less predictable

Author: Laine Welch | Fish Factor Updated: September 17 Published September 17

Two Bristol Bay fishermen pull sockeye salmon from a net near Naknek in this undated file photo. (AP Photo/Al Grillo)

"Unpredictable" is the way salmon managers describe Alaska's 2019 salmon season, with "very, very interesting" as an aside.

Alaska Department of Fish and Game
Division of Wildlife Conservation
(907) 465-4190—PO Box 115526
Juneau, AK 99811-5526

CHAPTER 4: DEER MANAGEMENT REPORT

From: 1 July 2012
To: 30 June 2014

LOCATION

GAME MANAGEMENT UNIT: Unit 2 (3,600 mi^2)

GEOGRAPHIC DESCRIPTION: Prince of Wales (POW) Island and adjacent islands south of Sumner Strait and west of Kashevarof Passage and Clarence Strait

BACKGROUND

Sitka black-tailed deer are found throughout Unit 2, both on Prince of Wales Island (POW) and the smaller associated islands. Deer populations fluctuate, primarily in response to severe winter weather, unfavorable changes in habitat resulting from clearcut logging, and predation by wolves and black bears. Deer abundance appears to be stable or slowly increasing, likely in response to mild winters during this reporting period in conjunction with low wolf and bear numbers. Managers continue to monitor range conditions for signs of over-abundance, but for now deer populations in Unit 2 appear healthy compared to other adjacent areas such as Units 1A and 3 where deer numbers are low.

Sitka black-tailed deer are highly valued for both their meat and their trophy value on POW. POW has a reputation for producing large-bodied and large-antlered bucks with a number of bucks qualify for the Boone and Crockett and Pope and Young record books each year. Winter severity, weather conditions during hunting season, and deer population levels are the main regulators of deer harvests. The annual harvest in Unit 2 this reporting period averaged 3,696 compared to 2,926 for the previous 10-year period (RY02–RY11; Table 1).

Hunting does is currently allowed under federal regulations however the practice remains controversial. In 1995, despite state opposition, the Federal Subsistence Board implemented a 2.5-month-long antlerless deer season in Unit 2. The federal antlerless deer season remains in effect, running from October 15 through December 31, and allows hunters who qualify to participate in federal subsistence hunts to harvest 1 female deer as part of their 5-deer bag limit. A 3-week state antlerless season was initiated in Unit 2 during regulatory year (RY) 1987, but was discontinued a year later due to public opposition. The bag limit remains 4 bucks for individuals hunting under state regulations.

The current population of Unit 2 is about 3,600 people, down from nearly 6,000 at the turn of the century. The population peaked in the 1960s and 1970s and declined along with the decline of the old-growth logging industry. The City of Craig is the largest community in Unit 2, with

approximately 1,100 residents, followed by the communities of Klawock and Thorne Bay. Despite the recent decline in the human population, demand for deer hunting opportunity in Unit 2 remains strong. In addition to local residents, Unit 2 is also a popular deer hunting area for residents of other Southeast Alaska communities, particularly Ketchikan, and nonresident hunters.

Clearcut logging has been widespread in Unit 2 since the late 1950s. Counting National Forest, state, and private land, over 300,000 acres of old growth forest have been logged, and over 5,000 miles of roads have been built. Logging and road-building are ongoing, albeit at lower levels than in the past. Road building has greatly increased hunter access, and logging has focused on productive old-growth forest below 800 feet elevation, which is critical habitat for deer during winters with significant snow. Further, 25–35 years after being clearcut, regenerating stands of trees form dense even-aged canopies which block most light and shade-out forbs and shrubs that deer depend on as forage. To date thinning schemes have shown little potential to improve value of regenerating stands for deer. Consequently, it appears that much formerly productive deer habitat in Unit 2 will remain unproductive for many decades and the population will remain vulnerable to die-offs during winters with deep snow.

MANAGEMENT DIRECTION

MANAGEMENT GOALS

Action by the Board of Game in fall 2000 established a Unit 2 Intensive Management (IM) population objective of 71,000 deer and a harvest objective of 2,700 deer. This action was based on the board identifying the Unit 2 population as important for satisfying high levels of human consumptive use.

MANAGEMENT OBJECTIVES

- Maintain populations in excess of 45 deer per mi^2 of winter range, as determined by mean pellet-group densities of 1.4 pellet groups per plot (Kirchhoff 1990).

METHODS

We collected population information from anecdotal reports provided by hunters and from field observations. We were unable to conduct spring pellet-group surveys and spring mortality transects during the reporting period because regional priorities shifted to more focused data collection in Units 1A and 3 associated with intensive management activities. We intend to conduct spring pellet counts again beginning in 2015. A new technique for estimating deer abundance developed on POW by Todd Brinkman, PhD identifies individual deer using fecal DNA and uses a DNA-based mark-recapture technique to measure abundance within specific study sites, usually a watershed (Brinkman 2009). Although the technique appears promising, questions remain about applying the study area findings to a larger landscape.

From 1980 (except 1981) through 2010 we collected deer harvest information using a region-wide questionnaire mailed to a random sample of 33% of deer harvest ticket holders (ADF&G 2012). Information provided by respondents was expanded to estimate total harvest for the unit. To address questions surrounding allocation of deer harvest among residents of Unit 2, other Alaska residents, and nonresident hunters, from 2005 through 2010 Unit 2 deer hunters were required to obtain and complete a deer harvest report form specific to the unit. Those hunters

were removed from the region-wide mail-out survey. Beginning in fall 2011, we began collecting harvest information using a statewide deer harvest ticket report, similar to that used for species such as black bear, moose, caribou and sheep. Those data are also expanded to account for harvest ticket holders who did not respond. A preliminary analysis found that the deer hunter questionnaire and new harvest ticket reports produced comparable results.

Please note that there may be discrepancies between data in this report and management reports from previous reporting periods. DWC deleted many records and reloaded data from 1997-2010 in the WinfoNet database as a result of questionable records found in the database. In most cases, these data differences are minimal and the current data is the best available.

RESULTS AND DISCUSSION

MORTALITY

Harvest

Season and Bag Limit	Resident and Nonresident Hunters	
Unit 2	1 August–31 December	4 bucks
	Federally Qualified Subsistence Hunters	
	24 July–31 December	5 deer, however, no more than one may be an antlerless deer.

Board of Game Actions and Emergency Orders. The Board of Game took no actions affecting Unit 2 deer hunting, and no emergency orders were issued during the report period.

Hunter Harvest. Deer harvest in Unit 2 during the reporting period was estimated at 3,690 (RY12) and 3,702 (RY13) deer, both well above the IM harvest objective of 2,700 and the 10-year average annual harvest (RY02–RY11) of 2,926. The number of deer harvested per hunter was 1.5 in both RY12 and RY13, identical to the 10-year average (RY02–RY11 of 1.5 deer per hunter. The average of 3.5 and 3.4 hunter days per deer during RY12 and RY13, respectively, was similar to the 10-year average (RY02–RY11) of 3.5 days per deer. Overall hunter success rates in RY12 and RY13 were also very high at 73% each year, and slightly higher than the 10-year average (RY02–RY11) of 71% success (Table 1). Harvest during RY12 and RY13 on POW itself was 3,144 and 3,143 deer, respectively, above the 10-year average (RY02–RY11) of 2,655 (Table 2). This harvest data is consistent with anecdotal and field observations in Unit 2, which all suggest that deer in Unit 2 are stable to increasing and relatively abundant.

Hunter Residency and Success. Ketchikan hunters' share of the Unit 2 harvest during the report period was 30%, similar to the 10-year average (RY02–RY11) of 29% (Table 3). An estimated 48% of the hunters harvesting deer in Unit 2 during this report period were residents of POW. Residents of POW had a higher success rate than other hunters, with residents enjoying an average success rate of 82% during the report period (Table 4). Higher than average numbers of nonresidents hunted deer in Unit 2 during this report period. Nonresident hunters numbered 198 and 212 during RY12 and RY13, respectively. The 10-year average (RY02–RY11) is 142 per year. The nonresident success rate during the report period was 56%, slightly higher than the 10-year average (RY02–RY11) of 50%. This indicates a robust deer population and perhaps an increase in guided hunting activity (Table 4). As black bear hunting opportunities diminish on

POW many lodges, outfitters and guides may be shifting focus to deer hunting. Over the past 5 years the ADF&G office in Craig has noted an increase in nonresident inquiries about deer hunting in Unit 2, particularly from hunters interested in taking a Sitka black-tailed deer as part of their North American "deer slam." Recent harsh winters on Kodiak Island in Unit 8 caused significant declines in that deer population. Some increase in nonresident hunters on POW may be a result of nonresidents who normally hunt Kodiak shifting effort to POW. As Kodiak deer rebound, managers expect nonresident focus to shift back to that unit.

The average annual reported doe harvest over the past 10 seasons (RY02–RY11) has been 108, or approximately 3.7% of the overall reported harvest. During the RY12 season, 109 does were reported harvested under federal subsistence permits in Unit 2. During RY13, hunters reported the harvest of 91 does (Table 5). With populations nearing carrying capacity in potions of Unit 2, a limited doe harvest is warranted. However, anecdotal evidence and testimony from local residents suggests that the doe harvest by federal subsistence hunters is likely substantially under-reported.

Despite abundant deer, historically high harvests, and liberal seasons and bag limits, hunters from rural communities continue to complain about their inability to meet their subsistence needs. In some cases data from hunter reports substantiate those concerns. Among rural residents there is a perception of increased hunting pressure. The number of hunters for this reporting period (2,468 and 2,459 in RY12 and RY13, respectively), are the highest in the last 10 years (RY02–RY11), and 22% higher than the 10-year average (Table 1). The recently enacted Access Travel Management Plan (ATM) by the USFS will close 150 miles of existing logging roads to highway vehicles and convert an additional 222 miles from highway vehicle use to OHV use only (USDA 2009). Road closures may direct the same number of hunters into smaller areas, affirming the perception of increasingly crowded hunting conditions. In addition, as clear-cuts regenerate, deer become less visible, fueling speculation that fewer deer are available for harvest. State and federal managers will continue to struggle with balancing ADF&G's mission of wildlife conservation with the Federal Subsistence Board's mission to provide subsistence resources for rural residents under the Alaska National Interest Lands Conservation Act.

Harvest Chronology. Most Unit 2 deer are harvested during August, October and November. From 2004 through 2013, August and October harvests were roughly equal accounting for 16% and 17% of the harvest, respectively. August harvest levels were traditionally much higher but beginning in 2003 significant changes were implemented to federal deer hunting regulations that restricted non-federally qualifying hunters from participating during the first 2 weeks of August. Federally qualified hunters are also taking advantage of the late July opening day for the season. For hunters not qualified to hunt under federal regulations, November, which coincides with the rut, is now by far the most popular period to hunt deer and accounts for roughly 42% of the total harvest (Table 6).

Transport Methods. With the extensive road system in Unit 2, highway vehicles typically represent the primary method of access for deer hunters. During this reporting period 62% of hunters accessed opportunity using highway vehicles, whereas only about 27% of deer hunters used boats. Those proportions compare to 66% and 24% respectively for the 10-year average (RY02 – RY11) (Table 7).

Other Mortality

We believe that Unit 2 has one of the highest illegal and unreported harvest rates in the region, estimated to be equal to the legal harvest (Table 5). That estimate is based on anecdotal reports, interviews with law enforcement personnel, and fates of radio-collared deer. If that estimate is correct, over 4% of the estimated 75,000 deer in Unit 2 may be illegally harvested each year. This high illegal take is likely due in large part to the extensive and remote road system and few law enforcement personnel patrolling the unit.

Flynn and Suring (1989) reported that actual mortality from legal hunting could be 38% greater than the estimated harvest because of unknown or unreported crippling loss. Field observations and voluntary reports of wounding loss suggest that this estimate might be conservative.

Historically and prior to extensive road paving on the island, deer/vehicle collisions were rare (10–25 deer/year) and were not considered a significant source of mortality. However, the collision risk increased with completion in 2003 of extensive new POW highway paving projects, which now extend from Craig to Coffman Cove and east to Thorne Bay. Construction and paving of the main 30 road to Coffman Cove was completed in 2008. Construction is currently underway to extend the paved surface of Road 20 to Whale Pass. Higher vehicle speeds, as well as an attractive food source created by planting grass for erosion control near the roads will likely cause more deer/vehicle collisions, prompting managers to raise estimates to 30-50 deer per year beginning in 2004.

HABITAT

Assessment

Although timber harvest peaked in the 1980's and early 1990's, occasional large sales continue. The recent Logjam Timber sale, involving 73 million board feet of timber, resulted in clear-cut logging of approximately 3,400 acres of old-growth forest. Another highly controversial sale called the Big Thorne was scheduled to begin in April 2015. The record of decision (ROD) for this sale was signed in June 2013 but was delayed by the regional forester pending review of wolf habitat concerns and also delayed by lawsuits from several conservation organizations. A federal judge upheld the ROD in March 2015, although defendants in the case have appealed the decision and requested an injunction. This sale will authorize an additional 149 million board feet of timber and approximately 6,200 acres old growth forest to be clearcut, making it the largest timber sale on the Tongass National Forest in decades. Many of the old growth stands slated for harvest are among the last remaining stands of high quality deer winter habitat and travel corridors within their respective drainages within the central part of POW. In addition, the Sealaska Lands Bill passed Congress in December 2014. That bill transfers 70,000 acres or approximately 110 square miles of old-growth forest from the Tongass National Forest to the Sealaska Corporation. Most of that land is within Unit 2 and will be subject to clearcut logging. Sizeable units on State of Alaska and Alaska Mental Health Trust lands in the Control Junction and Coffman Cove areas are currently being logged, further contributing to the loss of high quality deer habitat.

Although early seral stages of clear-cuts provide abundant deer forage during snow free periods, within 20 to 30 years the regenerating second-growth forest reaches the stem exclusion stage where the canopy closes and shades out understory plants important for deer forage. Road

construction associated with logging activities continually increases access to deer and other wildlife habitat. As clearcut logging continues to remove old-growth forest habitat in Unit 2, deer populations are expected to decline. In a study of the relationship between habitat and predation of Columbian black-tailed deer on Vancouver Island, British Columbia, McNay and Voller (1995) found that logging and associated road construction fragments deer winter range and concentrates predation on resident deer. They concluded that large blocks of intact old-growth forest at low elevations are essential to sustaining healthy deer populations.

Old-growth forest retains important winter forage and intercepts snowfall making that forage more available to deer during periods of deep snow. Population models estimate declines in carrying capacity for deer of 50–60% by the end of the U. S. Forest Service planned logging rotation in 2054. By then we expect few areas within road accessible and logged portions of Unit 2 will meet projected hunter demand for deer (USFS 1989). The USFS is investigating thinning and other ways of creating openings in the canopy of second-growth forest, but any benefits to deer may be short-lived and will not provide winter habitat (Farmer et. al. 2006). Long-term consequences of habitat loss are likely to include reductions in deer hunting opportunity and an inability to provide for subsistence needs.

CONCLUSIONS AND RECOMMENDATIONS

According to estimates based on harvest ticket reports, the Unit 2 harvest objective of 2,700 deer per year was exceeded during both years of this reporting period. In fact, anecdotal accounts from hunters and public testimony during a multi-agency Unit 2 deer planning effort in 2005 (Unit 2 Deer Planning Subcommittee 2005) suggested that we probably continue to significantly underestimate the total number of deer harvested because illegal and unreported harvest appear to be substantial. If that is the case, actual harvest may be more than double the harvest objective.

The reported harvest along with average deer per hunter and the average hunter days per deer during the past 2 years indicate good recruitment and stable to increasing deer numbers in Unit 2. Both the total number of hunters and the number of successful hunters increased during the reporting period, and despite increased hunting pressure success rates remain high. However, managers are concerned that in some drainages the population may be near carrying capacity, and that a severe winter could result in a substantial die-off.

We should better inform the public regarding the effects of logging on deer populations, so that they are aware of tradeoffs between timber harvest and wildlife. We anticipate that logging related reductions in important winter habitat will reduce deer carrying capacity for decades to come. The long term consequences of habitat loss include loss of hunting opportunity and the inability to provide for subsistence needs of rural residents (Wood 1990, Larsen 1993).

Effects of climate change on deer and deer habitat remain unknown. Anticipated declines in deer carrying capacity coupled with steady or increasing demand for deer will require that we closely monitor Unit 2 deer populations and develop management strategies to adapt to changing conditions.

REFERENCES CITED

ADF&G (Alaska Department of Fish and Game). 2012. Region I deer harvest reports: Deer harvest database of hunter survey results, 1997–2010, Wildlife Information Network (WinfoNet). Division of Wildlife Conservation, Anchorage. [URL not publicly available as some information is confidential].

Brinkman, T. 2009. Resilience of a deer hunting system in southeast Alaska: integrating social, ecological, and genetic dimensions. Doctoral dissertation, University of Alaska-Fairbanks.

Farmer, C. J., D. K. Person, and R. T. Bowyer. 2006. Risk factors and mortality of black-tailed deer in a managed forest landscape. Journal of Wildlife Management 70:1403–1415.

Flynn, R. W. and L. Suring. 1989. Harvest rates of Sitka black-tailed deer populations in Southeast Alaska for land-use planning. Unpublished report.

Kirchhoff, M. D. 1990. Deer pellet-group surveys in Southeast Alaska. Alaska Department of Fish and Game, Douglas, Alaska.

Larsen, D. N. 1993. Deer management report of survey-inventory activities. Pages 1–20 [*In*] S. M. Abbott, editor. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project W-23-4 and W-23-5, Study 2.0, Juneau.

McNay, R. S. and J. M. Voller. 1995. Mortality causes and survival estimates for adult, female Columbian Black-Tailed Deer. Journal of Wildlife Management 59:138–146.

Unit 2 Deer Planning Subcommittee. 2005. Unit 2 Deer Management. Southeast Alaska Subsistence Regional Advisory Council, Anchorage.

U.S. Forest Service. 1989. 1989–94 operating period for the Ketchikan Pulp Company. Long-term Sale Area, Final Environmental Impact Statement, USDA Forest Service, R-10-MB-66h.

USDA (United States Department of Agriculture) Forest Service. 2009. Access travel management plan environmental assessment Prince of Wales and surrounding islands. Craig and Thorne Bay ranger districts. Tongass National Forest, Alaska.

Wood, R. E. 1990. Deer survey-inventory progress report. Pages 1–13 *in* S. O. Morgan, editor. Annual report of survey-inventory activities. Part VI. Deer. Vol. XX. Alaska Department of Fish and Game. Federal Aid Wildlife Restoration Progress Report, Project W-23-2, Study 2.0, Juneau.

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While this unit report was actually published in 2016, it is part of the set of 2015 unit species management reports, so we suggest citing the report as a 2015 report to maintain its relationship to the other 2015 unit reports.

Product names used in this publication are included for completeness but do not constitute product endorsement.

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Table 1. Unit 2 deer harvest data, regulatory years 2002 through 2013.

Regulatory year	No. hunters	No. successful hunters	Percent successful	Total hunter days	Average hunter days	Total deer[a]	Average deer per hunter	Average hunter days per deer
2002[b]	1,850	1,122	61	10,426	5.6	1,805	1.2	4.8
2003[b]	1,390	887	64	8,014	5.8	2,176	1.3	4.4
2004[b]	1,410	1,038	74	6,819	4.8	2,184	1.5	3.1
2005[b]	1,824	1,322	72	9,194	5.0	2,744	1.5	3.4
2006[b]	2,072	1,548	75	10,102	4.9	3,326	1.6	3.0
2007[b]	2,005	1,385	69	10,521	5.2	2,854	1.4	3.7
2008[b]	2,114	1,511	71	11,122	5.3	3,319	1.6	3.4
2009[b]	2,108	1,567	74	11,681	5.5	3,340	1.6	3.5
2010[b]	2,250	1,682	75	11,823	5.3	3,626	1.6	3.3
2011[c]	2,229	1,680	75	13,271	6.0	3,882	1.7	3.4
2012[c]	2,468	1,795	73	12,972	5.3	3,690	1.5	3.5
2013[c]	2,459	1,800	73	12,663	5.2	3,702	1.5	3.4
Average	1,925	1,374	71	10,297	5.3	2,926	1.5	3.5

[a] Includes the reported harvest of does.

[b] Estimates calculated from hunter questionnaires sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 2. Expanded Unit 2 deer harvest from Prince of Wales Island only, regulatory years 2002 through 2013.

	Regulatory Year	Nr hunters expanded[a]	Nr successful hunters expanded[a]	Percent successful	Hunter days expanded[a]	Average days per hunter	Average deer per hunter	Deer killed
POW Island	2002[b]	1,761	1061	60	10,120	5.7	1.2	2,053
	2003[b]	1,311	828	63	7,608	5.8	1.3	1,650
	2004[b]	1,335	973	73	6,396	4.8	1.5	2,018
	2005[b]	1,726	1,234	71	8,676	5.0	1.5	2,540
	2006[b]	1,960	1,451	74	9,589	4.9	1.6	3,097
	2007[b]	1,910	1,312	69	10,044	5.3	1.4	2,645
	2008[b]	1,983	1,399	71	10,310	5.2	1.5	2,959
	2009[b]	1,958	1,441	74	10,706	5.5	1.5	2,987
	2010[b]	2,125	1,578	74	11,035	5.2	1.5	3,229
	2011[c]	2,056	1,559	76	11,983	5.9	1.6	3,373
	2012[c]	2,258	1,607	71	11,744	5.2	1.4	3,144
	2013[c]	2,217	1,605	72	11,287	5.1	1.4	3,143
	Average	1,813	1,284	71	9,647	5.3	1.5	2,655

[a] Expanded numbers are derived from a multiplier applied to survey results to yield totals for the area.

[b] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 3. Expanded Unit 1A (Ketchikan) hunters deer hunting effort and harvest in Unit 2, regulatory years 2002 through 2013[a].

Regulatory year	Residents of Unit 1A		Total 1A Resident Hunters	Total Hunters Unit 2	Deer Harvested by 1A Res.	Total Deer Harvested Unit 2
	Successful Hunters	Unsuccessful Hunters				
2002[b]	417	316	733	1,850	766	1,805
2003[b]	321	226	547	1,390	593	2,176
2004[b]	425	182	607	1,410	900	2,184
2005[b]	373	143	516	1,824	701	2,744
2006[b]	387	196	583	2,072	767	3,326
2007[b]	370	201	571	2,005	743	2,854
2008[b]	456	201	657	2,114	944	3,319
2009[b]	443	191	634	2,108	848	3,340
2010[b]	484	196	680	2,250	1,023	3,626
2011[c]	479	205	684	2,229	1,137	3,882
2012[c]	571	215	786	2,468	1,187	3,690
2013[c]	502	207	709	2,459	1,000	3,702
Average	416	206	621	1,925	842	2,926

[a] Expanded numbers are derived from a multiplier applied to survey results to yield totals for the area.

[b] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 4. Unit 2 hunter residency and success, regulatory years 2002 through 2013[a].

Regulatory year	Successful				Unsuccessful			
	Unit 2 resident[b]	Nonlocal resident	Nonresident	Total	Unit 2 resident[b]	Nonlocal resident	Nonresident	Total
2002[c]	548	574	0	1,122	301	427	0	728
2003[c]	475	412	0	887	172	331	0	503
2004[c]	475	563	0	1,038	126	246	0	372
2005[c]	742	491	89	1,322	176	217	107	500
2006[c]	756	723	65	1,544	147	277	83	507
2007[c]	721	590	75	1,386	165	303	151	619
2008[c]	719	693	100	1,512	189	302	111	602
2009[c]	745	657	139	1,541	149	291	88	528
2010[c]	789	724	136	1,649	161	308	88	557
2011[d]	799	770	102	1,671	122	339	86	547
2012[d]	812	858	111	1,781	186	392	87	665
2013[d]	804	849	119	1,772	195	363	93	651
Average	677	620	71	1,367	171	304	71	546

[a] Table does not include hunters with unknown residency.

[b] Local residents include Alaskan residents living within Unit 2 boundaries.

[c] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[d] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 5. Unit 2 reported and estimated deer harvest/mortality, regulatory years 2002 through 2013.

Regulatory year	Reported harvest			Unreported & illegal harvest[a]	Estimated total harvest	Estimated no. road kills
	Male	Female	Total			
2002[b]	1,736	69	1,805	1,805	3,610	30-50
2003[b]	2,085	91	2,176	2,176	4,352	30-50
2004[b]	2,090	94	2,184	2,184	4,368	30–50
2005[b]	2,630	114	2,744	2,744	5,488	30–50
2006[b]	3,215	111	3,326	3,326	6,652	30–50
2007[b]	2,756	98	2,854	2,854	5,708	30–50
2008[b]	3,193	126	3,319	3,319	6,638	30–50
2009[b]	3,187	153	3,340	3,340	6,680	30–50
2010[b]	3,525	101	3,626	3,626	7,252	30–50
2011[c]	3,762	120	3,882	3,882	7,764	30–50
2012[c]	3,581	109	3,690	3,690	7,380	30–50
2013[c]	3,611	91	3,702	3,702	7,404	30–50
Average	2,818	108	2,926	2,926	5,851	30–50

[a] Unreported and illegal harvest estimated at 100% of reported harvest.

[b] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 6. Unit 2 deer harvest chronology, regulatory years 2002 through 2013.

	Month of kill						
Regulatory year	July[a]	Aug	Sep	Oct	Nov	Dec	Unk/ other
2002 [b]	0	605	276	401	672	79	149
2003 [b]	78	284	287	357	567	49	182
2004[b]	68	310	240	481	811	61	213
2005[b]	210	504	399	503	897	76	154
2006[b]	189	501	460	538	1,329	153	158
2007[b]	128	428	300	450	1,218	121	210
2008[b]	116	494	362	522	1,525	167	132
2009[b]	122	488	263	510	1,658	183	117
2010[b]	156	471	281	594	1,669	178	278
2011[c]	220	619	290	598	1,918	197	41
2012[c]	142	460	306	557	1,879	315	32
2013[c]	167	485	282	461	2,100	174	34
Average	143[d]	470	316	495	1226	126	163

[a] Federal subsistence deer hunting season opens July 24.

[b] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

[d] Average does not include RY02 when there was no July season.

Table 7. Unit 2 hunter transport method, regulatory years 2002 through 2013.

Regulatory year	Method of transportation[a]					
	Airplane	Boat	Foot	Highway vehicle[b]	Other	Unk
2002[c]	34	345	38	1,077	0	69
2003[c]	75	426	41	1,469	0	28
2004[c]	32	330	33	1,113	0	31
2005[c]	80	391	41	1,432	0	56
2006[c]	81	526	56	1,569	0	35
2007[c]	93	480	43	1,502	0	32
2008[c]	84	794	73	1,306	1	87
2009[c]	69	623	57	1,479	0	76
2010[c]	54	562	71	1,668	0	145
2011[d]	76	637	215	1,478	12	112
2012[d]	101	716	195	1,605	9	80
2013[d]	90	720	60	1,737	7	88
Average	68	511	67	1409	3	67

[a] Numbers of successful and unsuccessful hunter trips.

[b] Includes cars, trucks, and off-road vehicles (3- and 4-wheelers).

[c] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[d] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

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Advisory Announcement

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2020 NOAA FISHERIES–ALASKA DEPARTMENT OF FISH AND GAME SOUTHEAST ALASKA PINK SALMON HARVEST FORECAST

The Southeast Alaska (SEAK) pink salmon harvest in 2020 is predicted to be in the *weak* range with a point estimate of **12 million fish (80% prediction interval: 7–19 million fish).** The categorical ranges of pink salmon harvest in SEAK were formulated from the 20th, 40th, 60th, and 80th percentiles of historical harvest over the 59-year period 1960–2018:

Category	Range (millions)	Percentile
Poor	Less than 11	Less than 20th
Weak	11 to 19	20th to 40th
Average	19 to 34	40th to 60th
Strong	34 to 50	60th to 80th
Excellent	Greater than 50	Greater than 80th

Forecast Methods:

The NOAA Alaska Fisheries Science Center, Auke Bay Laboratories (NOAA) initiated the Southeast Alaska Coastal Monitoring (SECM) project in 1997 to better understand the effects of climate and nearshore ocean conditions on year class strength of salmon and ecologically related species (Orsi et al. 1997). Since 2018, the SECM project has been conducted cooperatively by NOAA and the Alaska Department of Fish and Game (ADF&G), and the two agencies have combined efforts to produce a joint pink salmon harvest forecast using SECM data (Piston et al. 2019). The ADF&G research vessel *Medeia* is now used to conduct the SECM surveys and biologists from NOAA, ADF&G, and the regional aquaculture associations provided direct assistance to the sampling effort during the June, July, and August surveys. In the future, we plan to continue working towards increased coordination between agencies and will continue to look for ways to focus and expand the SECM survey to provide a wide variety of valuable information to the fishing industry.

The 2020 SEAK pink salmon harvest forecast (Figures 1 and 2) was primarily based on juvenile pink salmon abundance indices collected by the SECM project in northern SEAK inside waters. These data were obtained from systematic surveys conducted annually in June and July in upper Chatham and Icy straits and are highly correlated with the harvest of adult pink salmon in the following year (Wertheimer et al. 2011). The 2019 juvenile pink salmon abundance index (monthly peak juvenile CPUE; standardized catch based on 20-minute trawl sets) of 1.20 was the third lowest in the 23 years of SECM surveys.

Forecasts were developed using an approach described by Murphy et al. (in press). A multiple regression model was developed using the juvenile pink salmon abundance index and associated environmental parameters. The model used is:

$$E(y) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 X_2 + \varepsilon$$

where *E(y)* is the expected value for *y*, the natural log of Southeast Alaska pink salmon harvest, β_1 is the coefficient for the natural log of CPUE +1, β_2 is the coefficient for the natural log of the environmental covariate water temperature (e.g.,

summer water temperature indices in the upper 20 m in Icy Strait), β_3 is the interaction term, and ε represents the normally distributed error term. Leave-one-out cross validation (hindcast), Akaike Information Criterion for small sample sizes (Burnham and Anderson 2004), and the model performance metric mean absolute scaled error (MASE; Hyndman and Kohler 2006) were then used to evaluate forecast accuracy of alternative models. The 80% prediction intervals around the forecast were calculated using the car package in program R (Fox and Weisberg 2019).

Forecast Discussion:

The 2020 harvest forecast of 12 million pink salmon is approximately one third of the recent 10-year average harvest of 35 million pink salmon. A harvest near this forecast would also be approximately 60% of the average even-year harvest since 2006. The 2019 peak June–July juvenile pink salmon index value (1.20) ranked 21st out of the 23 years that SECM information has been collected. Pink salmon harvests associated with juvenile indices below a value of 2.0 have ranged from 8 to 37 million fish (mean=21 million fish).

The low juvenile abundance index in 2019 was not unexpected. Pink salmon escapements in the parent year (2018) were very poor throughout northern Southeast Alaska inside waters and the escapement goal was not met in that subregion, which may have resulted in below optimal egg deposition. Escapement and harvest of pink salmon in the Northern Southeast Inside subregion have been very poor since 2012 and the 2020 forecast indicates this pattern is likely to continue. Pink salmon escapement goals for the Southern Southeast and Northern Southeast Outside subregions were met in 2018, but harvests were well below average. The low juvenile abundance index in 2019 may also indicate that brood year 2018 pink salmon experienced poor freshwater and/or early marine survival. It is possible that drought conditions present in Southeast Alaska from the parent year 2018 spawn through the spring of 2019 reduced spawning success or negatively impacted overwinter survival of developing juvenile salmon, but the exact reasons for the low juvenile abundance are not known. Juvenile pink salmon caught in the 2019 SECM survey trawls, however, were among the largest (in length) in the 23-year time series (Figure 3) and were in good condition, which indicates favorable nearshore marine conditions in the spring. The size of juvenile pink salmon was similar to the large size of juveniles observed during the marine heat wave of 2014–2016 (Figure 3) and returns from those juvenile years were all below average.

Like many recent years, a potential source of uncertainty regarding the 2020 pink salmon return is the anomalously warm sea surface temperatures in the Gulf of Alaska in 2019. Warm temperatures that persisted throughout the Gulf of Alaska from fall 2013 through much of 2016 (Bond et al. 2015; Di Lorenzo and Mantua 2016; Walsh et al. 2018) returned in 2018 and strengthened in 2019. Compared to sea surface temperatures since 1997, when NOAA first started the SECM project, surface temperatures in the Gulf of Alaska in 2019, immediately offshore of Southeast Alaska, were the warmest of the time series in July, the 4th warmest in August, and 3rd warmest in September[1]. Sea surface temperatures were well above average across the entire Gulf of Alaska during that time[2]. Pink salmon that went to sea from 2014 to 2018 returned in numbers below expectation and below recent odd- and even-year averages. The impact of warm sea surface temperatures on the survival of pink salmon that went to sea in 2019 is unknown and adds uncertainty to the forecast.

The department will manage the 2020 commercial purse seine fisheries inseason based on the strength of salmon runs. Aerial escapement surveys and fishery performance data will continue, as always, to be essential in making inseason management decisions.

Literature Cited

Bond, N. A., M. F. Cronin, H. Freeland, and N. Mantua. 2015. Causes and impacts of the 2014 anomaly in the NE Pacific. Geophysical Research Letters 42: 3414–3420.

Burnham, K. P., and Anderson, D. R. 2004. Multimodel inference: Understanding AIC and BIC in model selection. Sociological Methods and Research 33: 261-304.

Di Lorenzo, E., and N. Mantua. 2016. Multi-year persistence of the 2014/15 North Pacific marine heatwave. Nature Climate Change 6:1042.

Fox, J., and S. Weisberg. 2019. An {R} Companion to Applied Regression, Third Edition. Thousand Oaks CA: Sage. ; https://socialsciences.mcmaster.ca/jfox/Books/Companion/

[1] https://www.ncdc.noaa.gov/data-access/marineocean-data/extended-reconstructed-sea-surface-temperature-ersst-v5.
[2] https://polar.ncep.noaa.gov/sst/rtg_high_res/archive/20190815/color_anomaly_NW_ophi0.png.

Hyndman, R. J., and A. B. Koehler. 2006. Another look at measures of forecast accuracy. International Journal of Forecasting 22: 679-688.

Murphy, J. M., E.A. Fergusson, A. Piston, A. Gray, and E. Farley. In Press. Growth and harvest forecast models for Southeast Alaska pink salmon. North Pacific Anadromous Fish Commission Technical Report No. 15.

Orsi, J. A., J. M. Murphy, and A. L. J. Brase. 1997. Survey of juvenile salmon in the marine waters of southeastern Alaska, May–August 1997. (NPAFC Doc. 277) Auke Bay Laboratory, Alaska Fisheries Science Center, National Marine Fisheries Service, NOAA, 11305 Glacier Highway, Juneau, AK 99801-8626, USA. 27 p.

Piston, A. W., S. Heinl, S. Miller, R. Brenner, J. Murphy, J. Watson, A. Gray, and E. Fergusson. 2019. Pages 46–49 [*In*] R. E. Brenner, A. R. Munro, and S. J. Larsen, editors. 2019. Run forecasts and harvest projections for 2019 Alaska salmon fisheries and review of the 2018 season. Alaska Department of Fish and Game, Special Publication No. 19-07, Anchorage.

Walsh, J. E., and thirteen other authors. 2018. The high latitude marine heat wave of 2016 and its impacts on Alaska [supplement]. Bulletin of the American Meteorological Society. 99: s39–s43.

Wertheimer, A. C., J. A. Orsi, E. A. Fergusson, and M. V. Sturdevant. 2011. Forecasting pink salmon harvest in Southeast Alaska from juvenile salmon abundance and associated environmental parameters: 2010 returns and 2011 forecast (NPAFC Doc. 1343) Auke Bay Lab., Alaska Fish. Sci. Cen., Nat. Mar. Fish. Serv., NOAA, 17109 Point Lena Loop Road, Juneau, AK 99801-8626, USA, 20 p.; http://www.npafc.org/new/pub_documents.html.

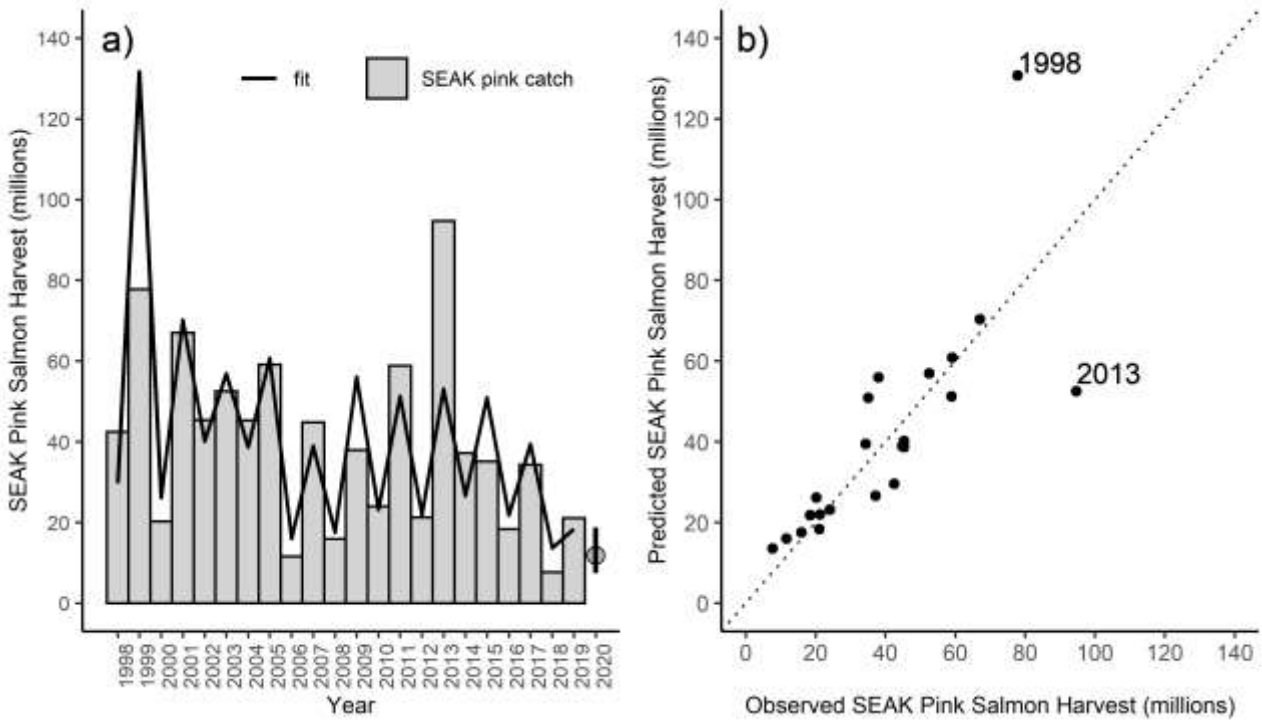

Figure 1. Forecast model fit (hindcasts) for total Southeast Alaska (SEAK) pink salmon harvest, 1998–2019 by year (a) and by the fitted values (b). The 2020 forecast is shown as a grey circle in panel a with the 80% prediction interval as a black vertical line. The observed SEAK pink salmon harvest is represented by the grey bars and the model fit is shown by the black line in figure a. The dotted line in panel b represents a one-to-one line; circles above the line represent hindcasts that would have been greater than the actual harvest and circles below the line represent hindcasts that would have been less than the actual harvest.

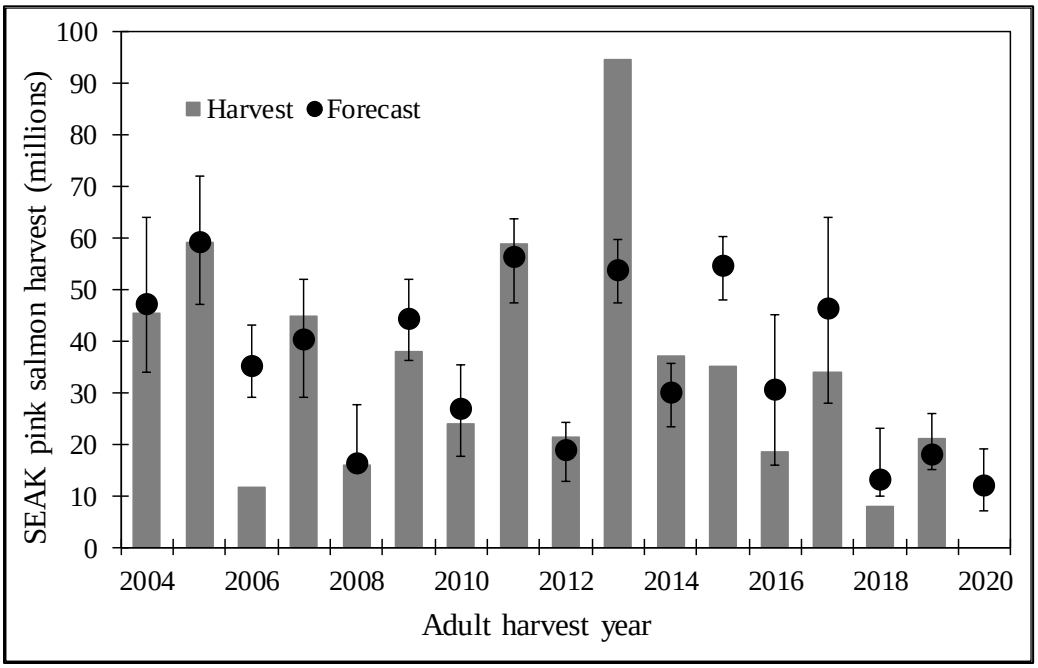

Figure 2. Annual harvests of pink salmon in SEAK compared to the actual preseason harvest forecasts, 2004–2020. The error bars represent the 80% confidence or prediction intervals of the forecasts.

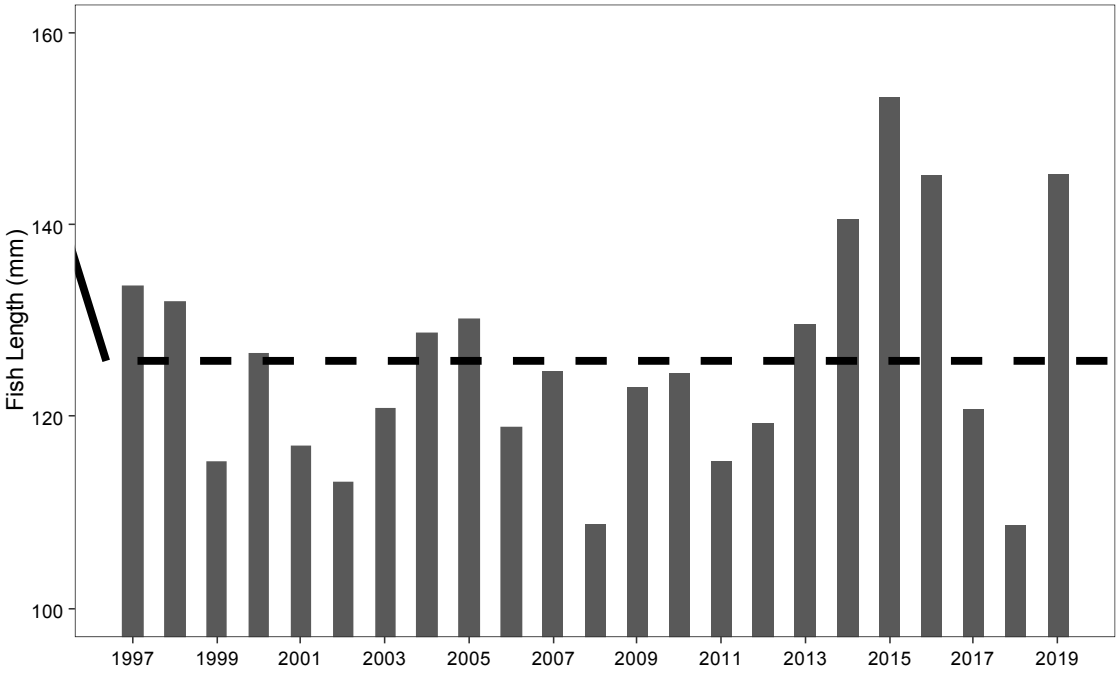

Figure 3. Average snout-to-fork length of juvenile pink salmon (standardized to 24 July) captured during trawl surveys in upper Chatham and Icy straits, 1997–2019. The dashed line represents the 1997–2019 average length.

Andy Piston, Steve Heinl, Sara Miller, and Rich Brenner, Alaska Department of Fish and Game
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TONGASS FISH AND WILDLIFE RESOURCE ASSESSMENT 1998

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DIVISION OF WILDLIFE CONSERVATION

DIVISION OF SPORT FISH

DIVISION OF COMMERCIAL FISHERIES

DIVISION OF SUBSISTENCE

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EXECUTIVE SUMMARY

Southeast Alaska is characterized by a productive coastal environment which supports high human uses of fish and wildlife populations for subsistence, personal use, commercial, and recreational purposes. Fish and wildlife resources are primarily associated with the old-growth forests of Southeast Alaska and serve as primary cornerstones to the economy of Southeast Alaska. The demand for these resources is increasing at a rate of over 15% per decade. Fish and wildlife from a relatively small proportion of the region support a relatively large proportion of the economy. The dependence on forest habitats for meeting subsistence needs for deer, fishing industry needs for salmon, and recreational and tourism needs for fish and wildlife is unmistakable. Wolves den among the roots of spruce trees, songbirds glean insects from their trunks and branches, and eagles nest in their crowns. Fish feed on insects that drop from the riparian forest plants along streams, deer forage on the understory herbs, and bears feed on berries from the understory shrubs. Loss or degradation of habitat affects a host of species for many different reasons and compromises the associated human use values.

At the request of Commissioner Frank Rue, the Alaska Department of Fish and Game (ADF&G) compiled fish and wildlife harvest, catch, and productivity data for selected fish and wildlife species. The species were chosen to serve as indicators of the relative importance of particular areas for the production and human use of fish and wildlife. The purpose was to produce an analytical tool to evaluate the significance of potential habitat impacts from proposed developments.

ADF&G staff systematically applied fish and wildlife resource data to specific Southeast Alaska watersheds or clusters of watersheds called Value Comparison Units (VCUs). Each VCU received a series of ranks to assess the relative resource value of each area. To maximize objectivity, numeric resource data provided the foundation of the overall ranking process. These data included coho and pink salmon production, sport fishing catch, subsistence use, brown and black bear harvest, and urban deer harvest. Data on old-growth forests was also compiled by VCU analysis. The specific assessment methods varied but the general results were ordered ranks, from high to low values within each VCU, for each species or topic. For example, Sitka black-tailed deer harvest was broken into four categories, from those VCUs with the highest 25% of deer harvest to those with the lowest 25% of harvest. The ranked values within each VCU for bear, fish, deer, and subsistence were geographically displayed on a set of four color-coded maps (enclosed).

The results of this data analysis were used to identify the highest value Community Use Areas in the state of Alaska's recommendations regarding the Tongass Land Management Plan revision. This report presents the methods used in the analysis and maps that portray the relative value of areas for black bear, brown bear, Sitka black-tailed deer, sport fishing, salmon production, and subsistence use. The information may be further used as a tool by the people of Southeast Alaska to help understand local resource values.

ADF&G believes it is in the state's interest to minimize conflicts between resource developments that result in the loss of habitat productivity and other forest uses that depend on habitat integrity. The best approach is for land owners, land managers and resource users to work cooperatively to protect the highest value Community Use Areas identified in this report, to restore degraded forests and streams, and to insure responsible development practices. Reducing risks to fish and wildlife and maintaining community uses of fish and wildlife is a public trust responsibility.

BACKGROUND

It is an understatement to say that hunting and fishing are highly significant social, economic, and cultural activities of the people of Southeast Alaska. Sitka black-tailed deer, found on the mainland and many islands, are the most hunted of all wildlife species with an average annual harvest of 13,000 deer since 1980 taken by an average of 8,200 hunters a year who enjoyed a 63% success rate. Salmon are the most often used fish species in the region. Tlingit, Haida, and Tsimshian residents maintain traditional salmon harvest areas that are generations old. Today, subsistence harvest of salmon by native and non-native Alaskans alike exceeds 1.2 million pounds annually. Excluding the two largest communities, Juneau and Ketchikan, the total subsistence harvest of fish and wildlife by all other Southeast communities is 4.4 million pounds per year. To replace these wild foods with store-bought equivalents would cost $22-35 million per year. Hunters from Juneau and Ketchikan harvest an additional 600,000 pounds of deer per year.

The productivity of the lakes, streams, bays, and estuaries in Southeast Alaska help stabilize local and regional economies with growing sport and commercial fisheries. A 1988 study determined the total economic effect of sport fishing in Southeast Alaska was to support over 1,100 jobs with more than $28 million in wage earnings (Jones and Stokes Assoc., 1991). Since 1988, angler-days have increased from 398,000 to 510,000 in 1996 and harvest has increased from 378,000 fish to 466,000 fish (Howe et al. 1997). In 1996, 939,000 fish were caught by sport anglers when catch-and-release fish are added to those caught and harvested (ibid).

Fish habitat throughout the region also yields 160 million pounds of commercially caught salmon every year on average with an economic value of $250 million and which supports over 5,000 jobs (Anadromous Fish Habitat Assessment, USFS, 1995).

In 1989, wildlife watching comprised 43% of all visitor activities and accounted for $43 million in income from boat charters, kayak/raft/canoe trips, hiking, flightseeing, and remote lodging. The average growth of this industry's clientele was 33% per year at the time of the study (Shea, 1990).

This Resource Assessment was produced to better understand and document the fish and wildlife resource values of Southeast Alaska. The objectives were two-fold:

1) Use best available information and data on Sitka black-tailed deer, brown and black bears, sport fishing, salmon production, and subsistence to identify relative values of Value Comparison Units (VCUs) for community uses of fish and wildlife.

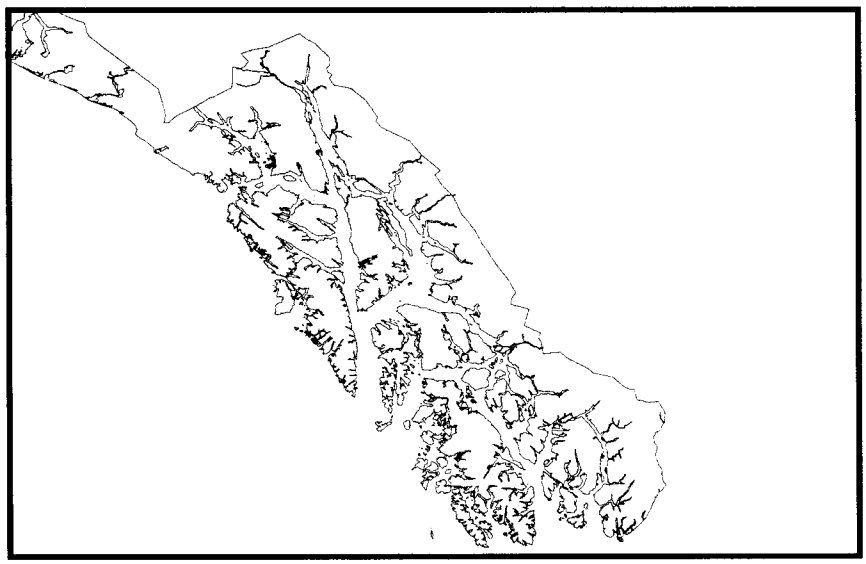
2) Provide the information to the public to aid their understanding of the distribution of fish and wildlife values in Southeast Alaska. The effort will provide information to help guide land owners, managers, resource users, and the general public as they consider future land and resource uses.

AREA DESCRIPTION

Southeast Alaska Region

The area evaluated in this Resource Assessment extends from Ketchikan and Hyder in the south, to Yakutat in the north and from the Canadian border in the east to the outer coastal islands to the west. Southeast Alaska is predominately a temperate coastal rain forest with a maritime climate of frequent wind, cool temperatures, and high rainfall. The dense old-growth forest is dominated by western hemlock (*Tsuga heterophylla*) and Sitka spruce (*Picea sitchensis*), although other conifer species of cedar, pine, yew, and fir are present in lesser numbers and in patchy distributions. Common understory species include blueberry (*Vaccinium spp.*) and bunchberry (*Cornus canadensis*) which are important food for herbivores. The abundant fish and wildlife resources include salmon (*Onchorhynchus* spp.), steelhead (*Salmo gairdneri*), eulachon (*Thaleichtys pacificus*), Sitka black-tailed deer (*Odocoileus hemionus sitkensis*), brown bear (*Ursus arctos*), black bear (*Ursus americanos*), mountain goat (*Oreamnos americanos*), and moose (*Alces alces*). The distribution and characteristics of forest habitat are influenced by terrain, hydrology, soils, and human disturbance. The interaction of these factors produce a mosaic of many habitat types across the landscape.

The topography is steep and divided by glaciers rivers, fiords, and marine waterways. Patches and stringers of poorly drained soil create wetlands amid the forest. Numerous islands divide the region, creating 11,000 miles of shoreline. The mainland boundary of mountains to the east is capped by glaciers and the largest ice field in North America, creating dramatic elevation and temperature changes. Wind is the primary natural disturbance force affecting forest age, size, and composition of tree species, though other lesser factors include landslides, soil slumpage, insects, fungi, and snow. Timber harvest is the primary source of man-induced disturbance, causing direct and indirect loss of forest habitat. The region is vast and ecologically distinct. The forest habitat, topography, and shoreline all affect how the forest is used by fish and wildlife and the people living in the towns and settlements of Southeast Alaska.



RECREATIONAL AND COMMERCIAL FISHERY VALUES

Summary

The Alaska Department of Fish and Game has compiled two indicators of fishery value for watersheds and VCUs of the Tongass National Forest: "Salmon Production" and "Sport Fishing Use." These indicators portray the relative fishery values that exist among watersheds and VCUs of Southeast Alaska and are useful for the management of fish habitat.

Salmon Production was estimated from indices of pink salmon escapement and coho salmon smolt capability (production). The pink salmon escapement data came from ADF&G's escapement database, and coho salmon smolt capability was calculated from a model developed by the U.S. Forest Service (USFS) and ADF&G.

Sport Fishing Use data are the product of ADF&G's statewide harvest surveys, which measure recreational fishing effort in freshwater systems. These data reveal angler preferences for certain fishing locations.

The Salmon Production and Sport Fishing Use indicators are heavily concentrated within relatively few VCUs: 60% of pink salmon escapement, 72% of coho salmon smolt capability, and 98% of sport fishing use all occur in only 26% (243 VCUs) of the 934 rated VCUs in the Tongass. In fact, 22% of all freshwater angler use occurred in one VCU—the Situk River. These core VCUs and the watersheds they contain, collectively, are considered to be Primary Fish Producers by ADF&G.

As a first attempt to link existing fishery and geographic databases related to the Tongass, this report contains data germane only to this analysis and intended only for use under narrow objectives of the project. Further, while we have taken great effort to insure data quality, our linking of data sources from varied agencies inevitably may contain errors. We thus caution readers to exercise care in adapting these data to other analyses. Finally, the results of our analysis cannot be interpreted as ADF&G's final judgment relating to land use recommendations. Site-specific analysis and ground truthing should be done for the review of VCUs or watersheds proposed for development. Results of this planning exercise also make it clear that significantly expanded, multi-agency efforts are needed to better develop comprehensive land use recommendations that insure long-term productivity of fish habitat and sustainable fish populations and fisheries in and adjacent to the Tongass National Forest.

Introduction

In October 1995, ADF&G Division of Sport Fish began a project to analyze fishery data and rate watersheds (areas draining to one tidewater discharge point) of the Tongass National Forest as to their value to fisheries. These ratings were initiated for use by ADF&G in reviewing land allocations of the USFS in the Tongass Land Management Plan (TLMP). The analysis was also motivated by concerns for the use and possible misuse of an obsolete rating system called "FHIP" (Forest Habitat Integrity Plan). FHIP was developed by ADF&G in 1981 to rate sport, commercial, and subsistence fishery values in watersheds that had been designated for intensive timber harvest under the 1979 TLMP. However, ADF&G abandoned FHIP in 1982, out of concern for biases in the rating system—concerns that exist yet today. Secondly, the FHIP ratings—frequently based on judgment—could be improved by using the many data collected on fisheries and salmonid

abundance since 1981. Finally, commercial fishery representatives were concerned that FHIP ratings were weighted toward recreational fisheries. Consequently, we determined that reexamination and re-rating fishery values for watersheds on the Tongass National Forest was necessary to provide the best possible planning data. To assure that concerns of recreational and commercial fisheries were equally represented, the Division of Sport Fish (SF) and the Commercial Fisheries Management and Development Division (CFMD) assigned staff to the project. The objectives were to:

- Examine available fishery data bases and choose data sets that were forest-wide and continuous over time;
- Compile the data for watersheds;
- Order the data and develop indices of value;
- Describe the distribution of indices within the Tongass.

Methods

The analysis defines the Tongass as the lands of Southeast Alaska encompassed by USFS Value Comparison Units (VCUs). A VCU is "a distinct geographic area that generally encompasses a drainage basin containing one or more large stream systems. Boundaries usually follow easily recognizable watershed divides. These units were established to provide a common set of areas for which resource inventories could be conducted and resource interpretations made" (USFS 1996). However, two VCUs (numbers 0 and 8888) were excluded in our analysis because there were multiple areas for each VCU number and they were located in widely separated areas which would render analysis useless. They represent, in fact, only a few noncontiguous areas of private, municipal, or state lands.

Three data sets of indices of fishery production were chosen for the analysis: coho salmon smolt capability (an estimate of the carrying capacity or maximum numbers the habitat can produce), pink salmon escapement indices, and freshwater sport fishing angler use. Pink and coho salmon were chosen because they are the most ubiquitous of commercial species, occurring in nearly every anadromous watershed in the region. Secondly, pink salmon escapement data is the most comprehensive and continuous of any stock assessment data in the region. In contrast, coho salmon stock assessment data is limited to only a few watersheds; we thus adopted results for this species from a USFS model based on habitat type/fish abundance relationships. These data were considered an index of the actual production (in numbers) of adult coho salmon. Absolute numbers of coho salmon smolt produced were not in themselves the important product of the model; it was the relative values of the modeled abundance that were of interest. Finally, to introduce a human dimension to the analysis, a database of freshwater sport fishing use was compiled to identify watersheds most frequently used by anglers.

Other data sets were examined and rejected. Recreational and commercial marine harvest data is by far the most accurate and extensive fishery data set available in Southeast Alaska. However, the marine harvests could not be allocated to the many watersheds in the Tongass with confidence. Recreational harvest data for freshwater was rejected because of difficulties in assigning relative value among species. (Is a watershed that produces many steelhead more or less valuable than a one that produces many coho salmon?) Chinook salmon data were not used because most chinook spawning and rearing habitat lies outside of the Tongass. Escapement data and/or freshwater harvest data for chum salmon are not comprehensive. Sockeye salmon were not used as an indicator because they are less ubiquitous and do not drive regional fisheries.

ADF&G data on pink salmon production and sport fishing use by stream in the Tongass were assembled, edited, and organized by VCUs, ADF&G Anadromous Stream Catalog numbers, and stream names. It is important to note that because one watershed may cross multiple VCUs, our assignments of angler use and pink salmon escapement to VCUs for this analysis may not be suited to other purposes. Extensive additional sampling and research will be needed to accurately model fish values at this and other levels of resolution that might be desired. Methodology adopted in this analysis was conducted solely to illuminate essential characteristics of the data and provide overall perspective and advice regarding the distribution of fisheries values within the Tongass.

Coho Salmon Smolt Capability

Estimates of coho salmon smolt capability by VCU in the Tongass were obtained from the USFS. The estimates were based on a relationship between coho salmon smolt abundance and riparian habitat and stream channel type and were considered an index of coho salmon production. No estimates of coho salmon smolt capability were available for some VCUs on Admiralty Island, Chichagof Island, the Juneau roadside, and other areas. Within these constraints, estimates for 597 VCUs in the Tongass having some coho salmon smolt production estimates were available. For this planning exercise, the assumption was that the various forms of error in modeled estimates were reasonably constant among VCUs, and estimates of coho salmon smolt production could be ranked by VCU.

Values for coho salmon smolt capability were sorted by VCU in descending order of coho capability. Percentiles of the sorted values were then determined, and coho salmon smolt capabilities summed between percentile cutpoints.

Pink Salmon Escapement Indices

Pink salmon escapements in Southeast Alaska are recorded by ADF&G as "peak" or non-peak counts, determined by observations (usually during aerial surveys) within a year. Sources of error include observer bias, variation in environmental conditions, and other factors that are subjects of considerable and ongoing research.

This analysis assumed that all anadromous streams in Tongass produce pink salmon. However, consistent annual counts are made only for (most) major pink salmon streams in the Tongass. These index streams are surveyed each year except when bad weather, logistics, or similar problems arise. To best chart recent conditions in the most productive streams in the Tongass, we compiled peak escapement counts for index streams from 1980 through 1994. Missing (annual) values were estimated by the average escapement by stream across years (this data set, with missing values estimated, was provided by Tim Baker, CFMD, Anchorage.) We then calculated median (i.e., mid) values for each index stream.

Non-index anadromous streams identified in the Anadromous Stream Catalog were considered "small" producers. Escapement to these streams was, for this analysis, assigned by referring to the order of the stream under the Catalog's ASC hierarchical coding system. Unsurveyed first-order (main stem) streams and second-order tributaries of non-index systems were assigned a peak escapement value of 2,200 fish. Unsurveyed tributaries of index systems received a value of 0 if the index escapement was associated with the main stem reach. Lastly, all third-order or higher tributaries without an index escapement were assigned a value of 0. We estimated the peak escapement value of 2,200 for unsurveyed areas by the first quartile of the distribution of median escapement for index streams. A total of 2,799 first-order

anadromous streams were compiled for the analysis.

The indices of escapement were summed by first-order catalog stream codes, then sorted in descending order of escapement. Percentiles of the sorted values were then determined, and escapements summed between percentile cutpoints.

Sport Fishing Use

Angler effort (use, in angler days in fresh water) was used as an indicator of sport fishing value. Angler use is highly correlated with harvest of salmon, trout, and char by stream in Southeast Alaska and was preferred over indices based on harvest since it eliminated the need for judging the relative value of species. Estimates of angler use for individual watersheds are made annually as part of the ADF&G Statewide Harvest Survey (SWHS) (Mills 1978–94, Howe et al. 1995). All the angler use data for individual watersheds were summed for the years 1977–1994 to form an index of sport fishing value.

In a few instances, freshwater angler use data in the SWHS were reported for general areas such as the "Juneau roadside." Such areas span many different streams and VCUs, and we could not accurately distribute use data among specific areas. Consequently, these data were eliminated from the analysis. Other data were excluded because of an unusually high number of angler days reported relative to harvest. These data were considered an artifact of tourism (e.g., Sheep Creek) and/or ease of access from urban areas (e.g., Herbert/Windfall Lake). Finally, some data were excluded if the contributing fisheries were heavily supported by stocking (Sheep Creek in Juneau, Ward and Ketchikan Creeks in Ketchikan) and would not ordinarily be able to sustain fisheries of this magnitude. Conversely, fisheries with records of stocking but no significant increase in sport harvest for those species were retained in the analysis.

Based on Sport Fish Division's knowledge of the fisheries, sport fishing angler use values were assigned to VCUs in the Tongass. If multiple VCUs were possibilities, one VCU was selected. Angler use was, however, almost always specific to a single identifiable watershed in a VCU. For example, in VCU 2351, angler days of use apply only to Kadashan River and not to other watersheds in the VCU. Editing of the sport fish data to remove enhanced and roadside fisheries eliminated angler use data in 19 VCUs.

The SWHS data have limitations. First, the survey identifies only watersheds where there were a sufficient number of anglers to insure that statistics are relatively precise; as a result, watersheds with high value streams that are infrequently fished are not individually identified (Mills and Howe 1992). Also, no response and inaccurate information by anglers might increase non-detection of some fisheries. However, since the undetected fisheries are almost always small, such problems are likely insignificant in this analysis.

Estimates of angler use by VCU were sorted in descending order of angler use. Percentiles of the sorted values were then determined, and angler use summed between percentile cutpoints.

VCUs Important to Salmon Production and Sport Fishing Use

Data from the three analyses were combined to identify the most valuable watersheds in the Tongass with respect to all three indicators. However, each pink salmon escapement index from the previous analysis had first to be associated with a VCU in the Tongass. Those VCUs containing no anadromous streams (according to the Catalog) were identified and

assigned an escapement index value of 0. Then the escapement estimates were summed for each of the 934 VCUs. These data were then sorted in descending order of escapement, and percentiles of the sorted values were determined as in all the other analyses; each VCU was thus related to a percentile value generated from each fishery value. Each percentile was then transformed to a score on a 1 to 10 scale according to its percentile order (1 = 1-10; 2 = 11-20; etc.).

A score from 1 to 10 was then assigned to each VCU using the maximax procedure (Merritt and Criddle 1993). The maximax procedure selects the lowest (best) score among the pink, coho, and sport use data to represent the score for a VCU. For example, if pink salmon escapement fell in the 10th percentile, coho salmon smolt capability in the 77th percentile, and sport use in the 23rd percentile, the best score (1 for the 10th percentile) would lead to a maximax score of 1. If data were missing from any of the data sets, the best score from the remaining data sets was chosen.

When one watershed crossed multiple VCUs, assignments of pink salmon escapement and sport fishing use for that stream to a VCU within the watershed could not be accurate. Estimating pink salmon escapement by VCU was problematic, for example, as this had not been a focus of past or current research. Where necessary, one VCU in the watershed (typically the lowest numbered VCU) was associated with the estimated pink salmon count for that stream. Such arbitrary assignments were later resolved, as described below, by extending results from the combined (maximax) analysis to watersheds, rather than individual VCUs. This also reflects our belief that it could, or would, be misleading to separate related reaches of major fishery streams by using a VCU-based computer analysis.

Results from the maximax analysis were appropriately linked to watersheds. VCUs in a watershed containing a VCU given the highest maximax score were given the same maximax score if these two conditions were met. First, the stream mouth or a substantial portion of the particular watershed important for its fishery value (high escapement or angler use) had to occur in the VCU, as judged from maps of the streams and VCU boundaries. Second, the magnitude of the fishery value for a high-value watershed found in several VCUs must have been relatively large. The "sharing" of the escapement or angler use with other related VCUs could not, therefore, imply small fishery values on a by-VCU basis.

Stream watersheds or VCUs assigned a maximax score of 1 are denoted Primary Fish Producers. VCUs with no anadromous streams (in the catalog), no modeled coho salmon smolt capability, and low sport fishing use are denoted Nonproducers. All other VCUs and watersheds are denoted Secondary Fish Producers. Primary producers which are so denoted because of top scores for pink salmon escapement and coho salmon smolt capability are referred to collectively as "Salmon Production" areas. Primary producers so denoted because of top sport fishing use scores are referred to as "Sport Fishing Use" areas.

VCUs designated as Primary, Secondary, or Nonproducers were mapped and color-coded to depict their various combinations of values. The following color codes were employed for this purpose: red stripes = Primary Fish Producers with a top Sport Fishing Use score; blue = Primary Fish Producers with a top Salmon Production score; pink = Secondary Fish Producers for Salmon Production; and white = Nonproducers. Red stripes overlay the blue background in those areas with top scores for both Salmon Production and Sport Fishing Use. Annette Island, Glacier Bay Park, and VCUs 0 and 8888 are colored gray and were not rated. Finally, an overlay of gray stripes indicates private, municipal, state, or National

Parks lands within mapped VCUs of the Tongass.

Results

Coho Salmon Smolt Capability

About 56% of the modeled coho salmon smolt capability occurs in 10% of the rated VCUs, and 72% of the modeled capability occurs in 20% of the rated VCUs (Table 1, Appendix A). Because this analysis excludes VCUs which lack estimates of coho salmon smolt capability, the true distribution of values across the Tongass may differ somewhat. Further research will be needed to supply these estimates before a complete ranking of VCUs with respect to their coho salmon smolt capability can be made.

Pink Salmon Escapement Indices

The distribution of pink salmon escapements is also skewed to a minority of streams in the forest. About 51% of the estimated pink salmon escapement occurred in 10% of the anadromous streams and 62% occurred in 20% of the anadromous streams (Table 2, Appendix A). Although further research to estimate indices for non-index streams might show the overall distribution of values to be different than in this analysis, the fact that most major streams are surveyed suggests a robust nature for the essential, skewed distribution of values that were calculated.

Sport Fishing Use

An estimated 507,597 angler days of sport fishing use were expended in 230 fresh water streams of the Tongass from 1977-1994 (Table 3, Appendix A). Thus, sport fishing angler use is also concentrated in a small number of watersheds (expressed as VCUs), according to this analysis. Twenty-two percent of all freshwater fishing effort since 1977 (Table 3, Appendix A) has occurred in a single watershed—the Situk River. Fifty-two percent of all freshwater fishing effort has occurred in only 8 watersheds (expressed as VCUs), fewer than 1% of the total number of VCUs in the Tongass. Ninety-seven percent of the freshwater use was expended in 10% of the Tongass watersheds (expressed as VCUs) (Table 4, Appendix A). Recall that these statistics are generated for wild stock fisheries specifically identified in the SWHS; a large number of other systems in the Tongass are visited by sport anglers at low levels of participation.

Watersheds and VCUs Important to Salmon Production and Sport Fishing Use

Two hundred VCUs received a maximax score of 1 because they fell into the top 10% of VCUs either for coho capability, pink salmon escapement, or freshwater sport fishing use. An additional 26 VCUs contained significant portions of the most important pink salmon streams, and 36 VCUs contained significant portions of the most important sport fishing streams. In total, 243 of the 934 rated VCUs on the Tongass (26%) received a maximax score of 1 (Appendix A) and are thus denoted Primary Fish Producers.

While Primary Fish Producers constitute only 26% of the 934 rated VCUs, they collectively produce 60% of the estimated pink salmon escapement index, 72% of the modeled coho salmon smolt capability, and 98% of the freshwater Sport Fishing Use identified to location in the Tongass (Table 5, Appendix A). Secondary Fish Producers, composing 64% of the rated VCUs, produced 40% of the pink salmon escapement index, 28% of the modeled coho salmon smolt capability, and 2% of the freshwater Sport Fishing Use. Nonproducers constitute 10% of VCUs in the Tongass.

A map entitled "Salmon Production and Sport Fishing Use by Value Comparison Unit (VCU) of the Tongass National Forest" accompanies this report. The map displays the geographical distribution of Primary, Secondary, and Nonproducing VCUs for Salmon Production and Sport Fishing Use.

Discussion

Salmon Production and Sport Fishing Use were heavily concentrated in 26% of the VCUs of the Tongass National Forest. Collectively, these VCUs - Primary Fish Producers - are the core of the region's sport, commercial, and subsistence fisheries.

Recent findings raise concerns about the sustainability of these fisheries. Findings include "current [timber harvest] procedures ...are not fully effective to prevent habitat degradation or fully protect salmon and steelhead stocks over the long term" (USFS 1995). Moreover, in spite of improved timber harvest practices, a "legacy of highly altered watersheds remain" (Bryant 1996). Since timber harvest in anadromous watersheds has been increasingly identified as a contributing factor in the decline of salmonid abundance and diversity in Oregon and Washington (Murphy 1995), it is obvious that some level of reduction will occur also in Southeast Alaska. Past and ongoing timber harvest practices expose some highly productive salmon, trout, and char streams to significant risks.

Thoughtful consideration of the fishery values in the Tongass by VCU is conceptually and practically difficult, because VCU boundaries are not always watershed boundaries. Future efforts among agencies to expand and refine long-term goals for management of the Tongass should focus on identifying fishery value by watershed, rather than by sometimes arbitrary VCUs. While this analysis provides overall perspective and advice regarding the distribution of fisheries values in the Tongass, site-specific analysis and ground truthing are needed for review of VCUs or watersheds proposed for development. Also, a lack of data on many systems, including potentially important salmon producers, dictates caution in the use of the information in this report for land use planning and permitting. Significantly expanded, watershed-focused, multi-agency efforts are required to better develop comprehensive land use recommendations to insure long-term sustainability of fish populations in Southeast Alaska.

DEER HARVEST BY RESIDENTS OF JUNEAU AND KETCHIKAN

Introduction

Sitka black-tailed deer (*Odocoileus hemionus sitkensis*) are the most sought after wildlife species by hunters in Southeast Alaska, providing over 600,000 pounds of meat per year to the residents of Juneau and Ketchikan alone. Although deer populations have historically fluctuated in response to winter weather conditions, quality of range, and predation, they have provided an important and dependable food supply over the years. The old-growth forests of Southeast Alaska are prime habitat for deer which depend on it for food and shelter, especially during winters of high snowfall. For this reason, considerable research has been conducted on the impacts of timber harvest on deer populations.

ADF&G encourages public land managers to maintain sufficient deer habitat to ensure sustained yields of deer to support a high level of deer harvest by residents of the region.

The purpose of this analysis is to identify the VCUs which recently have provided the greatest numbers of deer to hunters who live in the large, non-rural communities of Juneau and Ketchikan. A separate analysis of subsistence harvest of wildlife and fish, including harvest of deer, by residents of the smaller, rural communities is found in another section of the report. (Neither analysis shows where hunters have traditionally harvested deer but recently do not because of low deer numbers or poor hunting success.) This information will allow residents of these communities to assess the effect of proposed developments on their individual and community hunting areas. Furthermore, it will provide an objective basis for determining which VCUs are deserving of additional deer habitat protection during implementation of the Revised Tongass Land Management Plan (TLMP).

Methods

Annual deer harvest statistics are solicited from hunters through an annual survey form mailed to a random sample of deer hunters in each community of Southeast Alaska. Based on these annual harvest records, this resource assessment for deer reflects the average number of deer harvested by Juneau and Ketchikan residents between the years 1987 and 1994. The harvest data were first summarized by deer harvest survey areas (WAAs) which consisted of three to five watersheds. Then assumptions were made about the proportional distribution of deer harvested among the VCUs which comprised the survey areas. The VCU harvest distributions were estimated as percentages by local area biologists in Ketchikan and Juneau based primarily on their knowledge of hunting patterns in their management area. Factors that affect hunting patterns are related to relative ease of access, availability of anchorages, density of roads, and productivity for deer. The percentages were multiplied by the reported deer harvest in each analysis area to arrive at the mean number of deer harvested annually from each VCU. Based on the number of deer harvested, VCUs were ranked from highest to lowest for each community. VCUs with approximately the top 25% of harvest ranked the highest and VCUs with the lowest 25% of harvest ranked the lowest. The map in Appendix A displays the VCUs from which 75% of the deer are harvested and a table with the data.

Results

Juneau

Juneau residents harvest an average of 3,696 deer annually. Twelve VCUs contribute 25% of the total annual deer harvest. The most important VCU is Barlow (VCU 125), on the North Mansfield Peninsula of Admiralty Island, contributing 154 deer annually to Juneau hunters. Other very productive hunting areas, in order of importance, include Gambier Bay, Upper Seymour Canal, Youngs Bay, Funter Bay, Glass Peninsula, and Hawk Inlet (all on Admiralty Island). On Chichagof Island, the most productive VCU for Juneau hunters is Idaho Inlet. VCUs on Douglas Island are also quite productive, however because the Island is divided into five relatively small VCUs, no single VCU ranked in the top 12.

Ketchikan

Ketchikan residents harvest an average of 1,527 deer annually. Twelve VCUs contributed 25% of the total deer harvest. The most important VCU is Sweetwater Lake (VCU 573), on north Prince of Wales Island, contributing 73 deer annually to Ketchikan hunters. Other very productive areas, in order of importance, include Smugglers Bay, Helm Bay, and Port Stewart (all on Cleveland Peninsula), Vallenar and Bostwick (on Gravina Island), Ketchikan Lakes and Gnat Cove (on Revillagigedo Island), and Barnes Lake, Tuxekan Passage, Coffman Cove, and Staney Creek (on Prince of Wales Island). It should be noted that Coffman Cove and Staney Creek have been heavily clearcut, and will not produce as many deer when the regenerating conifers close over. Other, less disturbed VCUs will provide more stable deer populations over the long term. A complete ranking of important VCUs is provided on the enclosed map.

Discussion

Deer habitat management should consider those areas most important to hunters in each community, with most productive areas receiving higher priority for protection than less productive areas. The ranking of areas based on deer harvest is a simplified approach to assessing deer values at a scale that, while practical, has limitations. Local harvest numbers do not necessarily convert to local deer habitat productivity and are affected by access, traditional use patterns, visibility of deer, effort, and other immeasurable conditions. Harvest data is useful as an indicator to assess the relative resource values of specific areas.

BROWN AND BLACK BEAR HARVESTS

Introduction

Both brown and black bears are popular targets for big game hunters and wildlife viewers who reside in or visit Southeast Alaska. Since 1989, an average of 164 brown bears and 584 black bears have been killed by hunters annually in the region. Maintaining productive bear populations provides subsistence, recreational, and sport hunting opportunities to Alaskans. Bear hunters, especially those resident and nonresident hunters who use guides, also contribute to the economy of Southeast Alaska. Bear viewing is a popular and growing activity in Southeast Alaska and viewing of bears by tourists as well as residents contributes increasingly to the economy of the region. However, quantifiable data on bear viewing is not readily available. For that reason, the following analysis of bear values by area is limited to relative values associated with bear hunting.

The purpose of this analysis is to identify which watersheds within Southeast Alaska have provided the largest harvest of bears during the ten year period (1985-94) for which data is readily available.

Methods

Harvest Total

Bear harvest statistics are gathered annually on bear sealing certificates. All bears taken in Alaska must be sealed by ADF&G within a few days of their being killed. Information is collected at the watershed scale by ADF&G minor harvest units which generally correspond with the Forest Service's VCUs. At the time a bear is sealed, information is recorded on the location of kill by watershed (VCU), residency of hunter, method of transport used in the hunt, whether or not a guide was used, how many days hunters spent afield, and other data.

For this analysis, we simply added the number of bears killed legally by hunters in each VCU during the years 1985-1994. Bears killed in defense of life and property (DLP) were not counted. ADF&G harvest records include harvest from all lands in Southeast Alaska, private, state, and municipal as well as lands within National Forest boundaries. VCUs which are entirely or predominantly (>50%) outside of National Forest boundaries are included in the list but were not considered in our ranking of important National Forest VCUs for bear hunting.

Spatial Scale

Bear habitat varies greatly across Southeast Alaska. In general, the islands support more productive forest habitats and larger more concentrated bear populations than the mainland. Because ADF&G wants to maintain productive and huntable wildlife populations well distributed throughout the forest for humans to use wherever they live in the region, it is important to evaluate important bear hunting areas on something smaller than a forest-wide scale. We identified six subregions within the Tongass, primarily oriented around major islands or island groups, that serve as a frame of reference when evaluating individual VCUs.

Results

The enclosed map contains tables listing the most important VCUs (providing 75% of harvest within region) from highest to lowest based on the number of bears of each species harvested from them during the period 1985-94.

Brown bears

Brown bears occur on the mainland in Southeast Alaska and on the major islands of Admiralty, Baranof, and Chichagof (ABC islands) as well as smaller neighboring islands such as Kruzof (VCUs grouped with Baranof Is.) and Yakobi (grouped with Chichagof). Harvest of brown bears in the Mainland subregion is considerably lower than in the ABC islands. In the ABC islands, most harvest comes in areas with good boat anchorages for hunter access.

In the Mainland subregion, the five most important VCUs to brown bear harvest include Eagle River and Lake on Bradfield Canal, the Aaron and Berg Creek drainage off Blake Channel, the Unuk and Chickamin Rivers, and Walker Cove in Misty Fjords. VCUs that account for the second highest tier of mainland harvest, include three VCUs in Berners Bay, in the Port Snettisham area Limestone Creek and Whiting River, and the Bradfield River.

In the Chichagof Island subregion, the Sitkoh River VCU has the highest harvest. However, four VCUs at or near the Portage between Tenakee Inlet and Port Frederick are in the top ten. Other high harvest VCUs included Ushk Bay, Slocum Arm, Crab Bay, and Idaho Inlet, as well as private land in Spasski Creek drainage.

In the Baranof Island subregion, four VCUs on northeast Baranof around Kelp Bay and Catherine Island are in the top ten. Other important brown bear harvest areas are Rodman Saoak, and Fish bayson north Baranof, and Gut Bays and Port Walter on east and Red Bluff Baranof.

In the Admiralty Island subregion, eight of the top eleven brown bear harvest VCUs are on the south end of the island. Among them are Pybus, Gambier, Hood, Chaik, Whitewater, and Herring bays. Other high harvest VCUs include Hawk Inlet, Young Lake, and private land at Kathleen Lake.

Harvest in the Yakutat subregion can not be calculated by VCU because VCU boundaries in the Yakutat area do not correspond with ADF&G minor harvest units. Brown bears do not occur in the Central Islands subregion or Prince of Wales Island subregion.

Black bears

In the Mainland subregion, the highest 25% of harvest comes from VCUs on the west side of Lynn Canal in Excursion Inlet, St. James Bay, and at Pt. Couverden as well as at Port Snettisham, Hobart Bay (where most bears are hunted from the road system), Carroll Inlet, George Inlet, and in Misty Fjords at Portage Cove. VCUs providing the next highest 25% of black bear harvest on the mainland include the Juneau area, the upper Taku River, Berners Bay, Echo Cove, Gilbert Bay, Windham Bay, Sandborn Canal, Farragut Bay, Traitors Cove, and in Misty Fjords at Marten Arm of Boca de Quadra and Hidden Inlet.

In the Central Islands subregion, the most important VCUs for bear harvest are on northern Kuiu island and along Rocky Pass. Tebenkof Bay on Kuiu and both sides of Wrangell Narrows are also important harvest areas. Northern Kuiu is popular with black bear hunting guides.

In the Prince of Wales Is. subregion, bear harvest is closely associated with road access and a high percentage of bears killed (as high as 80% in some VCUs) are taken by hunters using roads for access rather than boats or planes, as elsewhere in Southeast Alaska. A more thorough analysis of areas important to road and non-road hunting has been proposed.

Many of the VCUs which have produced high black bear harvests are wholly or predominantly private lands. Of the National Forest VCUs responsible for high bear harvests, Staney Creek drainage produced the most bears. Others were: Harris River, Troeaders Bay, Thorne Bay, Luck Lake, Red Bay, 12 Mile Arm, Coffman Cove, and three VCUs in the Whale Pass area.

Harvest in Subregion 10 (Yakutat) can not be calculated by VCU because VCU boundaries in the Yakutat area do not correspond with ADF&G minor harvest units. Black bears do not occur on the ABC islands.

Discussion

There is one primary caution concerning these data. Bears range more widely across the landscape than deer. Rating harvest by the scale of single drainages may be misleading in that in some areas of high bear harvest, the kill may be evenly distributed over the several neighboring VCUs and no single VCU will have a high total. Thus, reporting harvest by VCU may cause one to overlook important areas where several neighboring drainages are important as a whole to bear hunting but no one particular VCU stands out as exceptional.

SUBSISTENCE USE

Introduction

In 1996, ADF&G developed fish and wildlife rankings by VCUs to better understand the relative resource values of these specific areas throughout Southeast Alaska. The ranking process allowed the ADF&G Division of Subsistence to systematically organize its data in such a way to better examine impacts from land use developments. The rankings were used to identify protection needed for the highest valued areas of Southeast Alaska and, specifically, within the Tongass National Forest. The subsistence rankings are also important reference points for residents of Southeast Alaska concerned with the impact of the forest and non-forest land use activities on their subsistence uses.

The methods used in ranking subsistence values were developed through past cooperative work by the Division of Subsistence and the USFS during development of the Northwest Baranof Plan from 1992-95. The purpose of that work was to develop an objective method to identify areas where resource development within timber cutting units would have greater or lesser impacts on the subsistence uses of Sitka residents. Results of that effort were incorporated in the planning record as a ranking of areas according to their subsistence *sensitivity to disturbance*. The success of this earlier planning effort provided a model for ranking the subsistence *sensitivity to disturbance* for VCUs throughout the Tongass. The VCU rankings that were developed provide a tool that may be used to evaluate proposed developments.

Methods

Division of Subsistence resource specialists ranked the VCUs used for subsistence by 29 Southeast Alaska communities where adequate data were available. The communities where rankings were undertaken were part of the Tongass Resource Use Cooperative Survey (TRUCS). Ranking were not done for Juneau and Ketchikan; these cities are considered urban areas not eligible for subsistence under the Alaska National Interest Land Conservation Act and are in non-subsistence use areas under state regulation. Accordingly, these communities were not part of the TRUCS or other subsistence studies. An analysis was presented in an earlier section of this report on deer harvest by Juneau and Ketchikan hunters. Ranking of VCUs for sensitivity to disturbance also was not done for Yakutat; little Tongass National Forest commercial quality timber remains that may be harvested within the Yakutat subsistence use area.

Identification of subsistence use areas for 29 communities were delineated through review of six primary data sources:

1) Division of Subsistence Community Studies and Subsistence Maps. In the 1980s, the division completed field research projects and thorough reports describing subsistence uses, harvest levels, and areas used for subsistence. Ethnographic interviewing, household surveys, and subsistence use area mapping were part of these community studies. Maps prepared showed both the extent of subsistence use of study communities and the intensity of use of different areas within the community territory. Technical reports were completed for Angoon, Hoonah, Kake, Klawock, Klukwan, Petersburg, Sitka, and Wrangell. These studies received support from the USFS.

2) The Tongass Resource Use Cooperative Survey. This study, undertaken by the Division of Subsistence and the University of Alaska,

Institute for Social and Economic Research with USFS support, included a survey of household harvests and uses and mapped household subsistence use in Southeast Alaska communities in 1988. Maps show intensity of subsistence use, by species harvested, for study communities.

3) ADF&G Deer and Other Species Harvest Data. Deer harvest data from these surveys showing where each community has taken subsistence deer were analyzed for the 1987-1995 hunting seasons. Harvest data for moose, mountain goat, and black bear were also consulted.

4) Historic Documents, Records, and Reports. These sources include the existing ethnographic literature on Southeast Alaska cultural groups, other historical documentation, and investigative reports. Some sources, such as Walter Goldschmidt and Theodore Haas, *Possessory Rights of the Natives of Southeastern Alaska* (1946), provide maps and descriptions of subsistence use areas.

5) Personal Research Experience of Division of Subsistence staff in Southeast communities. Division staff have over 30 years of research and planning experience related to subsistence in Southeast Alaska communities with a focus on identifying subsistence areas of particular importance.

6) Limited Review. Draft maps based on this analysis were circulated to Southeast Native Subsistence Commission member communities and presented to the federal Southeast Regional Advisory Council. Maps also received informal community review when staff were in communities on other projects. The VCU rankings and maps based on the rankings were available for review after June, 1996.

In general, the subsistence use areas for Southeast Alaska Native communities tend to closely coincide with the traditional territories that were owned, under customary law, by Tlingit localized clans. The subsistence use areas of most other Southeast Alaska communities are also well defined by research data. Most of the subsistence use areas are compact with use intensity inversely proportional to distance from the community. A few communities have more dispersed subsistence use areas. Because of their small populations and distance from key resources, Hyder and Skagway subsistence use areas are more dispersed than other small communities. Petersburg and Wrangell have large use areas because of their large populations, distance to deer hunting areas, and the wide-ranging commercial fishing activity that has enabled residents to become familiar with, and have access to much of the region. Using these methods, subsistence use areas for the 29 Southeast Alaska communities were rated by VCU.

Ranking was done for the following communities:

- Angoon
- Coffman Cove
- Point Baker
- Edna Bay
- Elfin Cove
- Meyers Chuck
- Metlakatla
- Hydaburg
- Port Alexander
- Port Protection
- Hoonah
- Kake
- Craig
- Klawock
- Klukwan
- Gustavus
- Hollis
- Pelican
- Hyder
- Tenakee Springs
- Whale Pass
- Kasaan
- Saxman
- Sitka
- Skagway
- Haines
- Wrangell
- Petersburg
- Thorne Bay

Community Ranking

For each community, staff referred to available data sources and ranked each VCU within each subsistence use area on a one-to-five ordinal scale for sensitivity to disturbance, with five meaning most sensitive to disturbance. A higher ranking means that the ranked VCU has more subsistence *sensitivity to disturbance*, but the difference between ranks is not defined. That is, a VCU ranked two on this scale is more sensitive to disturbance than a VCU ranked one, however, it is not necessarily twice as sensitive.

Disturbance in this context means any land use activity that could adversely impact subsistence uses.

ADF&G deer harvest data and Division of Subsistence, and TRUCS "intensity of use maps" provided a starting point for ranking VCUs within communities' use areas. Ranking also included consideration of professional knowledge of harvest levels of other fish, wildlife, and plant species, ease of access, distance from community, and cultural importance. For most areas in Southeast Alaska, logging, road construction, or mining are the most likely development disturbances that may affect subsistence uses.

Ranking was done such that approximately 20% of each community's subsistence use area was assigned each of the five ranks. This makes the ranking relative within a community. Because their subsistence use areas included only a small number of VCUs, rankings for Coffman Cove, Edna Bay, Elfin Cove, Gustavus, Hollis, Kasaan, Metlakatla, Meyers Chuck, Pelican, Port Alexander, Port Protection, Saxman, and Whale Pass used a three-point scale with one-third of their land area ranked 1, 3, or 5 respectively. The three-point scale was also used for Petersburg to allow more accurate ranking of its very dispersed use pattern. Because the communities of Klukwan, Skagway and Hyder use only a few VCUs, their subsistence use areas were given a single rank of 3.

Community Maps

Maps show rankings for each of the 29 communities in Southeast. Copies of the community maps were circulated for limited public review. Three of the community maps, those for Hoonah, Kake, and Sitka, are reproduced in this report as examples of local community-level analysis. Copies of *sensitivity to disturbance* maps and tabular data showing VCU rankings for each of 29 Southeast communities may be reviewed at the Division of Subsistence, Island Center Building, Douglas, AK 99824, (907) 465-2629, Attn. Mike Turek.

Combining Rankings

The enclosed large format map combines the results from the rankings done for each of the 29 communities. The community rankings were combined to better understand the regional *sensitivity to disturbance* among all communities. In areas where community subsistence use areas overlap, a VCU defaults to the highest value given for any individual community. For example, if a VCU was used by three different communities ranked 5, 3, and 3, respectively, the combined rank is 5. Similarly, a VCU was given a rank of 4 on the large format map if that was the highest ranking given the VCU for any community which used that area.

Results and Discussion

On the large format map is a table that summarizes the rankings for the 928 VCUs of Southeast Alaska. The vast majority of VCUs are located in the Tongass National Forest, but many VCUs include some municipal, borough, state, Mental Health trust, and private land. Acreage figures refer only to Tongass National Forest Lands. About 37% of all VCUs, comprising about 27% of the total non-national park land area of Southeast Alaska, were ranked 5, meaning most sensitive to disturbance by at least one Southeast Alaska community. About 30% of all VCUs, comprising about 45% of the total non-national park acreage in Southeast Alaska, were ranked as 0 meaning that they are not typically used for subsistence by members of the 29 communities covered (refer to Table 1 below).

These rankings, and the community and regional level maps based on them, provide forest-wide depictions of the extent of

subsistence uses and serve to identify those VCUs where subsistence uses may be most sensitive to disturbance. As such, the rankings provide a useful planning tool. We would note, however, that subsistence patterns may change over time due to variations in species abundance, changes in community subsistence use patterns, competition, forest succession, road development or closure, and other factors. Some areas that have been ranked low may have increasing subsistence use in coming years; this would be true, for example, for areas near Kake and Petersburg where deer populations are rebounding and where moose populations are becoming established. Conversely, subsistence use of some areas of Southeast Alaska could diminish in the future. There are areas today around Hoonah, Sitka, Pelican, and central Prince of Wales Island where deer hunter demand has exceeded deer carrying capacities. This is due to predicted declines in deer habitat capability due to the conversion of old-growth forests to second-growth forest.

Additionally, as much as 10% of current subsistence deer harvest comes from non-National Forest lands. Many of these lands, particularly private lands, have been extensively clearcut and deer habitat capability is expected to decline substantially as the recent clearcuts close over as second-growth forest. When that happens, hunters will most likely shift their effort to nearby National Forest lands. At the same time, demand for deer is expected to increase over time as the human population of Southeast Alaska grows. For these reasons, local communities need to be consulted to better define areas of particular importance for subsistence uses.

Table 1.

Ranking	# of VCUs	% of VCUs	Tongass National Forest Acres	% of Tongass National Forest Area
0	282	30%	7,556,924	45%
1	53	6%	1,035,311	6%
2	34	4%	480,910	3%
3	136	15%	2,064,626	12%
4	83	9%	1,163,004	7%
5	340	37%	4,634,238	27%
Total	928	100%	16,935,013	100%

OLD-GROWTH FOREST HABITAT CONDITIONS

Introduction

Many species of wildlife in southeast Alaska depend either directly or indirectly on old-growth habitat for their basic life requirements. Sitka black-tailed deer depend on the canopy structure of high-volume forests, at low elevation, for shelter from winter snows and access to nutritious forage. Marten depend on the structure of productive old-growth habitat, including dead and down logs, for foraging and denning habitat. Bears, marten, otter, and mink make extensive use of old-growth habitat in the beach fringe and along riparian corridors for foraging and/or denning habitat. Other species, including mountain goats, wolves, bears, and furbearers can be displaced or easily overexploited in areas that are intensively roaded and developed. Add to this the prospect of maintaining important habitat for species whose life histories are only poorly known, and one can appreciate the challenge involved in identifying important habitat that meets the needs of "wildlife" in general.

In 1993, an interagency committee of biologists was formed, called the Viable Population Committee (VPOP), to examine the old-growth habitat relationships of all terrestrial vertebrate species on the Tongass. They identified 8 species that were at risk from logging and associated development, and recommended a series of actions be taken to minimize risks to viable well-distributed populations as required by the National Forest Management Acts regulations (Suring et al., 1993). In addition to a number of specific standards and guidelines, the committee recommended the Forest Service establish a network of various-sized reserves, composed of relatively high-quality old-growth habitat (50% volume class 5 and higher) to meet the estimated minimum requirements of these and other old-growth affiliated species. Their conclusions were endorsed, and expanded upon, by a scientific peer review panel (Kiester and Eckhardt 1994). In theory, this network of old-growth reserves was to provide a "safety net" of protection for all old-growth associated species, including those whose ecology is poorly understood.

Using information from published scientific literature, as well as empirical data from local studies, scientists on the VPOP committee developed a set of recommendations for appropriate size, spacing, and composition of old-growth reserves. They applied their reserve network across the Southeast Alaska landscape, providing planners with one example of how such a reserve system might look on the ground. This reserve strategy, with minor modifications, was incorporated in the 1997 revised Tongass Land Management Plan.

The VPOP committee's early effort to map reserves was hampered by limited access to inventory information showing the extent and quality of old-growth habitats across the Tongass. That information is now readily available. The following analysis makes use of this information to evaluate the relative old-growth habitat quality of every watershed on the Tongass National Forest in terms that reflect its value to a host of old-growth associated wildlife. This analysis is not intended as a substitute for the recommendations of the VPOP committee. Rather, it is an independent analysis of old-growth associated habitat values at the watershed scale. This ranking should provide a useful guide to those VCUs on the Tongass most deserving of additional (or substitute) protection from a wildlife perspective.

Assumptions

There are two basic parameters of effective reserves. One is size, and the other is composition or quality. We assume that the more acres of important old-growth habitat there are, the more valuable a given area will be. We also assume, as did the VPOP committee, that the more concentrated that old-growth habitat is, the more functional it will be. In other words, 1,000 acres of high-value old-growth distributed over 2,000 acres is more valuable than if the same mount of old-growth is dispersed over 10,000 acres. Finally, the long-term security of some species is threatened by roads and development. All things being equal, areas that have minimal roading and fragmentation from development are more valuable as habitat for some species than areas that have been extensively roaded and developed. These three parameters were used to develop an index that reflects the overall old-growth habitat values of VCUs on the Tongass National Forest.

Methods

Old-Growth Score

Because the unit of analysis (VCUs) are different in size, any analysis based on the number of high value old-growth acres, or the % composition in terms of high-value old-growth acres, risks biasing the results towards inordinately large, or inordinately small VCUs respectively. Both the quality (concentration) and quantity of desirable habitat needs to be factored together. We assumed the percentage of land area in productive old-growth was a good measure of the relative quality or concentration of old-growth habitat. The number of acres of highly productive old growth (volume class 5+) below 800 feet elevation served as a measurable indicator of the quantity of the generally more important old-growth habitat. The USFS Geographic Information System (GIS) was used to determine (1) percentage of productive old growth and (2) acres of highly productive old growth in each VCU. These values were multiplied to give a composite index of high-quality old-growth habitat in each VCU. This index was then adjusted based on the amount of logging and roading that had occurred to date in each VCU. Using the USFS assumption that the acres harvested from each VCU were originally in the high-volume (volume class 5+) old growth below 800 feet elevation category, the percentage of those high-volume acres remaining was calculated. The composite habitat value index was then multiplied by this "% unlogged" percentage to arrive at a score which represented the relative value of each VCU in terms of habitat for old-growth associated wildlife.

Keep in mind that this ranking does not necessarily reflect where people see wildlife, or where they kill wildlife. Those characteristics are controlled as much or more by access and proximity to communities, than by wildlife habitat value. A good example is Kuiu Island, which is remote from most large population centers, and has had low deer numbers for the past 15-20 years. Although Kuiu receives relatively little deer hunting at present, the island has historically had high deer, wolf and black bear populations. That potential remains, as long as high habitat quality remains. This evaluation process is designed to identify important old-growth "hot spots" which are important to the long term productivity of many old-growth associated species.

It is important to note that the VCU list used for the old-growth analysis did not include later subdivisions of VCUs made by the USFS. There are only a few of these subdivisions that were used in the other analyses of this project. Where they exist, the ranking refers to the land

area covered by first three digits of the VCU. For example, the ranking associated with VCU 4050 applies to VCU 4050 and VCU 4051 and the ranking for VCU 4170 applies to VCUs 4170, 4171, and 4172.

Spatial Scale

There is a great deal of natural variability of forest characteristics across Southeast Alaska. In general, the southern islands are less rugged, and support more productive forest growth than the northern islands or the mainland. To maintain productive wildlife populations well distributed throughout the Tongass, it is important to evaluate habitat quality on something smaller than a forestwide scale. Ten subregions within the Tongass were identified, primarily oriented around major islands or island groups, that serve as a frame of reference when evaluating individual VCUs. These ten subregions, their component VCUs, and their Forest Service land acreage, are shown in Table 1.

Results

As expected, the mean old-growth habitat score for different subregions varied widely, with mainland and northern subregions having generally lower mean old-growth scores than the islands. Admiralty Island had the highest mean old-growth score (x=1875, n=60 VCUs), while Yakutat had the lowest mean score (x=261, n=42 VCUs). Within each subregion, the VCUs were ranked from high to low based on their score. VCUs in the 90th percentile received the highest rank; VCUs in the 80-90th percentile received the next highest rank, and so on. A complete listing of the scores and ranking for all VCUs in each subregion is available upon request from the Division of Wildlife Conservation (attn. Matt Kirchoff). The following discussion identifies the highest-value VCUs in each subregion.

Northern Mainland (94 VCUs)

This subregion includes the Chilkat Peninsula, VCUs along the east side of Lynn Canal, Douglas Island, and mainland VCUs from Stephens Passage south to Tracy Arm. The three highest rated VCUs were Gilbert Bay, Miegs Peak and Williams Cove, which lie between Port Snettisham and Holkham Bay south of Juneau. Port Snettisham itself was ranked (7th). Closer to Juneau, Auke Bay (4th) and Echo Cove (5th) were the next most highly rated VCUs. In this same area, Montana Creek (11th), Canyon Creek (15th), and Cowee Creek (19th), were ranked in the second tier (80-90th percentile). The west shore of the Chilkat Peninsula ranked 6th, and the Taku River ranked 8th. Other VCUs ranking in the second tier on the Chilkat Peninsula were Earth Station (10th), Point Danger (12th), Pt. Couverden (16th), and Endicott River (18th). Shelter and Lincoln Islands ranked 13th and the back side of south Douglas Island (McDonnough) ranked 14th; both of these are important deer hunting areas for Juneau residents.

Chichagof Island (114 VCUs)

Kadashan (VCU 2350), in Tenakee Inlet, was the highest-rated VCU on Chichagof Island. Nearby, Trap Bay (VCU 2380) was rated number 7. Northern Chichagof had many highly rated VCUs, including Point Adolphus (2nd), Lemesurier Island (3rd), Port Frederick (4th), Idaho Inlet (5th), Chicken Creek (6th), and Elfin Cove (9th). Poison Cove, in Peril Strait, was rated 10th. Second tier VCUs on northern Chichagof included Mud Bay (11th), Loon Lakes (12th), Port Althorp (13th), Neka Bay (15th) and Surge Bay (17th). In Upper Tenakee Inlet, important VCUs were Goose Flats (14th) and Seal Bay (18th). The majority of other important VCUs were clustered in upper Hoonah Sound, including Granite Creek (16th), Ushk Bay (19th), and Patterson Bay (20th).

Baranof Island (66 VCUs)

Important old-growth areas on Baranof Island were widely distributed. The 3 most important VCUs on Baranof were the South Basin in Kelp Bay, Neva Strait (north of Sitka), and Whale Bay (on south Baranof). Hanus Bay, in Peril Straits, was ranked 4th; while Cape Burunof (south of Sitka) was ranked 5th. Important VCUs in the second-tier included Saook Bay (7th), Lake Eva (9th), South Kruzof (10th), Fish Bay (11th), and Krestof Island (13th). These and other VCUs near Sitka are particularly important deer hunting areas for Sitka residents.

Admiralty Island (60 VCUs)

Admiralty Island has relatively high old-growth habitat values throughout, but especially so on the southern half of the island. The 3 most important VCUs in terms of old-growth habitat for wildlife were Hood Bay, Gambier Bay, and Pybus Bay. Gambier Bay is also the second most productive VCU for Juneau deer hunters. Mitchell Bay and Kanalku Bay, near Angoon, were the 4th and 6th highest-rated VCUs. The Fishery Creek drainage, south of Lake Florence, was rated 5th. Other important VCUs in the second tier included Wheeler Creek (7th), Hasselborg Lake (8th), Favorite Bay (9th), Wilson Cove (10th), Chaik Bay (11th), and Eliza Bay (12th).

Central Islands (63 VCUs)

This subregion includes Kuiu, Kupreanof, Mitkof, Zarembo, and a number of smaller islands in the central part of the Alexander archipelago. The highest rated VCUs were all on Kuiu Island. The highest rated VCU was Bay of Pillars, lying just north of Tebenkof Bay Wilderness Area. The 2nd, 3rd, 4th and 6th rated VCUs lie just south of Bay of Pillars, and include Elena Bay, Alvin Bay, Tebenkof Bay, and Port Beaudere. Rocky Pass, which straddles the narrow waterway dividing Kuiu and Kupreanof islands, was rated 5th. Other VCUs ranking in the second tier included Explorer (7th), Malmesbury (10th), Port Camden (11th), and Saginaw Bay (12th).

Central Mainland (50 VCUs)

This mainland subregion includes Tracy Arm-Fords Terror Wilderness on the North, and extends to include the Stikine-Leconte Wilderness area on the South. The highest rated area was Farrugut Bay, followed by the Salt Chuck in Port Houghton. Lying in between these 2 VCUs is Sandborn Canal (9th) in Port Houghton. The 3rd, 8th, and 10th-rated VCUs are near the mouth of the Stikine River (Wilkes, Stikine and Cottonwood). Other important VCUs are between Endicott Arm and Port Houghton, including Windham Bay (4th), Sanford Cove (5th), Dry Bay (7th) and Chuck River (8th).

Prince of Wales Island (179 VCUs)

This subregion includes Prince of Wales Island as well as smaller islands to the west, including Kosciusco, Warren, Heceta, Tuxekan, Noyes, Lulu, Baker, San Fernando, Suemez, Dall, Sukkwan and Long. A number of outside islands ranked in the top 10, including Baker (1st), Noyes (3rd), Coronation (5th), and Warren (7th). These islands each contain 1 relatively large VCU, have a high percentage of productive old-growth at low elevations, and are unlogged and unroaded. On Prince of Wales, the most highly-ranked VCUs were clustered to the south. These included Nutkwa (2nd), Klakas Inlet (4th), Nutkwa Creek (6th), Lancaster (8th), Dickman Bay (12th), North Moira (13th), Bokan (14th), and South Arm (15th). On north Prince of Wales Island, the most important VCUs were Port Protection (4th), Shakan (9th), and Mt.

Calder (32nd). On Kosciusko Island, important VCUs included Shipley Bay (24th) and Trout Creek (27th). On Heceta Island, important VCUs included Cone Bay (35th) and Derrumba Ridge (36th). On Central Prince of Wales, Salmon Lake (16th), Anderson Creek (16th), and McGillvery Creek (30th) in the Karta Wilderness rated high. In the Honker Divide Area, the most important VCUs were Sweetwater Lake (19th), Thorne Lake (25th), and Cutthroat Lake (31st).

Cleveland/Etolin/Mainland (68 VCUs)

This subregion is bounded on the north by Stikine Strait, on the south by Behm Canal, and on the west by Clarence Strait. It includes Etolin Island, Wrangell Island, and the Cleveland Peninsula, as well as a number of small islands. Madan, south of Wrangell, was the highest-ranked VCU. Four VCUs on the Cleveland Peninsula were highly ranked, including Yes Bay (2nd), Anan Creek (3rd), Point Stewart (6th) and Union Bay (7th). On Etolin Island, the northern shore (VCU 4620) and McHenry Inlet ranked 4th and 5th, Onslow and Burnett Inlet ranked 9th and 10th. Other VCUs ranked in the second tier include Garnet (8th) and Campbell (10th) on the mainland, and Thoms Place (14th) and Fools Inlet (12th) on Wrangell Island.

Misty Fiords/Revilla Island (138 VCUs)

This subregion includes all VCUs in Misty Fiords National Monument and on islands south of Behm Canal, including Revillagigedo, Gravina, and Duke. The Unuk River (VCU 7860), at the head of Burroughs Bay, was the highest-rated VCU. The majority of top-rated VCUs were on Revilla island, including Princess Bay (2nd), Naha Bay (3rd), Alava Bay (4th), Wasp Cove (6th), Ella Bay (8th), Fish Creek (9th), Behm Narrows (10th), Carrol Inlet (11th), and Gokachin (14th). Other VCUs rating in the top 10% were located at the southern tip of the Tongass National Forest, including Very Inlet (5th), Nakat Inlet (7th), and Willard Inlet (12th). Important VCUs in the second tier included Salt Lagoon (16th), Orchard Lake (17th), Manzanita Bay (18th), and Clover Pass (20th).

Yakutat (42 VCUs)

This smallest subregion is separated from the rest of the Tongass National Forest by Glacier Bay National Park and Preserve. It includes the Russel Fiord Wilderness Area, and mainland VCUs between Yakutat Bay and Dry Bay. The highest old-growth habitat values in this area are found in Dark Forest (VCU 3730), followed by the Akwe River, Lower Russel Fiord, and Khaantak Islands. VCUs ranking in the second tier include the Situk River (5th), the Old Situk River (6th), Lake Redfield (7th), and Chicago Harbor (8th). As the name of the top-rated VCU implies (dark forest), the trees in the Yakutat tend to be younger (150-250 years old), more even-aged, and have a higher component of Sitka spruce (*Picea sitchensis*) than old-growth elsewhere on the Tongass. Some of the "high-volume old-growth" inventoried in this area is probably structurally and functionally closer to maturing second-growth than typical old-growth found elsewhere in Southeast Alaska.

Table 1. Subregions of Southeast Alaska used for analysis of important old-growth habitat areas of the Tongass National Forest.

Sub-region Name	VCU Numbers	National Forest Acres
Northern Mainland	1-61,64,93-124	2,542,598
Chichagof Island	185-286	1,349,580
Baranof Island	287-351	1,168,176
Admiralty Island	125-184	1,050,863
Central islands	398-460	1,392,910
Central mainland	62, 63, 65-92,481-500	1,876,944
Prince of Wales Island	527-707	1,927,180
Cleveland/Etolin/Mainland	461-480,501-526,708-729	1,436,246
Misty Fiords/Revilla	730-867	1,967,506
Yakutat	352-395	753,076

APPLICATION TO TONGASS LAND MANAGEMENT PLAN

Introduction

In 1996, ADF&G used the resource assessment outcomes for deer, bear, fish, subsistence, and old-growth habitat for review of the Tongass Land Management Plan (TLMP) revision. High community use of fish or wildlife, or high fish and wildlife production areas provided the basis for ADF&G and the State of Alaska to identify priority areas in the Tongass National Forest that were essential to maintaining high yields of fish and wildlife for hunters, anglers and others, in communities throughout Southeast.

Methods

Using the resource assessment rankings described in this report, the highest ranked VCUs in the resource assessment for fish, deer, bear, subsistence and, secondarily, old-growth habitat, were reviewed by ADF&G to create a list of priority areas. Several levels of post-ranking review were performed. First, independent reviews of the resource assessment were requested of fish, wildlife, and habitat biologists in the area and regional offices of ADF&G. Second, a series of interdisciplinary meetings were held by regional staff to collaborate on interpretations, compare with old-growth analysis results, and create a draft list of priority watersheds. Besides the data-driven resource assessment, other information used to rank community use areas included: 1) professional knowledge of habitat quality, 2) combinations of high values in one VCU, 3) Viable Population Committee report, and 4) Anadromous Fish Habitat Assessment report. Finally, within the constraints and opportunities of National Forest management and state laws and policies, a list of priority watersheds, called "community use areas", was developed.

Results

The Community Use Areas listed below represent approximately the most important 20% of subsistence use areas in Southeast Alaska, 20% of the brown bear harvest areas, 20% of the urban (Juneau and Ketchikan) deer harvest areas, 40% of the black bear harvest areas, and 30% of the pink production, coho capability, and sport fishing use areas. These were submitted by the State of Alaska to the USFS for consideration in the revision of TLMP with the following recommendation: "work with ADF&G and Southeast communities to determine which of these areas should have appropriate management prescriptions that protect community use, and fish and wildlife values. Avoiding or minimizing timber harvest in areas of high community use will increase the predictability and reliability of the timber supply and ensure the viability of all forest dependent industries."

VCUs with Highest Community Use Values

230, 240, 550, 840, 1200, 2010, 2020, 2030, 2040, 2150, 2170, 2180, 2220, 2230, 2240, 2250, 2260, 2280, 2290, 2390, 2440, 2790, 2970, 2990, 3000, 3010, 3020, 3030, 3090, 3100, 3120, 3130, 3980, 3990, 4000, 4020, 4200, 4210, 4250, 4260, 4290, 4320, 4330, 4340, 4350, 4360, 4470, 4500, 4510, 4520, 4540, 5020, 5140, 5270,.5290, 5320, 5440, 5460, 5542, 5710, 5730, 5740, 5750, 5760, 5770, 5780, 5871, 5880, 5890, 5920, 5930, 5971, 6210, 6240, 6320, 6740, 6750, 6790, 6920, 7150, 7160, 7180, 7190, 7220, 7530, 8060

VCUs with Second Highest Community Uses Values

790, 1960, 2100, 2430, 2450, 2460, 2800, 2810, 4160, 4570, 4580, 4680, 4890, 5380, 5490, 5610, 5830, 6180, 6310, 6340, 7470

VCUs with Third Highest Community Uses Values

2360, 2920, 2940, 4670, 5810, 5910, 5960, 6200, 6250, 7200, 4240, 5940, 5950, 6220, 7390, 2400, 7130, 7140, 7200.

Discussion

The productivity and health of forest habitats influences the abundance of fish and wildlife upon which lifestyles, businesses, and other activities depend. Protection of these Community Use Areas would conserve key fish and wildlife habitat and, thereby, increase the opportunity for forest management to maintain sustained yields of fish and wildlife. However, even full protection of these Community Use Areas would not guarantee sustained yields of fish and wildlife use at current levels within the Tongass. While Old-growth Habitat Reserves within the revised TLMP were designed to maintain habitat for minimum viable populations, they are insufficient to supply sustained yields of fish and wildlife to meet the demands of hunters, anglers, and subsistence users.

LITERATURE CITED

Bryant, M. D. 1996. Habitat condition and current assessment for southeast Alaska: What it was, What it is, and What it will be. Proceedings of a Conference: Towards sustainable fisheries: Balancing the conservation and use of salmon and steelhead in the Pacific Northwest. Victoria, British Columbia, April, 1996.

Howe, A. L., G. F. Fidler, and M. J. Mills. 1995. Harvest, catch, and participation in Alaska sport fisheries during 1994. Alaska Department of Fish and Game, Fishery Data Series No. 95-24, Anchorage.

Howe, A. L., G. F. Fidler, C. Olnes, A. E. Bingham, and M. J. Wills. 1997. Harvest, Catch, and Participation in Alaska Sport Fisheries During 1996.

Jones & Stokes Associates. 1991. Southeast Alaska Sport Fishing Economic Study. Prepared for Alaska Department of Fish and Game, Sport Fish Division, Anchorage.

Kauffman, J. B., R. L. Beschta, N. Otting, and D. Lytjen. 1997. An ecological perspective of riparian and stream restoration in the Western United States. Fisheries 22:12-24.

Kiester, R. A. and C. Eckhardt (eds.) 1994. Review of wildlife management and conservation biology on the Tongass National Forest: A synthesis and Recommendations. Pac. NW Res. Sta., USDA For. Serv., Corvallis, OR. 282 pp.

Merritt, M. F. and K. R. Criddle. 1993. Evaluation of the analytic hierarchy process for aiding management decisions in recreational fisheries: A case study of the chinook salmon fishery in the Kenai River, Alaska. Proceedings of the International Symposium of Management Strategies for Exploited Fish Populations. Alaska Sea Grant Program, AK-93-02, 1993.

Mills, M. J. 1979. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1978-1979, Project F-9-11, 20 (SW-I-A), Juneau.

Mills, M. J. 1980. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1979-1980, Project F-9-12, 21 (SW-I-A), Juneau.

Mills, M. J. 1981a. Alaska statewide sport fish harvest studies (1979). Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1980-1981, Project F-9-13, 22 (SW-I-A), Juneau.

Mills, M. J. 1981b. Alaska statewide sport fish harvest studies (1980). Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1980-1981, Project F-9-13, 22 (SW-I-A), Juneau.

Mills, M. J. 1982. Alaska statewide sport fish harvest studies (1981). Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1981-1982, Project F-9-14, 23 (SW-I-A), Juneau.

Mills, M. J. 1983. Alaska statewide sport fish harvest studies (1982). Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1982-1983, Project F-9-15, 24 (SW-I-A), Juneau.

Mills, M. J. 1984. Alaska statewide sport fish harvest studies (1983). Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1983-1984, Project F-9-16, 25 (SW-I-A), Juneau.

Mills, M. J. 1985. Alaska statewide sport fish harvest studies (1984). Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1984-1985, Project F-9-17, 26 (SW-I-A), Juneau.

Mills, M. J. 1986. Alaska statewide sport fish harvest studies (1985). Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1985-1986, Project F-10-1, 27 (RT-2), Juneau.

Mills, M. J. 1987. Alaska statewide sport fisheries harvest report (1986). Alaska Department of Fish and Game, Fishery Data Series No. 2, Anchorage.

Mills, M. J. 1988. Alaska statewide sport fisheries harvest report (1987). Alaska Department of Fish and Game, Fishery Data Series No. 52, Anchorage.

Mills, M. J. 1989. Alaska statewide sport fisheries harvest report (1988). Alaska Department of Fish and Game, Fishery Data Series No. 122, Anchorage.

Mills, M. J. 1990. Harvest and participation in Alaska sport fisheries during 1989. Alaska Department of Fish and Game, Fishery Data Series No. 90-44, Anchorage.

Mills, M. J. 1991. Harvest, catch, and participation in Alaska sport fisheries during 1990. Alaska Department of Fish and Game, Fishery Data Series No. 91-58, Anchorage.

Mills, M. J. 1992. Harvest, catch, and participation in Alaska sport fisheries during 1991. Alaska Department of Fish and Game, Fishery Data Series No. 92-40, Anchorage.

Mills, M. J. 1993. Harvest, catch, and participation in Alaska sport fisheries during 1992. Alaska Department of Fish and Game, Fishery Data Series No. 93-42, Anchorage.

Mills, M. J. 1994. Harvest, catch, and participation in Alaska sport fisheries during 1993. Alaska Department of Fish and Game, Fishery Data Series No. 94-28, Anchorage.

Mills, M. J., and A. L. Howe. 1992. An evaluation of estimates of sport fish harvest from the Alaska statewide mail survey. Alaska Department of Fish and Game, Fishery Data Series No. 92-2, Anchorage.

Murphy, M. L. 1995. Forestry impacts on freshwater habitat of anadromous salmonids in the Pacific Northwest and Alaska – Requirements for protection and restoration. NOAA Coastal Ocean Program Decision Analysis Series No. 7. NOAA Coastal Ocean Office, Silver Spring, MD. 156 pp.

Shea, L. C. 1990. Impacts of development on the non-hunting, wildlife-oriented businesses of Southeast Alaska. Alaska Department of Fish and Game, unpublished survey data and report, Douglas.

Suring L. H. (D. C. Cocker-Bedford, R. W. Flynn, C. S. Hale, G. C. Iverson, M. D. Kirchoff, T. E. Schenck II, L. C. Shea, and K. Titus). 1993. A proposed strategy for maintaining well-distributed, viable populations of wildlife associated with old-growth forests in southeast Alaska. Report of an Interagency Committee. Review Draft. May. 278 pp.

USFS. 1995. Report to Congress. Anadromous fish habitat assessment. U. S. Department of Agriculture. Forest Service. Pacific Northwest Research Station, Alaska Region. R10-MB-279.

USFS. 1996. Tongass Land Management Plan Revision. Revised Supplement to the Draft Environmental Impact Statement. USDA Forest Service. March 1996.

APPENDIX A - SPORT FISH TABLES

Table 1. Distribution of modeled ***coho salmon smolt capability*** in 597 rated VCUs of the Tongass National Forest. Modeled data were ordered from maximum to minimum value to define the percentile cutpoints and to determine the number of VCUs, capability, percent of capability, cumulative capability, and cumulative percent capability at 10-percentile intervals.

Percentile of Distribution	Percentile Cutpoint	No. VCUs in Interval	Capability Interval	Percent of Capability	Cumulative Capability	Cumulative Percent
0	586,680*	-	-	-	-	-
10	49,727	60	7,186,850	56%	7,186,850	56%
20	24,263	60	2,015,917	16%	9,202,767	72%
30	16,351	60	1,200,954	9%	10,403,721	82%
40	12,000	60	810,391	6%	11,214,112	88%
50	8,217	60	605,273	5%	11,819,385	93%
60	5,680	60	411,795	3%	12,231,180	96%
70	3,473	60	268,597	2%	12,499,777	98%
80	1,863	59	157,160	1%	12,656,937	99%
90	736	59	73,122	1%	12,730,059	100%
100	24	59	21,970	0%	12,752,029	100%
Total		597	12,752,029	100%		

* The first datum in the ordered list.

Table 2. Distribution of estimated ***pink salmon escapement indices*** for anadromous stream drainages of the Tongass National Forest. Indices were ordered from maximum to minimum to define the percentile cutpoints and to determine the number of streams, indexed escapement, percent of indexed escapement, cumulative indexed escapement, and cumulative percent indexed escapement at 10-percentile intervals.

Percentile of Distribution	Percentile Cutpoint	No. streams in Interval	Escapement in Interval	Percent of Escapement	Cumulative Escapement	Cumulative Percent
0	242,000*	-	-		-	
10	7,400	280	6,862,602	51.4%	6,862,602	51.4%
20	4,400	280	1,476,683	11.1%	8,339,285	62.5%
30	2,200	280	868,356	6.5%	9,207,641	69.0%
40	2,200	280	616,000	4.6%	9,823,641	73.6%
50	2,200	280	616,000	4.6%	10,439,641	78.2%
60	2,200	280	616,000	4.6%	11,055,641	82.8%
70	2,200	280	616,000	4.6%	11,671,641	87.4%
80	2,200	280	616,000	4.6%	12,287,641	92.0%
90	2,200	280	616,000	4.6%	12,903,641	96.6%
100	257	279	449,369	3.4%	13,353,010	100.0%
	2,799	15,353,010	100.0%			

* The first datum in the ordered list.

Table 3. Nonlinear distribution of ***Sport Fishing Use*** (angler days of effort) in wild stock fisheries from 1977 through 1994 by drainages (expressed as VCUs) of the Tongass National Forest.

No. of VCUs	Percent of total VCUs	Angler effort (days fished)	Percent of effort
1	0.1%	111,937	22%
2	0.2%	154,638	30%
4	0.4%	206,878	41%
8	0.9%	262,762	52%
16	1.7%	333,099	66%
32	3.5%	406,184	80%
64	7.0%	469,809	93%
128	14.0%	500,962	99%
230	25.5%	507,597	100%
.	.	.	.
915	100.0%	507,597	100%

Table 4. Distribution of ***Sport Fishing Use*** (angler days of effort) in wild stock fisheries from 1977 through 1994 by drainages (expressed as VCUs) of the Tongass National Forest. Angler effort was ordered from maximum to minimum to define the percentile cutpoints and to determine the number of VCUs, angler effort, percent of angler effort, cumulative angler effort, and cumulative percent angler effort at 10-percentile intervals.

Percentile of Distribution	Percentile Cutpoint	No. of VCUs in Interval	Effort in Interval	Percent of Effort	Cumulative Effort	Cumulative Percent
0	111,937 *	-	-	-		
10	457	92	491,452	96.8%	491,452	97%
20	45	92	15,073	3.0%	506,524	100.0%
30	0	92	1,073	0.2%	507,597	100.0%
40	0	92	0	0.0%	507,597	100.0%
50	0	92	0	0.0%	507,597	100.0%
60	0	91	0	0.0%	507,597	100.0%
70	0	91	0	0.0%	507,597	100.0%
80	0	91	0	0.0%	507,597	100.0%
90	0	91	0	0.0%	507,597	100.0%
100	0	91	0	0.0%	507,597	100.0%
Total		915	507,597	100%		

* The first datum in the ordered list.

Table 5. Summary of fishery values in VCUs designated as ***Primary Producers, Secondary Producers, and Nonproducers.***

	Pink Salmon Escapement Percent	Coho Salmon Capability Percent	Sport Fishing Effort Percent	Tongass VCUs Percent
Primary Producers	60%	72%	98%	26%
Secondary Producers	40%	28%	2%	64%
Nonproducers	0%	0%	<0.1%	10%

Table 6. Pink salmon escapement, coho salmon capability, and sport fishing effort for VCUs of the Tongass National Forest rated as Primary Fish Producers (maximax score = 1).

VCU	Representative name	Representative Anadromous Stream Catalog No.	Estimated pink salmon peak escapement[1,2,3]	Percentile score	Coho salmon capability (ND = no data)	Percentile score	Estimated angler effort [1,3]	Percentile score	COMMENT (see key below)
120	BERNERS RV	115-20-10100	6600	5	90909	1	1355	1	
121			2200	7	ND		0	3	MS1 = SF VCU 120
130	LACE RV	115-20-10200	4400	6	93045	1	0	3	
140	ANTLER RV	115-20-10300	2200	7	96380	1	0	3	
150	ANTLER RV	115-20-10300	2200	7	52252	1	168	2	
230	COWEE CK	115-20-10620	4400	6	11942	5	0	3	MS1 = SF VCU 250
240	COWEE CK	115-20-10620	2200	7	9254	5	0	3	MS1 = SF VCU 250
250	COWEE CK	115-20-10620	6600	5	ND		3719	1	
260	HERBERT RV	111-50-10070-2004	4400	6	159022	1			RS = 2978
270	AUKE LK	111-50-10420-0010	68200	1	34042	2			RS = 12920; MS1 = SF VCU 280,290
280	MONTANA CK	111-50-10500-2003	0	8	78659	1	4943	1	
290	MENDENHALL RV	111-50-10500	15400	3	412	10	577	1	
430	TURNER LK	111-32-10800	7000	5	1262	9	7387	1	
460	TAKU RV	111-32-10320	19800	3	442652	1	3682	1	
590	SPEEL RV	111-33-10300	4400	6	36325	2	624	1	
610	WHITING RV	111-35-10050	4400	6	95010	1	182	2	
710	CHUCK RV	110-32-10090	143800	1	12000	4	106	2	
750	NANCY CK	110-33-10080	70372	1	ND		0	4	
760	CHUCK RV	110-32-10090	0	9	23271	3	0	4	MS1 = PK VCU 710
780	RUSTY RV	110-34-10030	40000	1	ND		0	4	
790	GLEN CK	110-34-10060	36230	2	4353	7	0	4	MS1 = PK VCU 780
840	SANBORN CR	110-34-10080	80300	1	12000	4	0	4	
900	FARRAGUT RV	110-14-10070	22010	2	181985	1	13	3	
1290	BEAR CK	111-50-10800	5400	6	4324	7	657	1	
1330	ADMIRALTY CK	111-41-10050	13200	3	7264	6	1830	1	
1480	KATHLEEN CK	112-17-10120	3300	7	ND		596	1	
1500	FLORENCE LK CK	112-17-10250	1311	8	ND		7111	1	
1560	MOLE HARBOR CK	111-13-10010	41100	1	ND		106	2	
1570	FRESH WATER LK CK	112-67-10250	10683	4	ND		12195	1	
1670	JIMS CK	112-67-10400	0	9	ND		1254	1	
1700	NE GAMBIER BAY	110-23-10030	82800	1	ND		0	5	
1800	ELIZA CK	109-30-10060	58300	1	ND		34	3	
1820	OLD MANS CK	110-22-10020	71214	1	ND		274	2	
1930	MUD BAY RV	114-23-10700	4000	7	26473	2	1433	1	
1931			4400	6	ND		0	5	MS1 = SF VCU 1930
2010	PORTAGE CK	114-33-10130	18600	3	33560	2	588	1	
2040	GAME CK	114-31-10130	16000	3	48792	2	2657	1	

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VCU	Representative name	Representative Anadromous Stream Catalog No.	Estimated pink salmon peak escapement[1,2,3]	Percentile score	Coho salmon capability (ND = no data)	Percentile score	Estimated angler effort [1,3]	Percentile score	COMMENT (see key below)
2050	GARTINA CK	114-31-10090	13200	3	12029	4	485	1	
2070	SPASSKI CK	114-27-10300	7400	5	18571	3	1416	1	
2170	KENNEL CK	112-50-10250	0	9	10602	5	1612	1	
2180	PAVLOF RV	112-50-10100	719	8	22756	3	2172	1	
2290	S. OF SEAL BAY	112-45-10360	40200	1	20490	3	0	5	
2351	KADASHAN CK	112-42-10250	42200	1	50317	1	1879	1	
2390	KOOK CK	112-12-10250	1282	8	15465	4	1601	1	
2430	SITKOH BAY	113-59-10025	45000	1	29562	2	0	5	
2440	SITKOH CK	113-59-10040	2200	7	9446	5	8341	1	
2450	PERIL STRAIT	113-51-10020	40400	1	8223	5	0	5	
2490	LISIANSKI RV	113-95-10060	31600	2	6515	6	141	2	MS1 = PK VCU 2620
2620	LISIANSKI RV	113-95-10060	48000	1	18093	3	0	5	
2630	GOULDING RV	113-81-10030	5000	6	ND		1187	1	
2650	GOULDING RV	113-81-10030	6600	5	ND		0	5	MS1 = SF VCU 2630
2700	LEO CK	113-61-10030	38238	1	ND		0	6	
2710	FISH CAMP CK	113-72-10020	55600	1	ND		0	6	
2740	FORD ARM LK CK	113-73-10030	32400	2	ND		2800	1	MS1 = PK VCU 2710
2750	FLAT COVE	113-73-10080	48800	1	ND		0	6	
2810	USHK BAY	113-56-10030	38200	1	23278	3	0	6	
2820	FICK COVE CK	113-57-10010	37200	1	20133	3	0	6	
2830	PATTERSON BAY	113-57-10050	57811	1	37494	2	0	6	
2840	GRANITE CK	113-58-10400	45000	1	24303	2	73	2	
2841			0	9	ND		0	6	MS1 = PK VCU 2620
2870	FISH BAY CK	113-65-10040	59800	1	16317	3	220	2	
2950	EVA CK (EVA LK CK)	113-52-10040	3535	7	11238	5	8960	1	
3080	S. KRUZOF	113-41-10050	48400	1	66814	1	0	6	
3110	INDIAN RV (SITKA)	113-41-10190	50500	1	24275	2			RS = 3332
3130	KATLIAN RV	113-44-10030	12200	4	16822	3	740	1	
3140	CLEAR RV	112-21-10050	55400	1	6233	6	0	6	
3210	KIZHUCHIA CK	113-41-10420	3200	7	8107	6	1829	1	
3230	SALMON CK (SITKA)	113-41-10320	6000	6	7365	6	4527	1	
3240	SILVER BAY	113-41-10315	11000	4	2193	8	496	1	
3260	BARANOF RV	112-11-10050	13200	3	452	10	4521	1	
3290	RED BLUFF BAY	109-20-10180	113800	1	ND		61	2	
3370	SASHIN CK	109-10-10090	64800	1	739	9			RS = 1795
3440	PLOTNIKOF CK	113-22-10280	8800	5	ND		4785	1	
3460	WHALE BAY	113-22-10030	44406	1	ND		365	2	
3470	BENZEMAN LK CK	113-34-10050	41800	1	ND		0	6	
3480	EKATERINA LK CK	113-32-10060	58000	1	ND		0	6	

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VCU	Representative name	Representative Anadromous Stream Catalog No.	Estimated pink salmon peak escapement[1,2,3]	Percentile score	Coho salmon capability (ND = no data)	Percentile score	Estimated angler effort [1,3]	Percentile score	COMMENT (see key below)
3660	SITUK RV	182-70-10100	13200	3	156820	1	111937	1	
3661			6600	5	ND		0	6	MS1 = SF VCU 3660
3670	LOST RV	182-80-10100	26400	2	113838	1	10522	1	
3690	ANKAU	183-50-10100	4400	6	ND		5138	1	
3700	ANKAU	183-50-10100	0	9	5073	7	11748	1	
3720	AHRNKLIN RV	182-70-12000	33000	2	586680	1	0	6	
3730	AHRNKLIN RV	182-70-12000	2200	7	52721	1	0	6	
3770	DANGEROUS R. TB	182-60-10050	0	9	56046	1	0	6	
3790	ITALIO RV, EAST FK	182-50-10100-2010	17600	3	277592	1	2442	1	
3810	AKWE RV	182-40-10100	0	9	ND		768	1	
3820	AKWE RV	182-40-10100	11000	4	235784	1	186	2	
3840	ITALIO RV	182-50-10100	2200	8	8160	6	0	6	MS1 = SF VCU 3790
3870	USTAY RV TB	182-40-10100-2018-3005	4400	6	85415	1	39	3	
3890	EMILE CK	182-30-10100-2011	13200	3	180719	1	21	3	
3950	ALSEK RV	182-30-10100	0	9	7613	6	5836	1	
3990	SAGINAW CK	109-44-10390	34900	2	84667	1	23	3	
4000	SECURITY BAY	109-45-10130-2008	32500	2	167075	1	50	2	
4020	ROWAN BAY	109-52-10080	43270	1	155532	1	200	2	
4030	KUTLAKU CK	109-52-10350	29350	2	86804	1	11	3	
4050	ALECKS CK	109-62-10130	68800	1	52390	1	13	3	
4070	WOLF CK	109-62-10290	40900	1	78412	1	0	7	
4090	BEAR HARBOR CK	105-10-10240	69300	1	12000	4	0	7	
4160	ALVIN BAY	105-31-10200	39607	1	10340	5	0	7	
4190	KISUTCH CK	105-32-10730	42784	1	22583	3	0	7	
4200	PORT CAMDEN CK	109-43-10060	20600	3	68770	1	228	2	
4210	KADAKE CK	109-42-10300	28000	2	117775	1	1900	1	
4230	GUNNUK CK	109-42-10040	10300	4	72497	1			EN = 175
4240	BIG CK (KUP. IS)	110-16-10110	22400	2	103302	1	0	7	MS1 = SF VCU 4411
4250	HAMILTON RV	109-42-10100	21000	3	58793	1	2327	1	
4260	HAMILTON RV	109-42-10100	0	9	147128	1	2301	1	
4270	BIG JOHN CK	105-32-10160	24200	2	102454	1	0	7	
4280	TUNEHEAN CK	105-32-10040	50149	1	137110	1			EN = 251
4290	TUNEHEAN CK	105-32-10040	0	10	106561	1	103	2	
4320	ZIM CK	106-41-10570	28850	2	63045	1	51	2	
4340	KAH SHEETS CK	106-42-10100	14300	3	50042	1	2074	1	
4350	CASTLE RV	106-43-10210	33000	2	56551	1	5159	1	
4360	CASTLE RV	106-43-10210	17600	3	50242	1	0	7	MS1 = SF VCU 4350
4410			4400	6	ND		0	7	MS1 = SF VCU 4411

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VCU	Representative name	Representative Anadromous Stream Catalog No.	Estimated pink salmon peak escapement[1,2,3]	Percentile score	Coho salmon capability (ND = no data)	Percentile score	Estimated angler effort [1,3]	Percentile score	COMMENT (see key below)
4411		106-43-10570	24200	2	36975	2	4493	1	
4450	PETERSBURG CK	106-44-10600	33200	2	61853	1	25374	1	
4470	FALLS CK	106-44-10060	92400	1	69574	1	946	1	
4480	HARVEY LK	106-43-10050-0010	17600	3	12383	4	541	1	
4500	BIG CK (BEAR CK)	108-50-10030	5441	6	79357	1	862	1	
4510	BLIND SLOUTH TB	106-44-10315	68200	1	12994	4			EN = 85606
4520	OHMER CK	108-40-10500	30800	2	53790	1			RS = 1914
4630	KUNK CK	108-10-10150	3869	7	1152	9	459	1	
4680	NAVY CK	106-22-10160	42400	1	2400	8	0	7	
4720	HATCHERY LAKE CK	106-21-10030	31100	2	14534	4	1395	1	
4730	KUDAYS CK	107-10-10700	38500	1	71795	1	0	7	
4790	THOMS CK	107-30-10300	10600	4	25134	2	2926	1	
4890	MUDDY RV	108-60-10030	30800	2	81153	1	141	2	
4920	STIKINE-DRY IS.	108-40-10075	22150	2	189953	1	0	7	
4930	ANDREW CK	108-40-10150-2008	29100	2	185718	1	10698	1	
4950	KETILI RV	108-40-10150-2033	19800	3	388498	1	279	2	
4960	STIKINE DELTA SL	108-40-10110	17600	3	174976	1	0	7	
4970	GOVERNMENT CK	108-40-10150-2004	2200	8	97387	1	0	7	
4980			0	10	30283	2	0	7	MS1 = SF VCU 4930
5020	MILL CK	107-40-10070	11000	4	12000	4	1443	1	
5090	MARTEN CK (WGL)	107-40-10380	10600	4	23173	3	804	1	
5110	HARDING RV	107-40-10490	4000	7	12000	4	593	1	
5140	BRADFIELD RV	107-40-10530	8800	5	64152	1	0	7	
5190	EAGLE RV (BRAD.CAN)	107-40-10550	36200	2	14952	4	1759	1	
5220	ANAN CK	107-20-10010	134000	1	12000	4	10590	1	
5320	RED BAY CK	106-41-10300	35200	2	ND		1380	1	
5330	RED BAY CK	106-41-10300	6600	5	19245	3	0	8	MS1 = SF VCU 5320
5341	SALMON BAY	106-41-10180	4400	7	20756	3	1403	1	
5380	BIG CK (108 CK, POW)	106-30-10800	42701	1	12000	5	1006	1	
5460	CHARLEY CK	103-90-10580	95570	1	10368	5	0	8	
5480	TOKEEM CK	103-90-10720	59685	1	3187	8	0	8	
5520	GRASSY LAKE	106-30-10250	15400	3	7576	6	112	2	MS1 = SF VCU 5730
5541	SARKAR RV	103-90-10140	15400	3	51405	1	3914	1	
5542			8800	5	ND		0	8	MS1 = SF VCU 5541
5680	W. PORTILLO CHANNEL	103-50-10920	37400	1	9565	5	0	8	
5690	S. PORT REAL MARINA	103-50-10750	55000	1	12568	4	0	8	
5700	PORT ALICE	103-90-10480	2200	8	3195	8	683	1	
5710	NAUKATI CK	103-90-10260	47745	1	52466	1	736	1	
5730	SWEETWATER LK	106-30-10670-2004-0020	3080	7	68253	1	42701	1	

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VCU	Representative name	Representative Anadromous Stream Catalog No.	Estimated pink salmon peak escapement[1,2,3]	Percentile score	Coho salmon capability (ND = no data)	Percentile score	Estimated angler effort [1,3]	Percentile score	COMMENT (see key below)
5750	THORNE RV	102-70-10580	60000	1	38135	2	12425	1	
5760	THORNE RV	102-70-10580	0	10	36096	2	0	8	MS1 = SF,PK, VCU 5750
5770	LOGJAM CK	106-30-10670-2004-3030	0	10	4541	7	1467	1	
5780	THORNE RV,NORTH FK	102-70-10580-2026	0	10	46404	2	0	8	MS1 = SF,PK, VCU 5750
5800	THORNE RV,NORTH FK	102-70-10580-2026	0	10	30620	2	0	8	MS1 = SF,PK, VCU 5750
5810	LUCK CK(EAGLE POW)	106-10-10300	31000	2	12272	4	512	1	
5860	THORNE RV	102-70-10580	24200	2	4263	7	33	3	MS1 = SF,PK, VCU 5750
5871	STANEY CK	103-90-10310	101624	1	10603	5	6728	1	
5880	STANEY CK	103-90-10310	0	10	130494	1	0	8	MS1 = SF,PK, VCU 5871
5890	SHAHEEN CK	103-90-10420	62200	1	31396	2	1617	1	
5900	STANEY CK	103-90-10310	0	10	18029	3	0	8	MS1 = SF,PK, VCU 5871
5920	SALT LAKE BAY	103-80-10440	88881	1	11548	5	0	8	
5930	ELEVEN MILE CK	103-70-10110	37144	1	22908	3	0	8	
5940	N. BIG SALT LAKE	103-60-10270	76945	1	26221	2	80	2	
5950	STEELHEAD CK	103-60-10290	91200	1	27715	2	3264	1	
5960	THORNE RV	102-70-10580	0	10	33935	2	0	8	MS1 = SF,PK, VCU 5750
5971	THORNE RV	102-70-10580	0	10	40969	2	150	2	MS1 = SF,PK, VCU 5750
5972			0	10	ND		0	8	MS1 = SF,PK, VCU 5750
6050	KARTA RV TB LK	102-60-10870-2012-0010	0	10	7426	6	19516	1	
6060			0	10	26413	2	0	8	MS1 = SF VCU 6050; PK VCU 6070
6070	KARTA RV	102-60-10870	43210	1	22948	3	0	8	MS1 = SF VCU 6050
6080	MCGILVERY CK	102-60-10870-2021	0	10	5494	7	0	8	MS1 = SF VCU 6050; PK VCU 6070
6090			32611	2	7341	6	0	8	MS1 = SF VCU 5950
6091	KLAWOCK		129000	1	ND		0	8	
6100	MAYBESO CK	102-60-10840	30600	2	7966	6	804	1	
6210	TWELVEMILE CK	102-60-10720	56200	1	7789	6	715	1	
6220	HARRIS	102-60-10820	101600	1	36341	2	5544	1	
6230	ST. NICHOLS CK	103-60-10590	44600	1	12977	4			EN = 40252
6231			0	10	ND		0	8	MS1 = PK VCU 6230
6232			0	10	ND		0	8	MS1 = PK VCU 6230
6240	TROCADERO BAY	103-60-10750	126400	1	18149	3	141	2	
6250	S. PORT ST. NICHOLAS	103-60-10620	98445	1	22958	3	0	8	
6300	PORT ESTRELLA	103-50-10210	51159	1	6445	6	127	2	
6310	NO. TLEVAK ST.	103-40-10005	40600	1	15249	4	0	8	
6320	SODA CK	103-40-10130	139174	1	49741	1	0	6	
6390	BOBS BAY	104-30-10350	39575	1	11147	5	0	9	
6710	W. DUNBAR INLET	103-40-10480	26727	2	19544	3	0	9	MS1 = PK VCU 6320

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VCU	Representative name	Representative Anadromous Stream Catalog No.	Estimated pink salmon peak escapement[1,2,3]	Percentile score	Coho salmon capability (ND = no data)	Percentile score	Estimated angler effort [1,3]	Percentile score	COMMENT (see key below)
6720	EEK LK (MAIN)	103-25-10090-0020	61400	1	6994	6	1238	1	
6740	PORTAGE CK	103-25-10300	159400	1	17019	3	86	2	
6750	SUNNY CK	102-40-10870	49200	1	3691	7	0	9	
6790	E. CHOLMONDELEY	102-40-10050	66415	1	24704	2	0	9	
6820	MILLER CK (POW IS)	102-30-10890	40800	1	10302	5	159	2	
6840	KEGAN CK	102-30-10670	30898	2	11285	5	3502	1	
6860	NUTKWA LAGOON	103-21-10080	155000	1	10344	5	0	9	
6870	KLAKAS INLET	103-15-10230	108033	1	6692	6	116	2	
6920	JOHNSON COVE CK TB	102-30-10170-2004	53555	1	41809	2	0	9	
6960	HUNTER RV	103-11-10190	51000	1	17053	3	25	3	
6980	HUNTER RV	103-11-10190	0	10	16992	3	0	9	MS1 = PK VCU 6960
6981			0	10	ND		0	9	MS1 = PK VCU 6960
7090	BLACK BEAR CK	107-10-10300	61400	1	12000	5	0	9	
7220	WASTA CK	101-80-10400	52568	1	39631	2	196	2	
7240	WOLVERINE CK	101-80-10680	15400	3	19575	3	5204	1	
7270	SHORT CK	101-80-10840	9000	4	9312	5	1140	1	
7280	SHORT CK	101-80-10840	0	10	1865	8	239	2	MS1 = SF VCU 7270
7300	HERMAN CK	101-75-10050	50000	1	ND		0	9	
7330	KLU CK	101-80-10200	11000	4	3738	7	1385	1	
7380	MARGRET CK	101-90-10390	11600	4	18823	3	626	1	
7390	TRAITORS CK	101-90-10290	99400	1	5287	7	84	2	
7420	NAHA RV	101-90-10500	62000	1	15619	4	26866	1	
7440	CARROLL RV	101-45-10780	87500	1	4171	7	0	9	
7480	WHITE RV	101-45-10240	82800	1	26830	2	2691	1	
7530	SHOAL COVE CK	101-45-10880	40400	1	50782	1	143	2	
7540	FISH CK (KTN)	101-43-10330	3500	7	336	10	2859	1	
7542			0	10	ND		0	9	MS1 = SF VCU 7540
7670	W. RYUS BAY	101-23-10740	39600	1	90955	1	0	10	
7730	ELLA CK	101-51-10900	4400	7	ND		1721	1	
7750	MANZANITA CK	101-71-10430	6600	6	21125	3	1496	1	
7820	GRANT CK	101-75-10100	44286	1	ND		0	10	
7830	GRANT CK	101-75-10100	0	10	ND		0	10	MS1 = PK VCU 7820
7840	EULACHON RV	101-75-10150	9000	4	6695	6	0	10	MS1 = SF VCU 7860
7860	UNUK RV	101-75-10300	13200	4	194460	1	3811	1	
7880	UNUK RV	101-75-10300	6600	6	ND		0	10	MS1 = SF VCU 7860
7990	WALKER CK	101-71-10260	47501	1	ND		388	2	
8020	GOAT CK, BIG	101-60-10300	65200	1	ND		184	2	
8060	FISH CK	101-15-10500-2006	25800	2	68278	1	4307	1	
8159			65800	1	ND		0	10	

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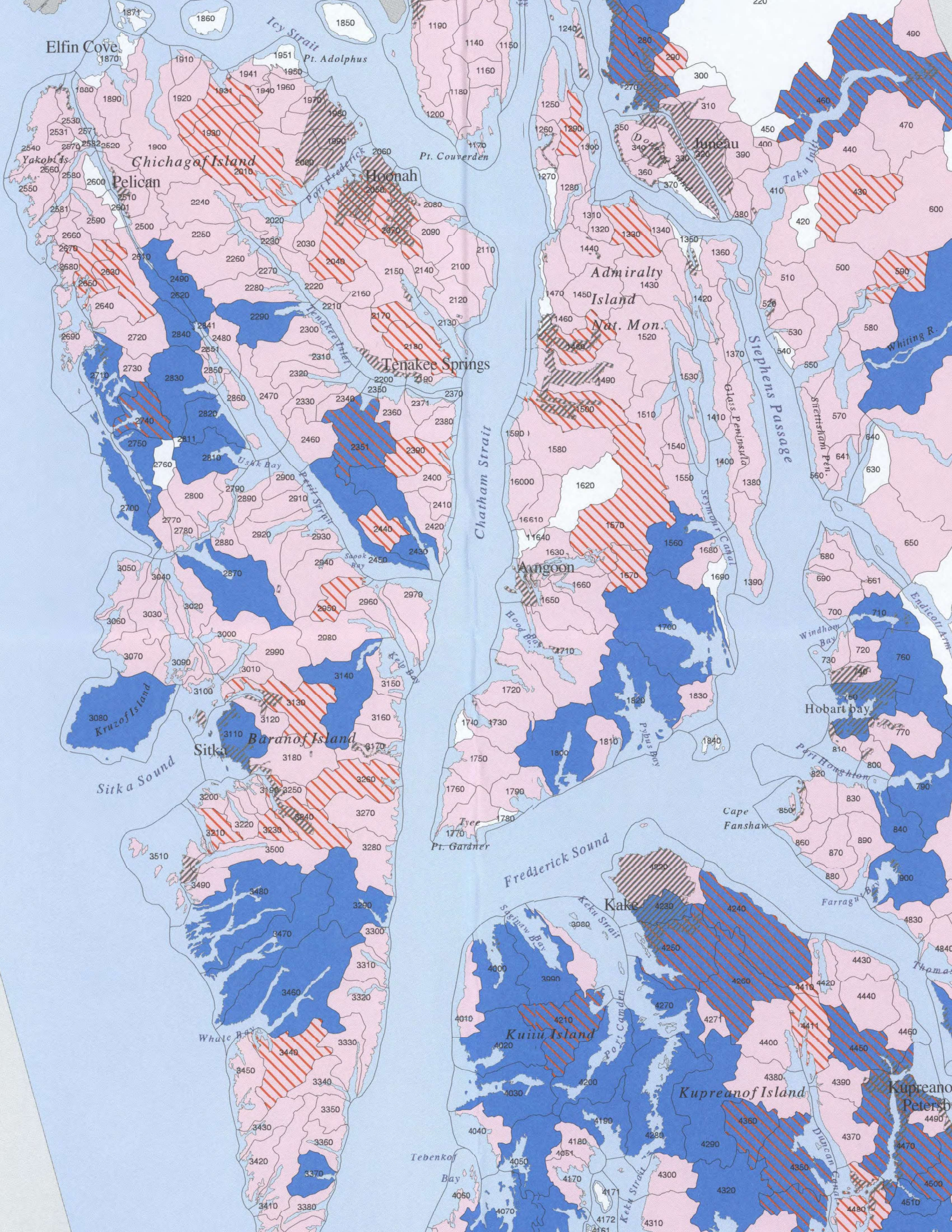
VCU	Representative name	Representative Anadromous Stream Catalog No.	Estimated pink salmon peak escapement[1,2,3]	Percentile score	Coho salmon capability (ND = no data)	Percentile score	Estimated angler effort [1,3]	Percentile score	COMMENT (see key below)
8170	WILSON RV	101-55-10200	242000	1	ND		1925	1	
8179			0	10	ND		0	10	MS1 = SF,PK, VCU 8170
8189	WILSON RV	101-55-10200	6600	6	ND		0	10	MS1 = SF,PK, VCU 8170
8210	WINSTANLEY CK	101-51-10100	2200	8	ND		1770	1	
8260		101-55-10600	2200	8	ND		651	1	
8269			14400	3	ND		0	10	MS1 = SF VCU 8260
8270	BADGER LK	101-55-10730-0020	4400	7	ND		0	10	MS1 = SF VCU 8260
8340	HUMPBACK CK	101-30-10830	162400	1	ND		2851	1	
8380	MARTEN RV	101-30-10600	90000	1	42798	2	0	10	
8390			0	10	2010	8	0	10	MS1 = PK VCU 8380
8419	KETA RV	101-30-10300	87050	1	ND		26	3	
8429	KETA RV	101-30-10300	0	10	ND		0	10	MS1 = PK VCU 8419
8430	TOMBSTONE CK	101-15-10190	62000	1	24214	3	0	10	
8590	N. VERY INLET	101-23-10190	48408	1	ND		0	10	

KEY: MS1 = SF VCU = #: Maximax score of 1 assigned due to important sport fishing stream in common with VCU = #.
MS1 = PK VCU = #: Maximax score of 1 assigned due to important pink salmon stream in common with VCU = #.
RS = #: Roadside fishery. Angler effort = # assigned to this VCU was removed; see text.
EN = #: Enhanced fishery. Angler effort = # assigned to this VCU removed; see text.

[1] Angler effort and pink salmon escapement are estimated by stream. When streams cross VCU boundaries, the estimates are assigned to one VCU; thus, these estimates are not accurate at the VCU level, and 0 values assigned to other VCUs do not imply absence of sport fishing or pink salmon.

[2] All VCUs in this list contain anadromous streams, and thus, presumably, pink salmon.

[3] The ordering of VCUs having similar (tie) or 0 fishery values is arbitrary.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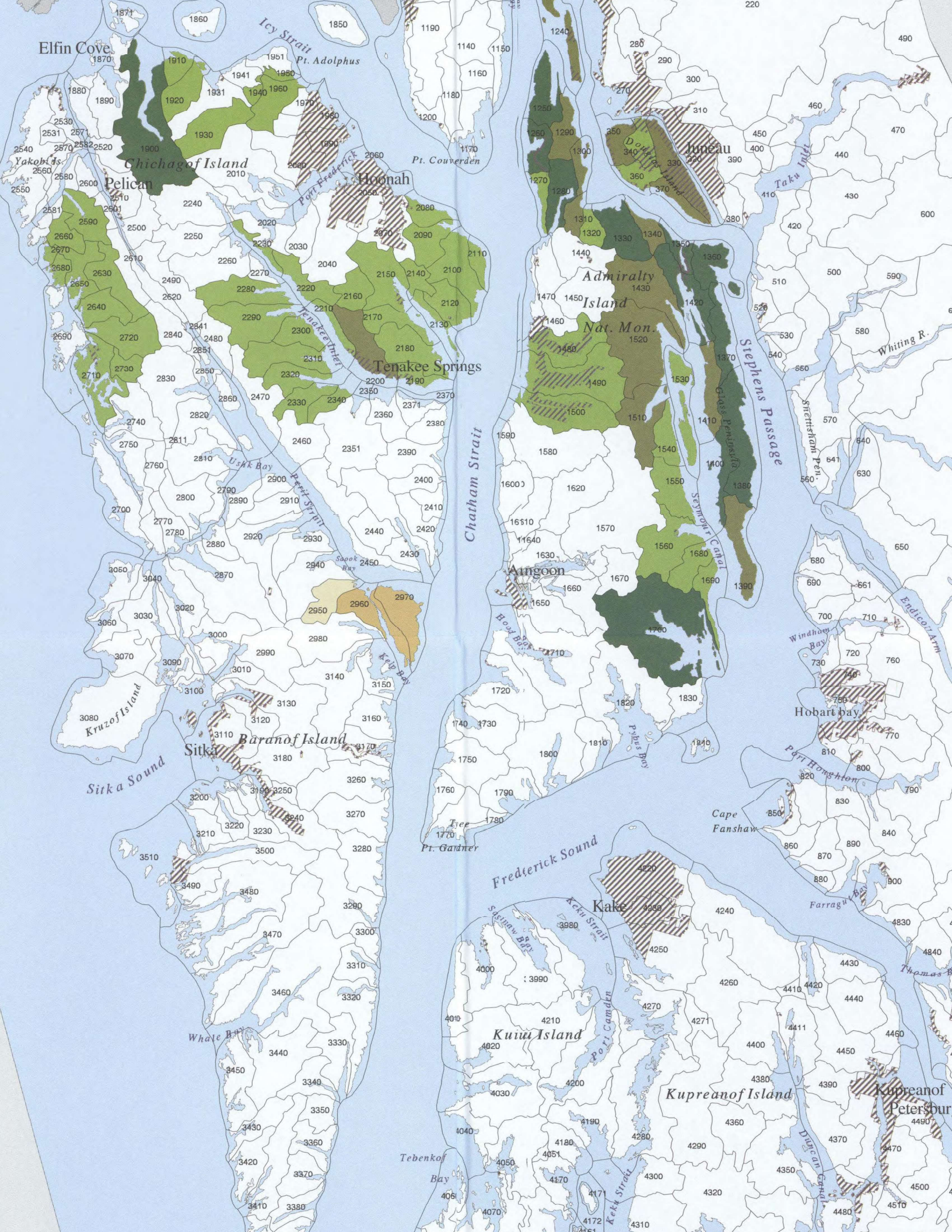
Icy Strait
Pt. Adolphus
Yakobi Is.
Chichagof Island
Pelican
Port Frederick
Hoonah
Pt. Couverden
Tenakee Inlet
Tenakee Springs
Chatham Strait
Admiralty Island Nat. Mon.
Juneau
Taku Inlet
Stephens Passage
Whiting R.
Glass Peninsula
Seymour Canal
Snettisham Pen.
Angoon
Hood Bay
Pybus Bay
Windham Bay
Hobart bay
Port Houghton
Cape Fanshaw
Farragut Bay
Kelp Bay
Kruzof Island
Sitka
Baranof Island
Sitka Sound
Fredierick Sound
Kake
Keku Strait
Saginaw Bay
Port Camden
Kuiiu Island
Kupreanof Island
Duncan Canal
Tebenkof Bay
Whale Bay
Tyee
Pt. Gardner
Uskk Bay
Pavil Strait
Snook Bay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Pt. Adolphus
Yakobi Is.
Chichagof Island
Pelican
Port Frederick
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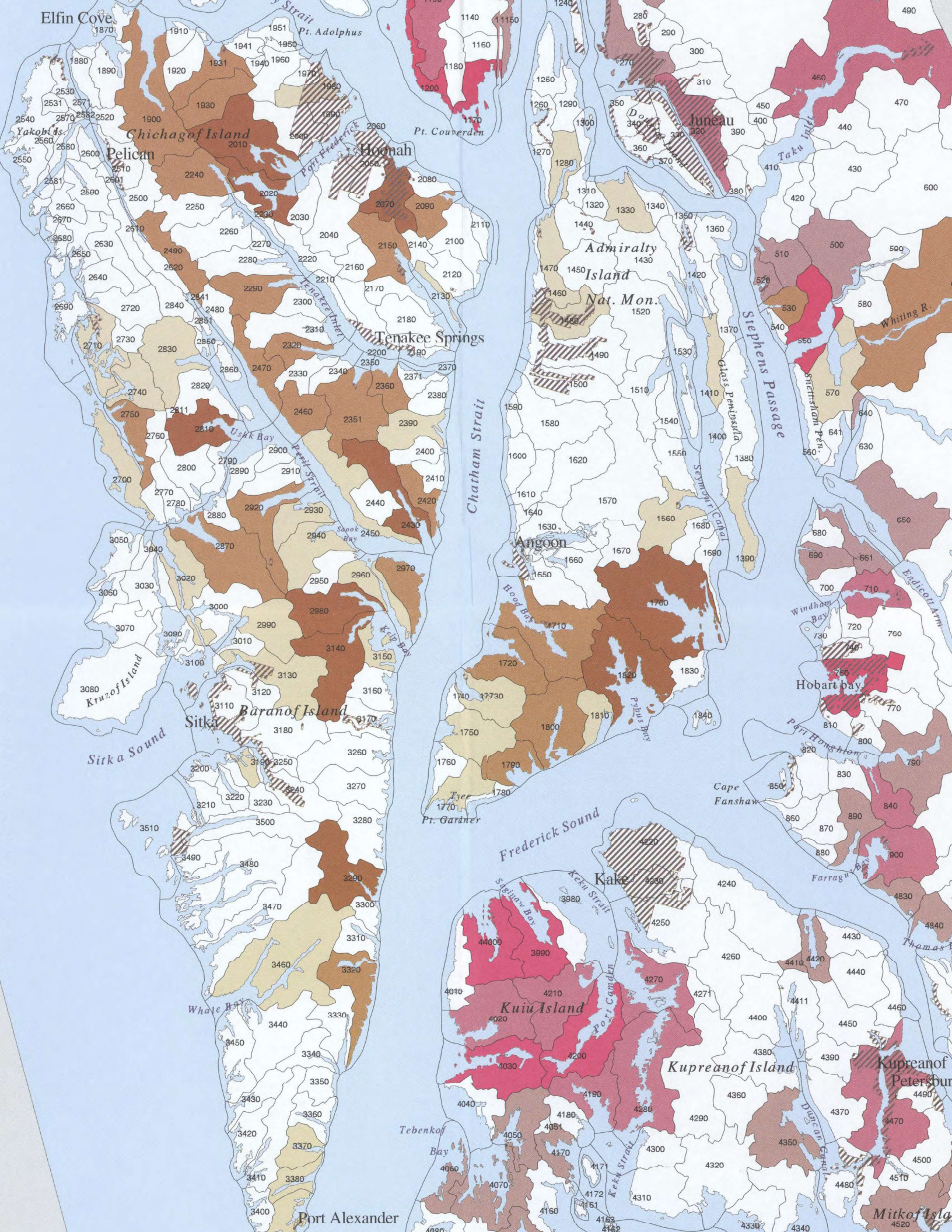
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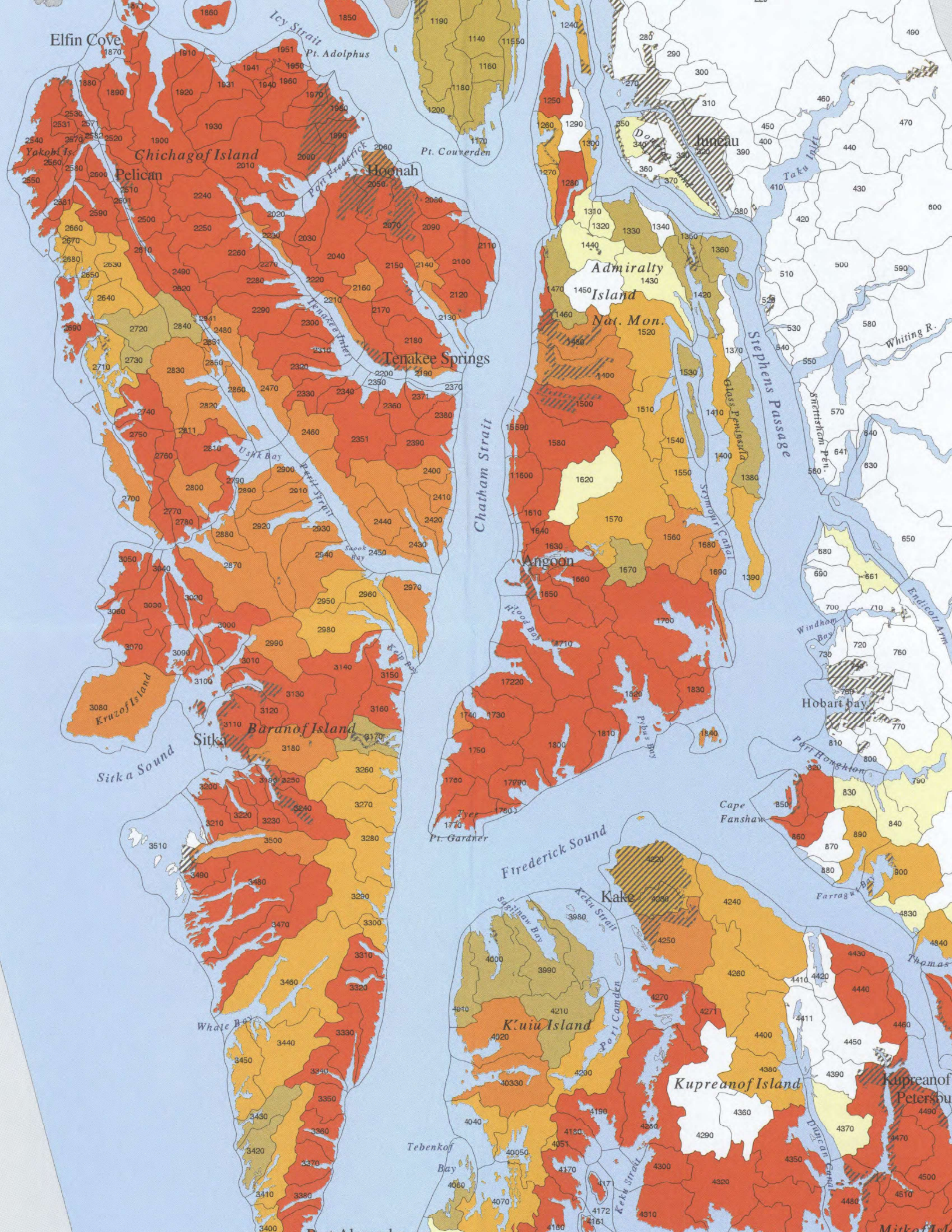
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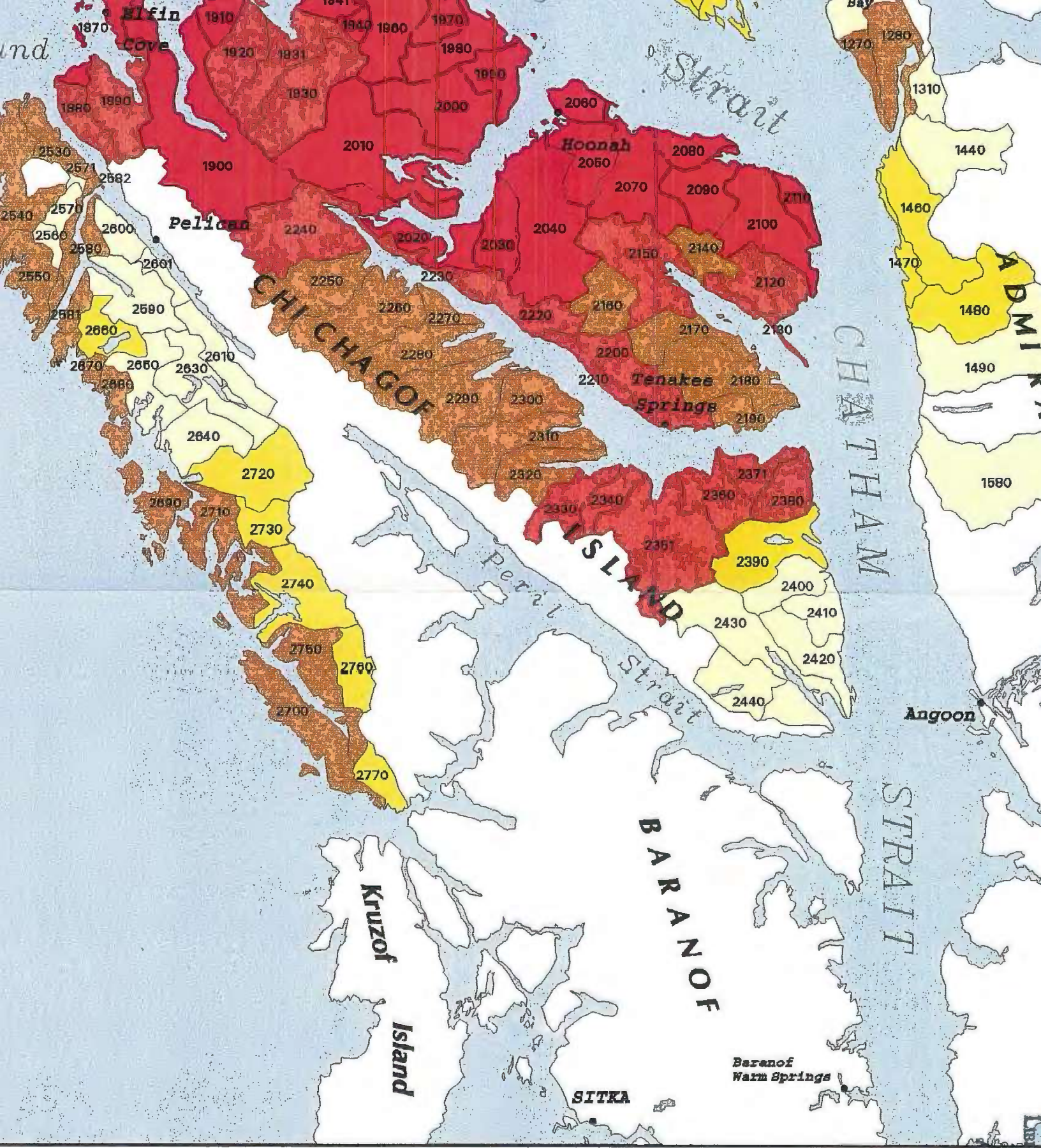

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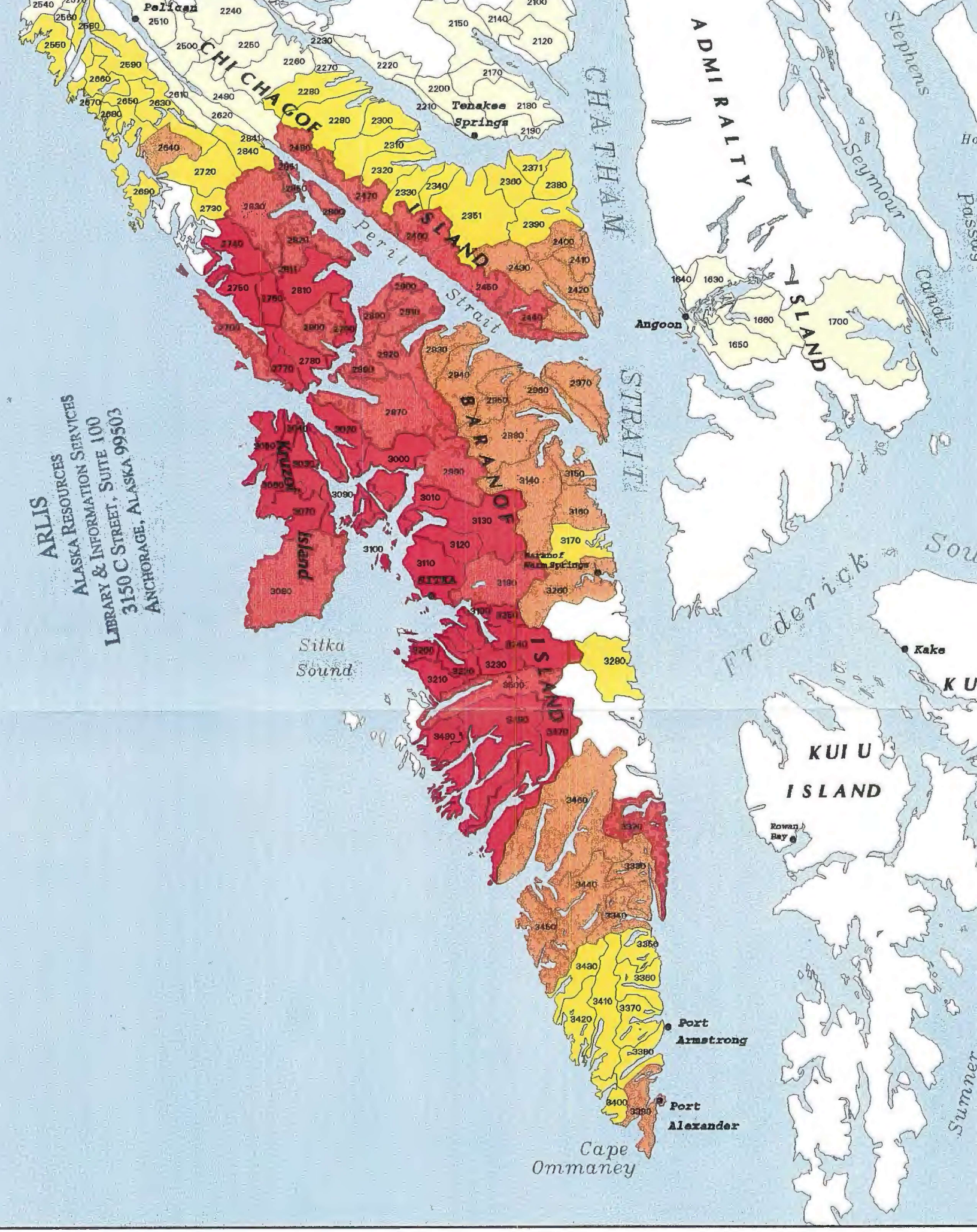

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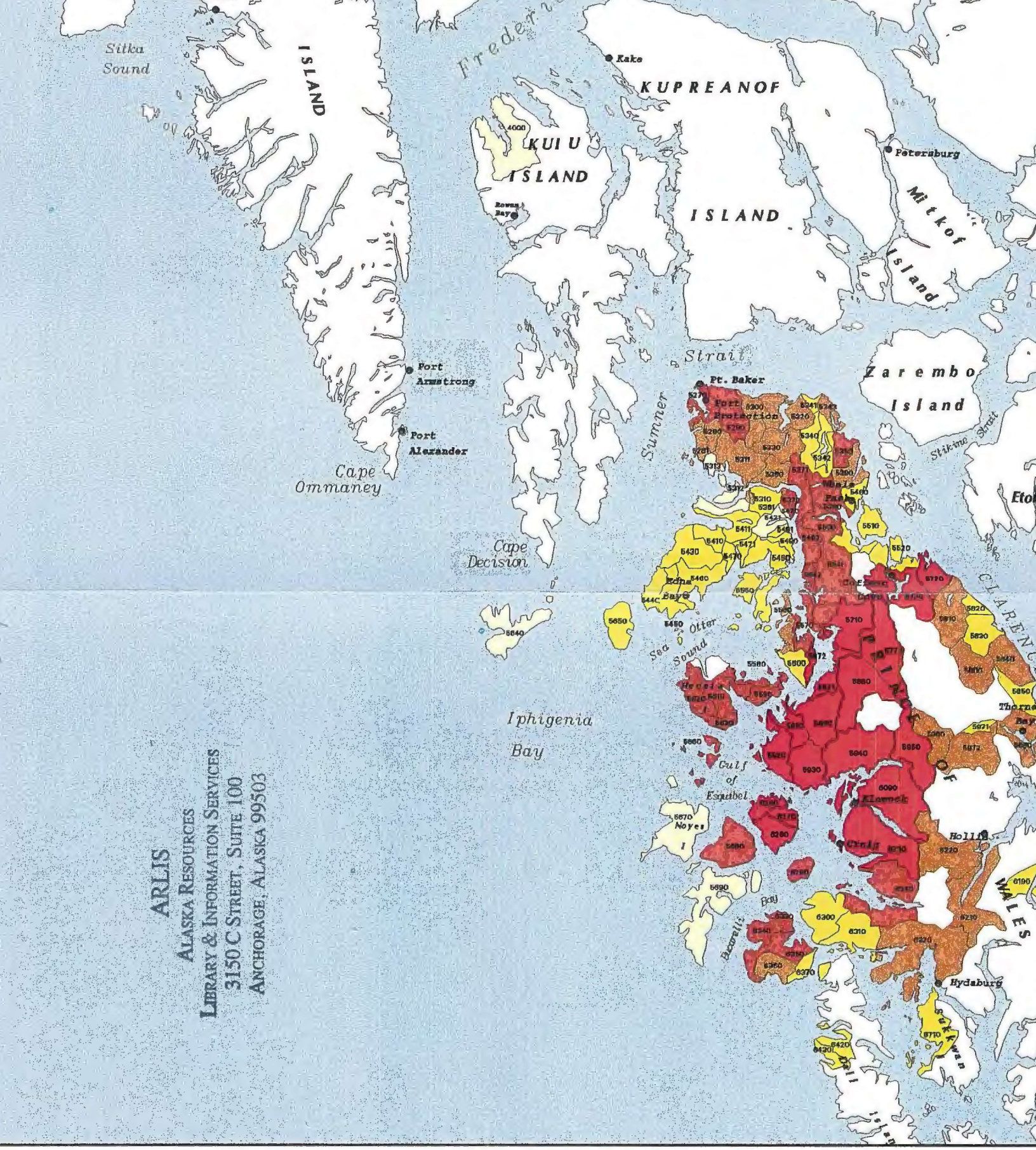

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VCUs Ranked By Subsistence Use Sensitivity To Disturbance

- 5 = High Rank
- 4

2019 Alaska Commercial Salmon Harvests — Ex-vessel Values

Source: ADF&G

PRELIMINARY DATA: 2019 Salmon Season

Updated 10/16/2019. Subject to change

Preliminary figures may not total exactly due to rounding.
Estimates based on fish tickets and reports from Area Managers.
DATA NOT FOR LEGAL INTERPRETATIONS.

Area	Species	Average Weight (in pounds)	Average Price per Pound	Number of Fish	Pounds of Fish	Estimated Exvessel Value
SOUTHEAST (including Yakutat)	CHINOOK	11.88	$5.07	177,246	2,106,034	$10,687,304
Updated 10/11/2019	SOCKEYE	5.67	$2.13	878,252	4,980,383	$10,623,867
	COHO	6.80	$1.71	1,652,014	11,232,259	$19,257,575
	PINK	3.68	$0.30	21,106,149	77,769,262	$23,694,520
	CHUM	7.99	$0.56	8,416,594	67,261,401	$37,582,818
	totals			32,230,255	163,349,339	$101,846,084
PRINCE WILLIAM SOUND (including hatchery fish)	CHINOOK	18.42	$8.59	18,399	338,836	$2,911,944
Updated 10/3/2019	SOCKEYE	5.35	$2.49	2,553,041	13,656,160	$33,989,146
	COHO	8.01	$1.19	504,159	4,038,880	$4,807,891
	PINK	3.40	$0.34	49,340,614	167,752,712	$57,746,792
	CHUM	6.04	$0.48	5,334,239	32,230,460	$15,449,375
	totals			57,750,452	218,017,048	$114,905,148
COOK INLET	CHINOOK	14.95	$3.54	3,393	50,736	$179,712
Updated 10/8/2019	SOCKEYE	5.34	$1.85	1,975,333	10,556,250	$19,556,087
	COHO	5.75	$0.76	158,584	911,207	$693,427
	PINK	3.11	$0.31	2,048,406	6,375,091	$1,953,714
	CHUM	6.91	$0.41	178,621	1,234,641	$506,282
*see supplemental tables	**totals**			4,364,337	19,127,925	$22,889,222
BRISTOL BAY	CHINOOK	11.40	$0.50	30,579	347,449	$173,725
Updated 9/24/2019	SOCKEYE	5.20	$1.35	42,967,737	225,108,917	$303,897,039
	COHO	6.00	$0.55	75,517	455,885	$250,737
	PINK	3.80	$0.05	5,680	21,588	$1,079
	CHUM	6.50	$0.25	1,379,169	9,002,884	$2,250,721
	totals			44,458,682	234,936,723	$306,573,301
KODIAK	CHINOOK	8.92	$0.60	7,723	68,889	$41,333
Updated 10/2/2019	SOCKEYE	4.96	$1.50	2,179,133	10,806,398	$16,209,597
	COHO	7.17	$0.52	396,326	2,842,352	$1,478,023
	PINK	3.17	$0.28	33,119,381	104,896,254	$29,370,951
	CHUM	7.04	$0.26	548,943	3,865,278	$1,004,972
	totals			35,702,563	118,613,893	$47,099,905
CHIGNIK	CHINOOK	9.13	$0.80	4,286	39,024	$31,219
Updated 10/3/2019	SOCKEYE	5.66	$1.40	638,772	3,614,393	$5,060,150
	COHO	6.37	$0.32	248,281	1,581,396	$506,047
	PINK	3.09	$0.27	2,452,838	7,583,891	$2,047,651
	CHUM	6.58	$0.35	157,517	1,037,197	$363,019
	totals			3,501,694	13,855,901	$8,008,086
ALASKA PENINSULA	CHINOOK	8.44	$0.58	26,006	219,493	$126,655
AND	SOCKEYE	5.17	$1.53	4,002,326	20,709,338	$31,751,763
ALEUTIAN ISLANDS	COHO	6.00	$0.25	560,495	3,362,106	$848,143
Updated 10/16/2019	PINK	2.77	$0.24	20,903,380	57,977,153	$13,777,438
	CHUM	5.89	$0.32	1,386,998	8,168,441	$2,630,082
*see supplemental tables	**totals**			26,879,205	90,436,531	$49,134,081
KUSKOKWIM	CHINOOK					
Updated 10/2/2019	SOCKEYE					
	COHO		No Buyer in the Kuskokwim Area			
	PINK					
	CHUM					
	totals					

YUKON	CHINOOK	12.17	$6.65	3,105	37,784	$251,295
Updated 10/1/2019	SOCKEYE					
	COHO	5.96	$1.00	57,389	342,297	$342,249
	PINK	3.09	$0.10	10,962	33,835	$3,384
	CHUM	6.56	$0.60	490,188	3,215,358	$1,923,447
*see supplemental tables	**totals**			561,644	3,629,274	$2,520,374
NORTON SOUND	CHINOOK	10.50	$3.00	1,371	14,792	$44,376
Updated 10/4/2019	SOCKEYE	6.0	$1.39	6,969	41,859	$58,299
	COHO	6.4	$1.57	139,820	899,549	$1,409,520
	PINK	3.4	$0.13	75,929	261,240	$33,125
	CHUM	6.7	$0.50	157,035	1,057,675	$528,266
	totals			381,124	2,275,115	$2,073,586
KOTZEBUE	CHINOOK	12.30	$0.80	16	197	$158
Updated 10/4/2019	SOCKEYE	4.90	$1.50	29	143	$215
	COHO					
	PINK					
	CHUM	8.1	$0.38	493,295	4,004,727	$1,538,603
	totals			493,340	4,005,067	$1,538,975
ALASKA TOTALS	CHINOOK	11.84	$4.48	272,124	3,223,234	$14,447,722
Updated 10/16/2019	SOCKEYE	5.24	$1.45	55,201,592	289,473,840	$421,146,163
	COHO	6.77	$1.15	3,792,585	25,665,932	$29,593,611
	PINK	3.27	$0.30	129,063,339	422,671,026	$128,628,652
	CHUM	7.07	$0.49	18,542,599	131,078,062	$63,777,586
	totals			206,872,239	872,112,094	$657,593,734

*Supplemental Tables: 2019 Salmon Season

		Average Weight (in pounds)	Average Price per Pound	Number of Fish	Pounds of Fish	Estimated Exvessel Value
LOWER COOK INLET	CHINOOK	12.86	$4.07	736	8,854	$36,057
updated 10/8/2019	SOCKEYE	4.47	$2.20	311,696	1,394,639	$3,065,187
	COHO	7.40	$0.95	12,712	93,086	$88,017
	PINK	3.11	$0.31	1,980,124	6,165,154	$1,909,627
	CHUM	7.25	$0.49	55,508	402,516	$198,396
	totals			2,360,776	8,064,249	$5,297,284
UPPER COOK INLET	CHINOOK	15.76	$3.43	2,657	41,882	$143,655
updated 10/4/2019	SOCKEYE	5.51	$1.80	1,663,637	9,161,611	$16,490,900
	COHO	5.61	$0.74	145,872	818,121	$605,410
	PINK	3.07	$0.21	68,282	209,937	$44,087
	CHUM	6.76	$0.37	123,113	832,125	$307,886
	totals			2,003,561	11,063,676	$17,591,938
NORTHERN DISTRICT OF ALASKA PENINSULA	CHINOOK	14.83	$1.29	3,566	52,879	$67,965
Updated 10/13/2019	SOCKEYE	5.27	$1.56	2,371,500	12,504,661	$19,444,748
	COHO	6.33	$0.32	37,583	238,084	$76,901
	PINK	3.25	$0.26	113,278	368,576	$96,604
	CHUM	5.94	$0.41	49,246	292,491	$119,336
	totals			2,575,173	13,456,691	$19,805,554
SOUTH ALASKA PENINSULA, NORTHWESTERN DISTRICT, & ALEUTIAN ISLANDS	CHINOOK	7.42	$0.35	22,440	166,614	$58,690
	SOCKEYE	5.03	$1.50	1,630,826	8,204,677	$12,307,015
Updated 10/15/2019	COHO	5.97	$0.25	522,912	3,124,022	$771,242
	PINK	2.77	$0.24	20,790,102	57,608,577	$13,680,834
	CHUM	5.89	$0.32	1,337,752	7,875,950	$2,510,746
	totals			24,304,032	76,979,840	$29,328,526
YUKON SUMMER SEASON	CHINOOK	12.35	$6.59	2,582	31,896	$210,079
Updated 10/1/2019	SOCKEYE					
	COHO					
	PINK	3.09	$0.10	10,962	33,835	$3,384
	CHUM	6.07	$0.60	227,089	1,377,335	$823,473
	totals			240,633	1,443,066	$1,036,936
YUKON FALL SEASON	CHINOOK	11.26	$7.00	523	5,888	$41,216
Updated 10/1/2019	SOCKEYE					
	COHO	5.96	$1.00	57,389	342,297	$342,249
	PINK					
	CHUM	6.99	$0.60	263,099	1,838,023	$1,099,974
	totals			321,011	2,186,208	$1,483,438

PETITION TO LIST YELLOW-CEDAR, *CALLITROPSIS NOOTKATENSIS*, UNDER THE ENDANGERED SPECIES ACT

Photo Credit: Walter Siegmund

CENTER FOR BIOLOGICAL DIVERSITY, PETITIONER
THE BOAT COMPANY, PETITIONER
GREATER SOUTHEAST ALASKA CONSERVTION COMMUNITY, PETITIONER
GREENPEACE, PETITIONER

JUNE 24, 2014

NOTICE OF PETITION

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Pursuant to Section 4(b) of the Endangered Species Act (ESA), 16 U.S.C. §1533(b), Section 553(3) of the Administrative Procedures Act, 5 U.S.C. § 553(e), and 50 C.F.R. § 424.14(a), the Center for Biological Diversity, the Boat Company, Greater Southeast Alaska Conservation Community (GSACC), and Greenpeace (collectively "Petitioners") hereby petition the Secretary of the Interior, through the United States Fish and Wildlife Service ("USFWS"), to list the Yellow-cedar tree, *Callitropsis nootkatensis*, as a threatened or endangered species.

The Center for Biological Diversity works through science, law, and policy to secure a future for all species, great or small, hovering on the brink of extinction. The Center has 775,000 members throughout Alaska and the United States. The Center and its members are concerned with the conservation of imperiled species, including the yellow-cedar tree, and the effective implementation of the ESA.

The Boat Company is a nonprofit educational and charitable organization with a 35-year history of offering wilderness cruises in southeast Alaska, helping to build a strong constituency for wildlife and wildlands conservation through personal experience.

GSACC's mission is to defend and promote the biological integrity of Southeast Alaska's terrestrial, freshwater, and marine ecosystems for the benefit of current and future generations.

Greenpeace is the leading independent campaigning organization that uses peaceful protest and creative communication to expose global environmental problems and to promote solutions that are essential to a green and peaceful future.

USFWS has jurisdiction over this petition. This petition sets in motion a specific process, placing definite response requirements on USFWS. Specifically, USFWS must issue an initial finding as to whether the petition "presents substantial scientific or commercial information indicating that the petitioned action may be warranted." 16 U.S.C. § 1533(b)(3)(A). USFWS must make this initial finding "[t]o the maximum extent practicable, within 90 days after receiving the petition." *Id.* Petitioners need not demonstrate that a listing *is* warranted; rather, Petitioners must only present information demonstrating that such listing *may* be warranted. While Petitioners believe that the best available science demonstrates that listing the yellow-cedar tree as endangered *is* in fact warranted, there can be no reasonable dispute that the available information indicates that listing the species as either threatened or endangered *may* be warranted. As such, USFWS must promptly make a positive initial finding on the petition and commence a status review as required by 16 U.S.C. § 1533(b)(3)(B).

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EXECUTIVE SUMMARY

Yellow-cedar is suffering massive and unprecedented decline as the climate changes and warms with increasing anthropogenic greenhouse gas emissions. Across over 500,000 acres in southeast Alaska, over 70% of yellow-cedar trees are dead because of climate-change-induced root freezing injury. By the middle of this century, yellow-cedar will only exist in scattered fragments of its former range, and is likely to be extinct in 100 years. Unsustainable old-growth logging practices that target healthy yellow-cedar in southeast Alaska and British Columbia contribute to yellow-cedar's rapid slide toward extinction.

Absent both drastic reductions in greenhouse gas emissions and a ban on all live-logging removals, yellow-cedar will continue to suffer widespread decline. Current regulatory mechanisms are inadequate to address the rising greenhouse gas emissions that threaten yellow-cedar. Regulatory mechanisms governing old-growth logging are similarly inadequate to protect this vulnerable tree species, and are often focused on commercial exploitation of the species rather than protection. Given its precarious status and the uncertainty surrounding future impacts of climate change throughout its range, yellow-cedar cannot withstand any level of live-tree logging, and is need of immediate protection under the Endangered Species Act.

Yellow-cedar plays an important ecological, economic and cultural role in southeast Alaska and coastal British Columbia. As physically massive, long-lived components of the ecosystem, the trees define forest structure, alter microclimates, affect soil chemistry, and, through respiration, mass, and chemical composition, greatly influence ecosystem processes, such as carbon cycling and decomposition. The native people of the region have long valued yellow-cedar's honey-colored, aromatic wood for its strength, straight grain, and decay resistance, and use it in cultural and medicinal applications. The timber industry places high economic value on yellow-cedar, which has long been the most commercially valuable wood in Alaska. Yellow-cedar is important to wildlife, as a browse species for brown bears and Sitka deer, and as habitat for a wide range of forest species, including flying squirrels, bats, and nesting birds. Downed yellow-cedars and snags provide important structural habitat along waterways for anadromous and freshwater fish species, including salmon.

Yellow-cedar distribution is climate dependent. During the snowy, cool and wet period of the Little Ice Age, from about 1500 to 1850 AD, yellow-cedar at lower elevations and at wet, cool sites thrived, due to the tree's unique ability to access nitrates early in spring with a network of fine roots. Unfortunately, this shallow root system also makes the tree more vulnerable to reduced snow pack as the climate rapidly warms with anthropogenic greenhouse gas emissions. This causes a loss of soil-insulating snow pack, earlier springs, and spring freezing events during the vulnerable period after the snow is gone and when the soil has thawed, resulting in root-freezing injury. As a result, yellow-cedar at lower elevations in southeast Alaska, continue to suffer drastic decline due to inadequate snowpack, and early spring freeze-thaw events. In addition to the 600,000 acres of trees already affected in the United States and Canada, decline is likely to spread to higher elevation sites, and to more southerly latitudes as the climate continues to warm. Migration to more suitable sites at higher elevation is limited by the tree's specific habitat needs and extremely low rate of regeneration, and the lack of suitable areas for long-term

growth, especially if climate change continues to accelerate at its current pace. Researchers have recorded next no natural regeneration at sites with yellow-cedar decline.

Despite their decline, yellow-cedar trees are one of the primary targets of the old-growth logging industry in southeast Alaska. The timber industry is putting a great deal of pressure on remaining yellow-cedars because the wood has a high value in foreign markets. In fact, red cedar and yellow-cedar trees drive the layout of most major timber sales in the Tongass National Forest. Without cedars present, most timber sales are economically unviable.

As a long-lived tree that reproduces very slowly, with poor competitive ability, and with a nutrient acquisition strategy (shallow fine roots, and early de-hardening) that results in deadly root-freezing injury as the climate warms, yellow-cedar is unable to naturally adapt to a rapidly changing climate. There is no evidence that enough genetic variability exists within the species to allow a percentage of trees resistant to climate change to survive and repopulate. The devastating effects of climate change on this species, combined with unsustainable logging that directly targets yellow-cedar, will lead to its extinction. Yellow-cedar is unlikely to survive this century unless the species is protected under the Endangered Species Act.

I. NATURAL HISTORY, CULTURAL IMPORTANCE, AND ECONOMICS OF THE YELLOW-CEDAR

A. TAXONOMY AND NAMING

Although there is controversy among scientists as to what to call this species, this petition uses the most updated and widely accepted scientific (*Callitropsis nootkatensis*) and common names (yellow-cedar), as described in more detail below.

1. Taxonomic Nomenclature

When first described in 1824, yellow-cedar was placed in the *Cupressus* genus, and then transferred to *Chamaecyparis* in 1842 (Little et al. 2004). In 1865 botanist Orsted created the monotypic genus *Callitropsis* specifically for the tree then known as *Chamaecyaparis nootkatensis*, based on unique cone structure, but at the time this did not gain approval in the scientific community (Russell 2012).

Thus, the species remained solidly in the *Chamaecyaparis* genus until the discovery of a species of related conifer in Vietnam, *Xanthocyparis vietnamensis* (Farjon and Hiep), which indicated that yellow-cedar is more closely related to the cypress family, Cupressoideae, than the cedar family (Gadek et al. 2000, Little et al. 2004, Little 2006, Harrington 2010, Russell 2012). Further evidence, including information from molecular markers, coupled with the taxonomic rules for assigning scientific names, all give compelling support for using the scientific nomenclature *Callitropsis nootkatensis* (Russell 2012). We will use the scientific name *Callitropsis nootkatensis* in this petition.

2. Common Name

Like the scientific name, the common name for yellow-cedar is also variable, but subject to less vigorous debate. Yellow-cedar is the most frequently used common name for this species, and is widely accepted in both Canada and the United States (Harrington 2010). We have retained the hyphen in the common name, despite its somewhat outdated usage to denote a false cedar (Russell 2012). Although recent scientific information places the yellow-cedar in the cypress family, meaning yellow cypress may be the most appropriate common name, this has not been widely adopted. Other common names include Nootka cedar, Sitka cedar, Sitka cypress, Nootka false cypress, and Alaska cedar or Alaska yellow-cedar (Harrington 2010, Russell 2012).

B. CULTURAL AND ECONOMIC IMPORTANCE

1. Cultural Importance

Yellow-cedar is of immense cultural importance to the native peoples of Alaska and Canada (Stewart 1995), who value its honey-colored, aromatic wood for its strength, straight grain, and decay resistance (Hennon et al. 2007). Alaska Native and First Nations people carved yellow-cedar trunks into totem poles (Figure 1), and used the wood for canoe paddles, dishes, masks and bows, while the fibrous inner bark was woven into baskets, hats, mats, blankets and clothing (Turner et al. 2007, Turner *in* Harrington 2010). Yellow-cedar was also used in a variety of medicinal applications, and played a central role in native peoples' culture, ceremonies, and spiritual belief systems (Stewart 1995). Historically, native people often partially harvested yellow-cedar wood or bark, which was accomplished without killing the tree. These culturally modified trees are found in many parts of the yellow-cedar's range, and are useful for dating and anthropogenic studies (Turner *in* Harrington 2010). Commercial logging and decline has limited the availability of yellow-cedar for cultural purposes in many areas (Turner *in* Harrington 2010).

Figure 1: Yellow-cedar totem pole in front of a Haida longhouse. Image Source: http://www.csindy.com/blogs/IndyBlog/

2. Economic Importance

With natural durability and superior wood characteristics, yellow-cedar is commercially prized, and on a per-unit-volume basis, the most valuable tree species in Alaska (Hennon et al. 2007). From 2005 to 2010, the value of yellow-cedar was nearly three times that of the next most valuable tree species in southeastern Alaska, Sitka spruce (Beier 2011). Currently, Western redcedar is the second most valuable tree species to yellow-cedar, and timber sales are driven by the economics of cedar sales. Yellow-cedar comprises a relatively small percent of harvest, but brings high prices at market, primarily as an export. There is great pressure on this tree resource, especially as many stands are now composed of dead and dying trees.

Most yellow-cedar wood is exported to Asian markets, primarily in Japan, where it is used for home construction, ceremonial boxes, and restoration of temples and shrines (Kelsey et al. 2005, Gaston and Eastin *in* Harrington 2010). The wood is popular decking material in the United States, where it is also used for boat building, saunas, musical instruments, carving, window frames and greenhouse construction (Gaston and Eastin *in* Harrington 2010).
In addition to the harvest of live trees, salvaging of dead standing yellow-cedar also provides wood for these markets, as wood from yellow-cedar snags remains viable for up to a century (Kelsey et al. 2005, Hennon et al. 2007).

Yellow-cedar's slow rate of growth and poor reproductive success has limited its use in tree plantations (Ritland et al. 2001). Recent evidence suggests that the species may be a suitable candidate for commercial plantations or reforestation in areas when ecological conditions are carefully chosen, although long-term studies on commercial plantation viability are not available (Kooistra et al. *in* Harrington 2010). Because yellow-cedar is not naturally competitive at many sites, young replanted trees would have to be carefully nurtured to viability, with deer-exclusion, addition of needed nutrients to the soil, and elimination of competing tree species. Yellow-cedar growth can also be encouraged through planting and thinning in areas determined suitable for long-term survival as the climate warms. Generally, these sites are at high elevation with adequate spring snowpack and well drained soils (Lamb and Wurtz 2009).

C. BIOLOGY, LIFECYCLE, AND ECOLOGICAL ROLE

1. Lifecycle

Yellow-cedar is one of the longest-lived and slowest growing trees in the western United States and Canada, routinely living over 1,000 years, with very narrow annual growth rings compared to other species of trees (Ritland et al. 2001). The amount of yearly growth is tightly linked to climatic conditions (Laroque and Smith 1999). Reaching over 44 meters in height, with a trunk diameter of up to one meter, the yellow-cedar is covered in shaggy, gray, fibrous bark, with drooping soft-green foliage that sheds snow (Figure 2). The largest yellow-cedar was recorded in Mount Rainier National Park, with a diameter at breast height of 2.43 m and a height of 40.2 m (Harris 1970). Some researchers have reported that yellow-cedar may live as long as 3,500 years,

while others indicate a maximum age of 1,824 years (Harris 1990, Pojar and MacKinnon 1994). The longevity of yellow-cedar is related to its ecological strategy of defense, and the production of antifungal and antibacterial nootkatin and chamic acids, which together provide the tree with resistance to both disease and insect infestation (Barton 1976, Harris 1990, Hennon et al. 1990b). As a result, yellow-cedar has a low mortality and long life span once mature, but less energy is devoted to reproduction and growth.

Figure 2: Largest living yellow-cedar on Vancouver Island. Photo credit: B. DeBaie.

Yellow-cedar's unique heartwood chemistry with natural anti-fungal and bacterial agents delays decay or rotting of the wood, leaving snags of dead trees standing for up to a century (Barton 1976). This allows for large-scale mapping of areas of yellow-cedar decline, because stands of dead trees are relatively easy to find via remote sensing, especially via aircraft overflights (Hennon and Wittweb 2013). Dead standing trees also provide incentive for the salvage of viable and lucrative wood for market. Issues with permitting and types of harvest have limited such activities to date (Harrington et al. 2010).

2. Reproduction and Genetics

a. Sexual Reproduction

Yellow-cedar has low reproductive potential, due to low pollen viability, poor recruitment rate, and a long natural reproductive cycle (Harris 1990, Hak and Russell 2004, Massah et al. 2010). Yellow-cedar has an extended, three-year natural reproductive cycle, meaning there are often at least four years between good seed crops (Harris 1990, Ritland et al. 2001, Hennon et al. 2006). Some researchers suggest that yellow-cedar cones take two years to develop as an adaptation to the short growing season at high elevations (El-Kassaby et al. 1991).

During year one of yellow-cedar's three-year reproductive cycle, yellow-cedar forms pollen and seed cone buds. Pollination and fertilization occurs in the spring or early summer of the second year of cone development (El-Kassaby et al. 1991). Yellow-cedar seeds mature and disperse in autumn of the third year (Ritland et al. 2001). The tree is monecious, with male and female reproductive organs in the same plant, and appears to utilize outcrossing (Ritland et al. 2001). Seeds have limited dispersal, of less than 120 m, and wind is critical for pollen and seed dispersal (Thompson et al. 2008). Mature yellow cedars produce hundreds of pollen and seed cones, increasing the incidence of self-fertilization, and inbreeding is relatively high within the species. As a result of the above factors, successful sexual reproduction is limited, as indicated by few young seedlings at many sites, and poor regeneration capacity (Hak and Russell 2004). The abundance of young seedlings at a site is directly correlated with the live basal area of yellow-cedar trees, with older trees critical to successful reproduction (Hennon and Shaw 1997).

b. Asexual Reproduction

At marginal sites, yellow-cedar utilizes a form of vegetative reproduction called "layering," where low-lying branches produce adventitious roots. This type of reproduction mainly occurs at boggy sites and in rocky soils at high elevations (Zobel and Antos 1986). Layering may also occur at avalanche and landslide sites. Seedlings produced by layering often form dense, genetically similar thickets at the edges of poor habitat (Zobel and Antos 1986, Ritland et al. 2001). Layering is relatively uncommon in closed-canopy forests and well-drained sites where trees grow to massive heights and thus lower limbs are farther from the ground (West Coast Region Ministry of Natural Resource Operations 2011).

c. Genetic Structure and Diversity

Yellow-cedar is able to survive in a wide range of ecological conditions, which promotes genetic plasticity (Harris 1990, Russell 1993), resulting in a high level of genetic diversity among yellow-cedar populations, with significant genetic differences among populations of yellow-cedar (Ritland et al. 2001). This genetic structure is based on several factors (Harrington 2010, Russell and Krakowski 2012). First, the species has a core range covering over 20 degrees latitude or 1,000 km of coastal North America, and occupies different ecological niches across this range, from bogs at sea level in southeast Alaska, to rocky high elevation peaks in Oregon and Washington, to dry montane areas in the Siskiyou Mountains of Northern California and Southern Oregon. The wide variety of environments puts diverse selective pressures on different

populations, resulting in genetic variation. Second, as discussed in greater detail in the two sections above, low rates of natural regeneration and frequent use of layering mean there is reduced gene flow among disjunct populations of yellow-cedar. Finally, the range of yellow-cedar is not continuous, due to yellow-cedar's adaptations to specific niche environments. Yellow-cedar is especially fragmented in the southern half of its range (see distribution map in Section I.D, Figure 6). These geographic isolations contribute to among-population variation in yellow-cedar (Ritland et al. 2001). While populations of yellow-cedars are genetically distinct, they do not appear to have different levels of inbreeding or to be more homozygous.

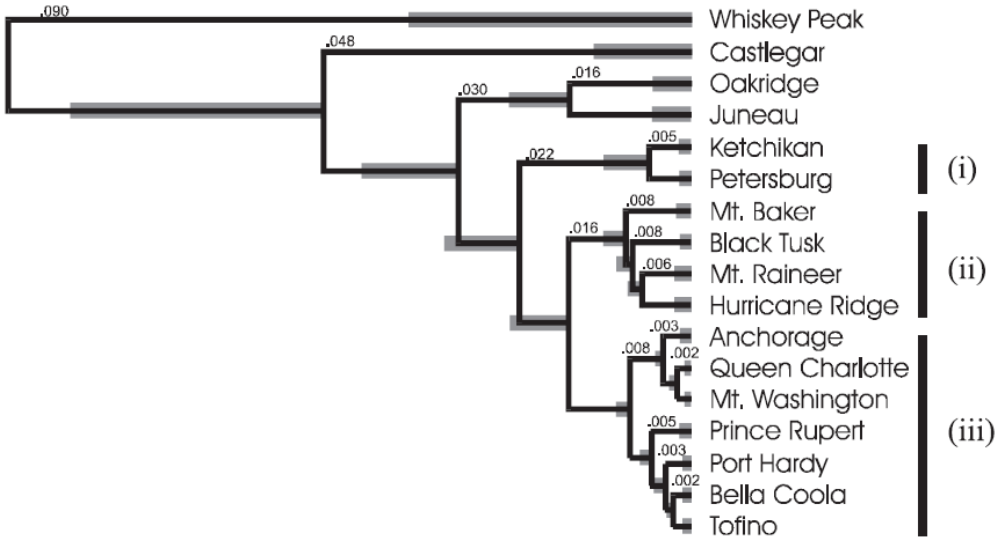

Figure 3: Dendrogram showing genetic distances among the yellow-cedar populations. Distances between clusters indicate relatedness. Source: Ritland et al. 2001.

The genetic structure of yellow-cedar is still poorly understood. Yellow-cedar appears to be divided into three major genetic groups: (i) Ketchikan and Petersburg; (ii) Mount Baker, Black Tusk, Mount Rainier, and Hurricane Ridge; and (iii) Anchorage, Queen Charlotte, Mount Washington, Prince Rupert, Port Hardy, Bella Coola, and Tofino (Figure 3; Ritland et al. 2001). Ritland (2001) believes that the geographic structure of populations reflects separate glacial refugia, with the biotic refugia of the Queen Charlotte Islands during the last ice age accounting for group (c). Group (b) is accounted for as the refugia south of glaciated areas. Each group had varying levels of inbreeding and heterozygosity.

3. Ecological Value of Yellow-cedar

a. Introduction

Trees are a foundation species in forested ecosystems and play an important role in many ecological processes. Trees define forest structure, alter microclimates, and through respiration, mass and chemical composition, greatly influence ecosystem processes, such as carbon cycling and decomposition. Long-lived trees like yellow-cedar play an important role in many aspects of forest ecology.

Yellow-cedar occupies harsh sites with poorly drained soils, often on the edges of bogs, where nutrient supplies are low. In these very wet, rocky or acidic areas, few other tree species are able to survive, and there is little competition (Figure 4). Thus, by channeling relatively few resources into growth and reproduction, yellow-cedar outlives competitors (Hennon and Shaw 1997). Yellow-cedar is also adapted to survive in avalanche zones, due to the snow-shedding properties of its needles (Zobel and Antos 1986, Harris 1990).

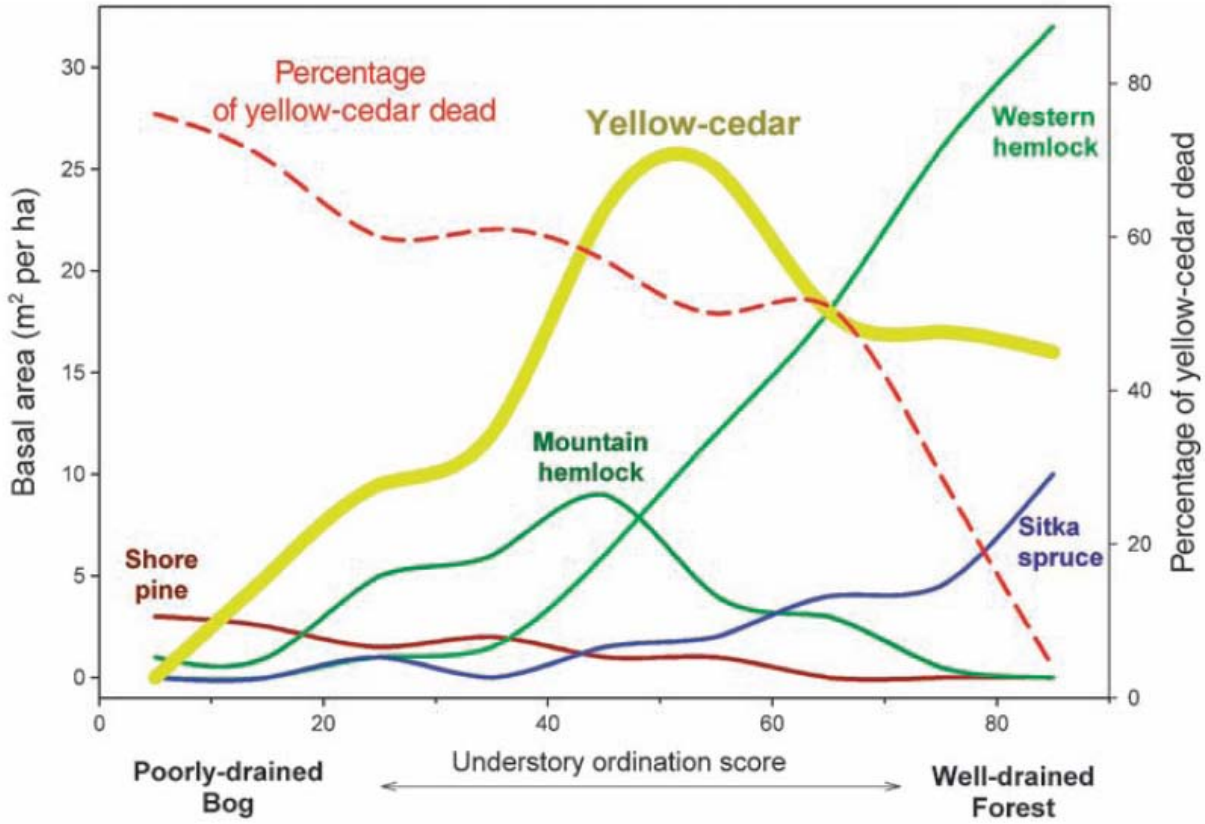

Figure 4: Yellow-cedar's optimum niche and yellow-cedar mortality along the soil-drainage gradient. The percentage of dead yellow-cedar reveals a threshold of drainage beyond which yellow-cedar is healthy but outcompeted by faster-growing tree species. Source: Hennon et al. 2012.

Based on its ecological strategy, yellow-cedar is primarily found in moist, nutrient-poor soils, where biotic competition is low, inhabiting boggy settings with more acidic soil toward the northern edge of its range in southeast Alaska and northern British Columbia. Yellow-cedar can be found in mixed-species forests at low elevation along with western redcedar (*Thuja plicata*), western hemlock (*Tsuga heterophylla*) and other species including lodgepole pine (*Pinus contorta*), mountain hemlock (*Tsuga mertensiana*), Pacific silver fir (*Abies amabilis*), and Sitka spruce (*Picea sitchensis*).

b. Wildlife Interactions: Sitka Deer and Brown Bear

Yellow-cedar is an important browse species for Sitka black-tailed deer or Sitka deer (*Odocoileus hemionus sitkensis*) and Alaska brown bears (*Ursus arctos*) (Hennon et al. 2012). Alaska brown bears gnaw on yellow-cedar trunks in the spring in order to access the soft under-bark layer, the phloem, which is high in fructose. Basal scars from either brown bears or native Alaskans were evident on over 49% of the yellow-cedars on Chichagof and Baranof Islands (Hennon et al. 1990a), and in some stands the majority of yellow-cedar have basal scars from bear feeding (ADNR 2000).

Yellow-cedar provides critical thermal and refuge cover for Sitka deer, other large ungulates, and small mammals (Walters 1991). In a study of 34 Queen Charlotte goshawk (*Accipiter gentilis laing*) nest trees, four percent were yellow-cedar (Flatten et al. 2002). Keen's myotis (*Myotis keenii*) females, preferred cedar (redcedar and yellow-cedar combined) for roosting trees, which comprised 87% of roosts used by the bats in one study (Boland et al. 2009). Female bats roosted in cedars significantly more than expected, based on their availability (Boland et al. 2009). Yellow-cedar comprise important habitat for Keen's myotis, which is a poorly known species with limited range.

Hennon et al. (2012) hypothesize that yellow-cedar trees were able to regenerate prolifically during the Little Ice Age, in part because heavy snow kept populations of Sitka deer in check (White et al. 2009). Snow may reduce winter browsing by deer. The extirpation or decline of natural predators, including the Alexander Archipelago wolf (*Canis lupus ligoni*), may result in rapid population growth of Sitka deer. Deer may exert cascading effects on small mammals, birds and invertebrates, both by competing directly with them for the same resources, and by indirectly modifying the composition and physical nature of habitats (Baltzinger et al. 2009). Habitat protection is the most important aspect of deer management in southeastern Alaska (Hanley et al. 1989). Thus, yellow-cedar, Sitka deer, and large predators such as the Alexander Archipelago wolf, form an important community, vital to the forests of southeast Alaska. A loss of yellow-cedar has cascading negative impacts on this important ecosystem.

c. Carbon Balance

In southeast Alaska and British Columbia, tree mortality along the Gulf of Alaska, where forests contain a significant source of carbon, can potentially impact the climatic balance of the region (McKinley et al. 2011). Loss of forest habitat will accelerate the climate changes that are already imperiling the habitat of yellow-cedar, possibly shifting the balance from forests as a net carbon sink to forest as a source of atmospheric carbon, further accelerating climate change (Figure 5). The net contribution of a forest to the atmospheric greenhouse gas balance is the result of a combination of factors including uptake of CO_2 by photosynthesis, release of CO_2 by respiration, release of CO_2, CH_4 and N_20 by disturbance, and transfer of carbon to forest products (e.g., the timber industry) (Houghton et al. 1997). A loss of living trees also exerts strong feedbacks on the local and regional climate by altering surface albedo and thus energy exchange between land surface and the atmosphere. Even small increases in albedo due to tree loss could result in increasing climate warming because of the high amount of energy available in these systems (Rotenberg and Yakir 2011). Changes in hydrology are also likely, as a loss of trees may

increase surface evaporation, but decrease the amount of water released through the leaves and needles of a tree (transpiration; Adams et al. 2010)

Currently, forests of the United States absorb and store about 16% of the CO_2 emitted by fossil fuel burning in the country each year (Joyce et al. 2014). The carbon stored in United States' forests right now is equal to about 25 years of the country's anthropogenic greenhouse gas emissions, under current rates. This amount of carbon storage is likely to drop drastically with tree die-offs and with changing habitat caused by climate change.

Because of their important role in the carbon cycle, it is important that forest management practices and policy decisions consider the importance of forests as carbon sinks when making decisions. Forest management strategies that increase the average carbon storage and uptake by forests and reduce disturbance to tree species may include: altering tree planting and harvest strategies through species-specific selection and timing; considering genetic variation; managing for reduced stand densities (reduced wildfire risk); reducing other stressors such as poor air quality; using forest management practices to minimize stress from drought; and developing regional-focused strategies to mitigate impacts to ecosystem functions (Joyce et al. 2014).

Large-scale die-backs of the forest, such as those occurring with yellow-cedar decline, reduce carbon sequestration and contribute to warming in the Pacific Northwest and entire subarctic region (Lamb and Wurtz 2009). Forests play an important role in the United States and global carbon cycle, and carbon sequestered in forests and timber products offsets 12-19% of fossil fuel emissions in the United States (Ryan et al. 2010), with long-lived, old-growth trees especially important for carbon sequestration (Stephenson et al. 2014).

In Canada, climate related die-offs of pine forests resulted in carbon emissions of an estimated 990 megatons of CO_2 over a 20-year period, reducing carbon sinks by 270 megatons. This die-off was equivalent to 5 years of Canada's annual emissions from the transportation sector (Anderegg et al. 2011), and influenced Canada climate change policy.

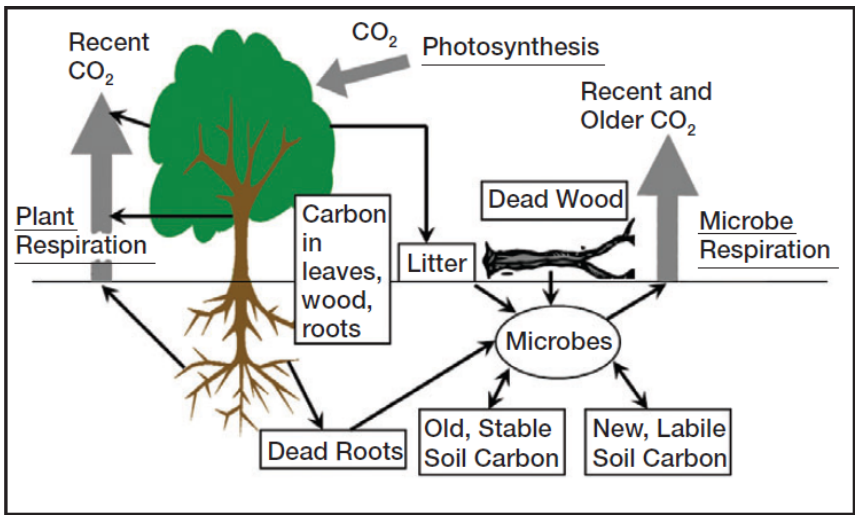

Figure 5: Flows of carbon from the atmosphere to the soils and back. Carbon is stored mostly in live and dead wood as forests grow. Source: Ryan et al. 2010.

Loss of these large, old-growth trees continues to radically transform the landscape, which will alter biodiversity, soil chemistry, undercover growth, ecosystem function and services, and land-atmosphere interactions such as carbon sequestration (Anderegg et al. 2011). Thus, the loss of yellow-cedar could exacerbate (or already is exacerbating) impacts of climate change and warming on the species by disrupting the carbon balance. Long-lived trees take up an especially significant amount of carbon dioxide, increasing the importance of yellow-cedar as a thriving part of the ecosystem (Stephenson et al. 2014). Future forest management may significantly contribute to reducing future greenhouse gas concentrations in the atmosphere, as recognized in the Kyoto Protocol for 2008- 2012. It is important that living yellow-cedar be protected, to preserve their role in the carbon cycle.

d. Landslides

Yellow-cedars also reduce landslide risk and increase productivity of the landslides that do occur. Both cedar decline and timber harvest increase landslide activity, with timber harvest resulting in a 2-fold to 10-fold increase, while in areas with cedar decline landslide risk increases by 3.8 times (Johnson 2013). Following tree death, either by decline or forest harvest, there is a loss of soil cohesion and decreased root strength. Decreased tree canopy interception and reduced transpiration reduces the shear strength of soil, which is associated with increased soil saturation (Johnson 2013). Most landslides occur after the majority of yellow-cedars at a site have been dead for more than 50 years, while landslides typically occur less than 5 years after timber harvest, with 50% of landslides occurring within a year at clearcut sites (Johnson 2013).

Landslides at sites with old-growth, where yellow-cedar snags remain standing, are more ecologically beneficial. Ecological benefits are especially important for anadromous fish habitat, because landslides from areas with standing dead yellow-cedar contain more woody debris that provides structure to streams, and are an important part of fish habitat. Thus, while site conditions that result in landslides are similar at both harvested sites and sites with yellow-cedar decline, the timing and ecological consequences are very different. (Johnson 2013).

D. DISTRIBUTION AND PREFERRED HABITAT

Yellow-cedar is primarily a coastal species, and occurs from the Siskiyou Mountains of northern California to Prince William Sound, Alaska, with isolated interior stands in southeastern British Columbia and central Oregon (Figure 6; Harris 1990). While primarily found in areas with a wet maritime climate, yellow-cedar also occurs on dry locations in the southern parts of its range, and can survive under a wide range of marginal conditions due to a combination of slow growth, a unique fine-root system, reproduction by layering, and an inherent biotic resistance to natural stressors. On a small scale, the yellow-cedar niche is mostly controlled by an affinity for wet or acidic soils at sites where most other tree species are not competitive (Krajina 1969).

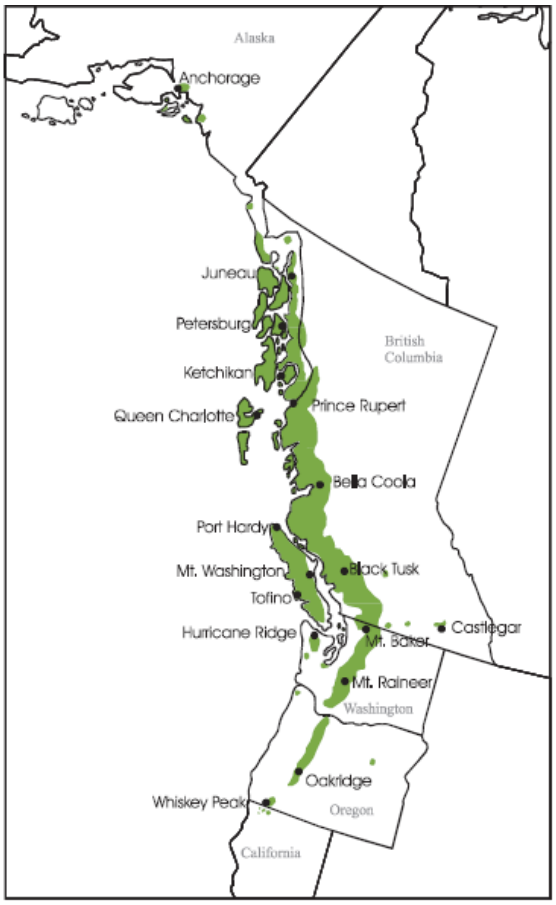

Figure 6: Distribution of yellow-cedar in green. Source: Ritland et al. 2001.

Yellow-cedar is widely distributed and locally abundant in the coastal mountains of southeastern Alaska and British Columbia. Southeast Alaska has a cool, moist climate, with annual precipitation of 150 to 500 cm. Winters are moderate, with occasional brief cold snaps. Summers have few prolonged dry periods, and lightning is rare. Thus, fire does not currently play a role in forest structure and succession (Harris 1990). Common disturbances include windfall and landslides, with disease and insects also playing a relatively small role in mortality. The poorly drained soils preferred by yellow-cedar are highly organic and shallow to deep. These soils are found on sites with gentle slopes.

Old-growth forests of western hemlock (*Tsuga meterophylla*) and Sitka spruce (*Picea sitchensis*) dominate the region, accounting for 89% of commercial timber volume (Deal 2009). Yellow-cedar, western redcedar (*Tsuga plicata*), mountain hemlock (*Tsuga mertensiana*), and shore pine (*Pinus contorta* var *contorta*) are relatively minor forest components, with yellow-cedar accounting for just 4-9% of the commercial timber volume (Hutchinson and LaBau 1975, Wilson 2002). As discussed in this petition, the high market value and special wood qualities of yellow-cedar makes it a sought-after and commercially important tree species, despite its relative scarceness.

In southeast Alaska and northern British Columbia and Washington, yellow-cedar is found in bogs or rocky ridges, where it can form dense thickets through layering. Yellow-cedar is found at

middle to higher elevations in the southern portions of southeast Alaska, extending to treeline, where it can form krummholz and tree islands. North of a latitude of 55 degrees, the tree is restricted to a more limited elevation range from sea level to just 150 m in some locations (Hennon et al. 2005, Lesher and Henderson *in* Harrington 2010). The 55 degree latitude line also marks the northern extent of western redcedar, a species often found in association with yellow-cedar (D'Amore et al. 2009).

In the western United States, yellow-cedar is common on the slopes of Mount Rainier, but occurs infrequently south of the mountain, and is locally common to the mountain peaks of the central Oregon Cascades (Figure 7; Zobel and Antos 1986). South of Mount Jefferson, the species is absent from the high Cascades, with a few disjunct locations in the Siskiyou Mountains of northern California and southern Oregon, and one occurrence in the Aldrich Mountains, east of the Oregon Cascades (Ritland et al. 2001).

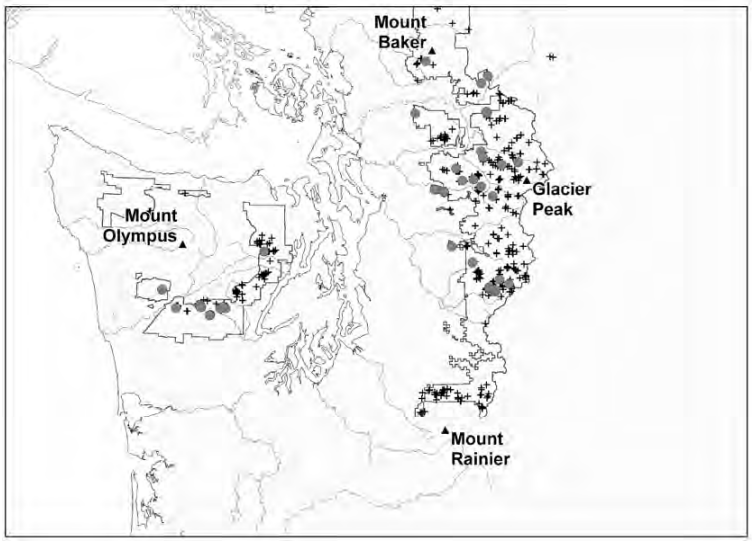

Figure 7: Yellow-cedar distribution in Washington Source: (Lesher and Handerson *in* Harrington 2010).

South of Mount Rainier, yellow-cedar occupies a variety of sites, including boggy and wet areas, and dry rocky ridges (Lesher and Handerson *in* Harrington 2010). In the Siskiyou Mountains, yellow-cedar forms shrubby thickets on marginal sites that are rocky or very wet. In the Aldrich Mountains, yellow-cedar occurs in one isolated location at the head of a sheltered, north-facing drainage (Zobel and Antos 1986).

II. CONSERVATION STATUS: YELLOW-CEDAR DECLINE

A. INTRODUCTION

For the past three decades yellow-cedar has precipitously declined. This population collapse, called "yellow-cedar decline" is caused by a warming and changing climate. Specifically, shifts in the timing and frequency of freeze-thaw events during February and March, and reduced snow cover, causes freezing injury to the tree's shallow fine roots, resulting in death (Figure 7).

Over the past decade, widespread tree die-offs due to climate change have been reported globally (Allen 2009). These mortality events drastically transform the landscape, affecting biodiversity, ecosystem functions and services, and land-atmosphere interaction, and lead to increased fire risk (Anderegg et al. 2011). Over the past thirty years, tree mortality rates in the western United States have more than doubled (Adams et al. 2010). Rising temperatures drive elevation shifts, increasing mortality at lower altitudes and latitudes, and pushing tree species uphill into smaller geographic ranges (Lenoir et al. 2008, Allen 2009). Because trees do not easily migrate or shift distribution to more suitable habitats when conditions in their environment change and become deadly or suboptimal, many tree species will be pushed to extinction as climate change progresses (Bunnell and Kremsater 2012).

Yellow-cedar decline is the most severe forest die-off ever recorded in North America (Ostry et al. 2011, Hennon et al. 2012), and has greatly altered forest dynamics in southeast Alaska. Because yellow-cedar is extremely decay-resistant, snags remain standing for 80 to 100 years, which allows for long-term study and reconstruction of cedar population dynamics (Figure 8). Mapping to date indicates that yellow-cedar decline occurs across more than 500,000 acres in southeast Alaska, primarily on sites from sea level up to 300 m in elevation (Lamb and Wurtz 2009, Hennon and Wittweb 2013). Decline extends 150 km south from the Alaska border into British Columbia onto an additional 124,000 acres at elevations up to 1,000 m (Westfall and Ebata 2012, Hennon et al. 2012). Yellow-cedar decline is concentrated at lower elevations in the northern parts of the tree's range, but extends to higher elevations and to warmer, southerly slope aspects at southern latitudes (Wooton and Klinkenberg 2011).

In stands affected by yellow-cedar decline in southeast Alaska, over 70% of yellow-cedar trees are dead (D'Amore and Hennon 2006, pers. comm. Lauren Oakes 2014), with complete mortality recorded at some sites. Mortality is more severe at locations with relatively wet soils, decreasing or loss of snow cover, southerly slope aspect, and gentle gradient (Snyder and Lundquist 2007). The number of trees suffering from active mortality continues to increase at many locations, indicating that the yellow-cedar decline is expanding in area and intensity at sites where many trees have already died (Snyder and Lundquist 2007). This also indicates that the rapid pace of human-caused climate change may be exacerbating an already serious dieback.

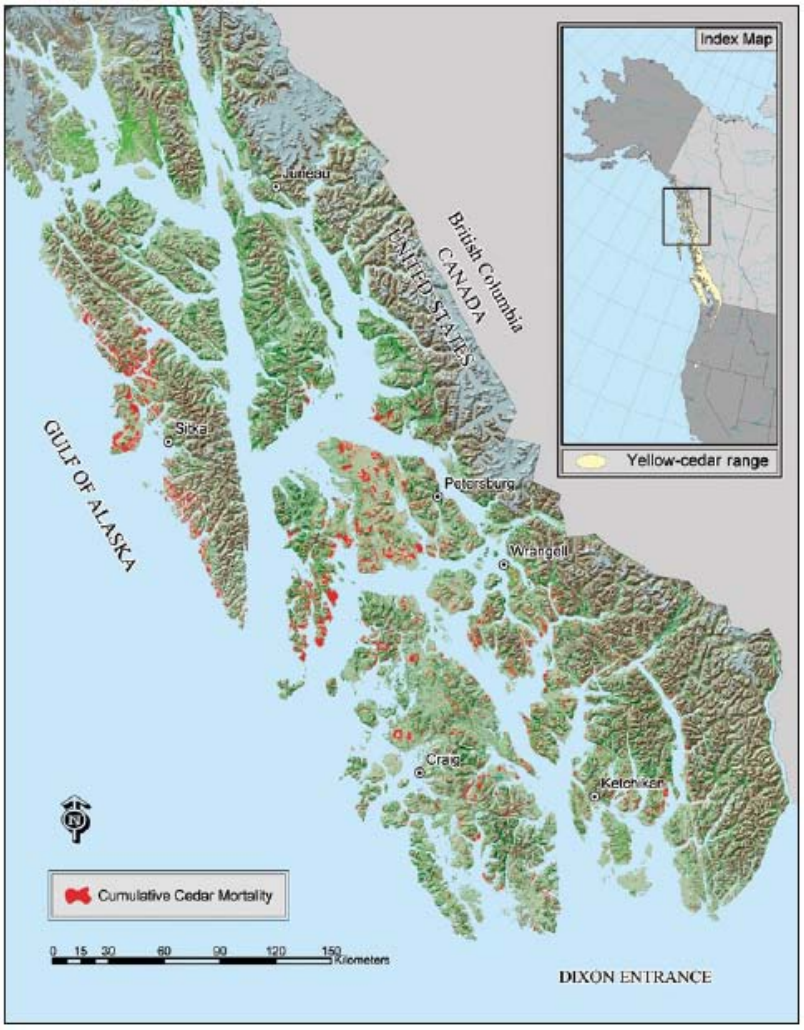

Figure 8: Distribution of yellow-cedar decline in southeast Alaska and inset map of the natural range of yellow-cedar. Figure from Hennon et al. 2005.

Yellow-cedar decline has been intensively studied for over 30 years. After all likely biotic factors were researched and rejected, researchers focused their attention on abiotic reasons for decline by investigating two primary questions: (1) what change in the environment triggered decline, and (2) what physiological features or other factors make yellow-cedar uniquely vulnerable to decline. To date, the best scientific information indicates that yellow-cedar decline is due to a unique combination of physiological features and environmental change—namely a warming climate due to anthropogenic greenhouse gases—which is discussed in more detail in Part II of this petition.

Researchers have determined that the warming climate, which leads to slight shifts in freeze-thaw patterns, is the root-cause of freezing injury and yellow-cedar decline. Decreasing snow cover is a key factor linked to decline, and provides for a fairly simple mapping tool to predict and model future decline patterns (Hennon et al. 1990a, 2008, 2012). Affected trees exhibit dieback symptoms that progress from initial root injury to subsequent crown death, and eventually to tree death (Hennon and Shaw 1997).

Yellow-cedar's unique physiology, which makes it well adapted to cool, snowy habitats, and to marginal habitats, also makes is susceptible to root freezing injury as the climate warms. Yellow-cedar has a shallow fine root system, early dehardening, and extensive uptake of nitrogen and calcium in early spring, along with a propensity for growth in saturated soils. These traits make the tree more prone to freezing injury with shifts in the freeze-thaw cycle, especially when freezing temperatures penetrate the soil surface layer, where the trees' shallow fine-roots grow.

Based on over 30 years of research, scientists have developed an interactive causation pathway that includes the physiological and abiotic factors for decline, the basis of which is fine-root death (Figure 9). Separate studies, as detailed in the upper right corner of Figure 9, contributed to this figure, by investigating the many interactions along the causation pathway that leads to yellow-cedar decline, including hydrology, canopy cover, air and soil temperatures, snowpack, yellow-cedar phenology, and freezing injury to seedlings and mature trees (Hennon et al. 2012).

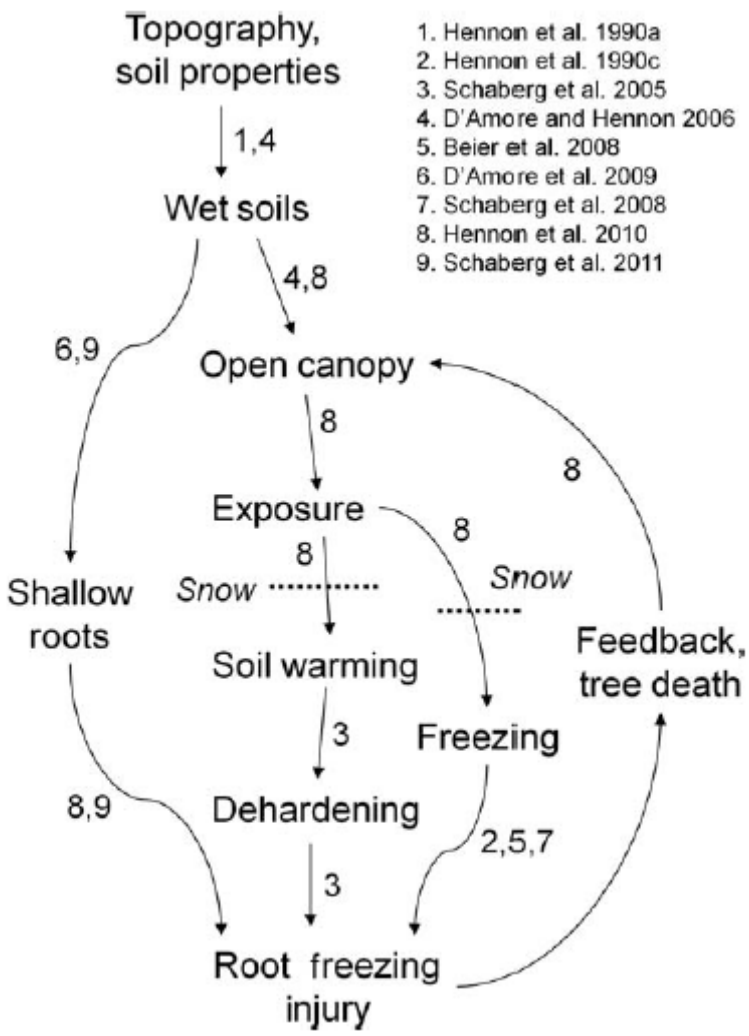

Figure 9: Cascading factors that contribute to yellow-cedar decline, culminating the fine-root mortality and tree death. The mitigating role of snow cover is shown. Tree death is a feedback that can expose adjacent trees to great fluctuation in microclimate, thereby creating conditions for local spread of this

forest decline. In the original document, numbers refer to the studies on interacting factors. Source: Hennon et al. 2012.

Tree death primarily occurs in areas where yellow-cedar was formerly well adapted with a competitive advantage over other tree species due to marginal site conditions, such as bogs. The spreading mortality of yellow-cedar indicates that the tree has been pushed beyond a critical level of biological tolerance over a large area (D'Amore and Hennon 2006). Climate change-caused warming soil and air temperatures and decreasing snow cover are strongly linked to yellow-cedar decline.

Researchers have mapped yellow-cedar decline across an extensive portion of southeast Alaska, especially from the western Chichagof and Baranof Islands to the Ketchikan area. Starting with broad aerial surveys that mapped areas with dead trees, researchers used finer-scale mapping to identify landscape features and other factors such as snow cover, slope, elevation, and aspect that together play a role in yellow-cedar decline. Recent mortality has been most dramatic on the outer and southern coast of Chichagof Island, indicating a northward spread of mortality, which is consistent with the climatic patterns that trigger mortality, especially decreasing snowpack and warmer spring temperatures, combined with intermittent freezing events (Mulvey and Lamb 2012).

B. PHYSIOLOGICAL FACTORS RELATED TO DECLINE: ROOT-FREEZING OF YELLOW-CEDAR

Yellow-cedar's fine roots are relatively shallow and have certain properties that make them more vulnerable to cold temperatures and freezing injury than other conifers. This is due to adaptations that allow yellow-cedar trees to better access nutrients such as nitrogen and calcium, especially at marginal sites such as bogs (Daniels et al. 2011, Schaberg et al. 2011). The high proportion of yellow-cedar's fine roots found in the upper soil levels (less than 7.5 cm) is an important factor predisposing the tree to freezing injury (Schaberg et al. 2011). Yellow-cedar roots near the soil surface are vulnerable to injury when temperatures drop just below freezing (-5 degrees C). Soils commonly drop to temperatures below the threshold for fine-root injury at depths less than 7.5 cm, but such conditions are less common at depths of 15 cm (Schaberg et al. 2011).

The combination of limited cold tolerance, early dehardening and shallow rooting contributes to the unique sensitivity of yellow-cedar trees to freezing injury and decline (Hennon et al. 2012).

1. Spring and Winter Dehardening

Yellow-cedar roots are fully dehardened in March, while other conifer species' roots continue to deharden into May (Hennon et al. 2012). Researchers believe the spring dehardening of yellow-cedar roots is thermoregulated to track microbial activity in late winter, associated with the surge in available nitrogen that occurs during freeze-thaw periods at this time (Schaberg et al. 2005). Tree species that co-occur with yellow-cedar regulate dehardening and growth by photoperiod, and also maintain fewer shallow roots, making them less vulnerable to spring freezes (Hennon & Shaw, 1994).

A study comparing cold hardiness of yellow-cedar and western hemlock at various elevations found that yellow-cedar was much more sensitive to cold temperatures in spring. From winter to spring, yellow-cedar trees dehardened almost 13 °C more than western hemlock (Schaberg et al. 2005, Hennon et al. 2012). This study found that low- and mid-elevation stands of yellow-cedar were less cold hardy than trees growing above 130 m in elevation, consistent with observed trends in yellow-cedar decline.

A study comparing cold hardiness of yellow-cedar with four other coniferous species growing near Ketchikan had similar findings. The roots of all conifer species showed a typical pattern of increasing cold hardiness from November to January, decreasing hardiness from January to March, and a continued reduction in cold hardiness from March to May (Figure 10). Compared to the other species, yellow-cedar developed minimal winter hardiness, and was fully dehardened by March. Particularly notable was the yellow-cedars trees' reduced mid-winter cold hardiness, at a time when air temperatures were lowest, and prior to consistent spring warming (Schaberg et al. 2011). In January, the difference in cold hardiness between yellow-cedar and other cedar species was just 1.6 degrees C, but this small difference may be important. This is because the threshold in freezing tolerance is close to the temperature of -5 degrees C reached in soils in southeast Alaska when there is no insulating snow cover (D'Amore and Hennon 2006, Hennon et al. 2010). Thus, just a small difference in cold hardiness may mean the difference between fine-root death due to freezing injury, and no cold damage.

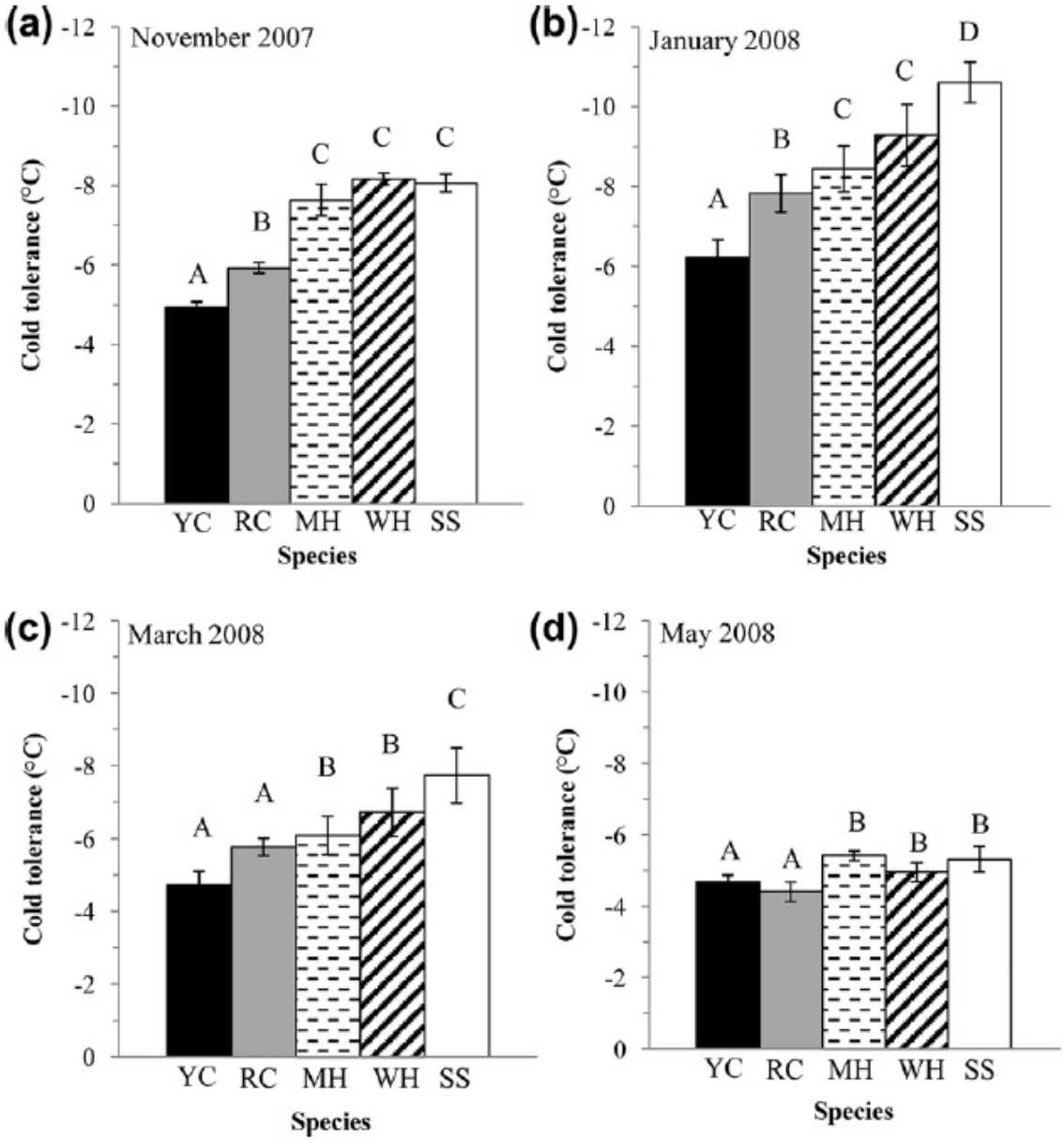

Figure 10: Difference in mean cold tolerance of fine roots of yellow-cedar (YC), western redcedar (RC), mountain hemlock (MH), western hemlock (WH), and Sitka spruce (SS) growing together in Ketchikan, Alaska, and assessed on four dates: (a) November 2007, (b) January 2008, (c) March 2008, and (d) May 2008. Per sampling date, treatment means with different letters are significantly different. Source Schaberg 2011.

These results indicate that freezing damage to yellow-cedar trees is influenced by early dehardening which, for yellow-cedar starts as early as January, and continues through late winter and early spring.

2. Nutrient Acquisition Strategies

Yellow-cedar root systems are especially vulnerable to changes in climate because they are shallow—a characteristic that is essential for the trees to take up nutrients. Yellow-cedar trees rely on the linked uptake of nitrate anions with calcium cations to exploit shallow, rich sources of nitrogen (D'Amore et al. 2009). In order to accommodate this nutrient uptake, yellow-cedar trees have a high proportion of shallow fine roots, early spring dehardening and root activation, and exceptionally high levels of calcium in their tissues (Oliver and Hennon 2013). Scientists theorize that this method of calcium-nitrate cycle from soil to tree, and the resulting interactions with yellow-cedar physiology, plays a crucial role in yellow-cedar decline (Figure 11).

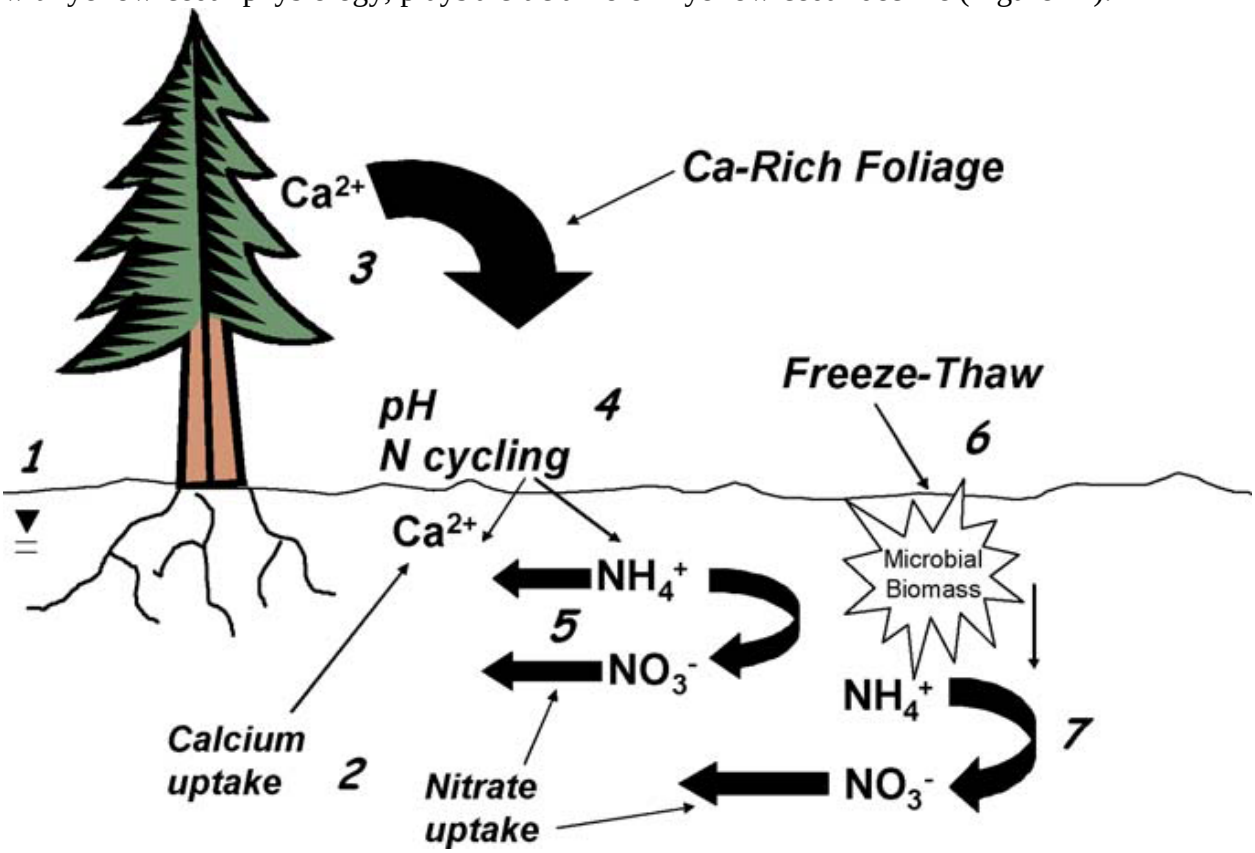

Figure 11: Model for the hypothesis of cedar calcium (Ca) and nitrogen (N) cycling in forests of the Pacific Northwest. (1) Cedars grow in wet soils with low N; (2) cedars assimilate NO3- as a nitrogen source, but must also assimilate Ca as a counter ion to balance cellular pH and osmotic pressure; (3) Ca-enriched foliage falls to the forest floor during senescence, and decomposition consumes H+; (4) increased pH enhances N turnover including nitrification in the forest floor; (5) mineralization and nitrification provide a low, but persistent supply of N to the plant along with Ca available near the soil surface; (6) spring freeze-thaw leads to the release of microbial biomass N that is nitrified; and (7) early spring dehardening and fine-root activity of cedars coincides with the N released by freeze-thaw events.

The shallow-rooting system utilized by yellow-cedar may allow the trees to be more competitive by utilizing nitrate as a source of nitrogen for growth. The acquisition of nitrogen is difficult in saturated soils where yellow-cedar often grows, due to lower mineralization rates and competition from microbial communities and bryophytes. In such areas, nitrogen availability is

regulated by the ability of a tree to acquire nitrogen that has been mineralized through organic matter decomposition or microbial biomass turnover (D'Amore et al. 2009). This type of nitrogen is often available during spring freeze-thaw events in bogs and forested wetlands, and can be utilized by the tree if cedar roots are active at the time, through early dehardening and an extensive fine root system.

High concentrations of calcium also play a role in yellow-cedar's ability to uptake nitrogen. Yellow-cedar accumulates a high level of calcium in its tissues. This high level of calcium, an ion which contains two positive charges, allows yellow-cedar roots to associate with negatively charged ions in the soil, especially nitrate (D'Amore et al. 2009).

When the roots remain insulated by snow, early dehardening allows the tree to immediately utilize the spring flush of nitrogen for growth. However, this strategy comes at a cost. Adaptations to increase tolerance of marginal habitats, and allow for increased uptake of nitrogen and calcium from soils, especially during early spring, make yellow-cedar uniquely vulnerable to root freezing and decline (D'Amore and Hennon 2006, Daniels et al. 2011).

C. MAPPING AND EVALUATING RISK FACTORS FOR YELLOW-CEDAR DECLINE

Researchers first determined the onset and trends of yellow-cedar decline based on aerial photographs, historical written observations, and various methods of dating time of death for standing snags (Hennon et al. 1990a). Although yellow-cedars began declining in the 1880s, at the end of the Little Ice Age, studies indicate that the decline accelerated at most sites during the second half of the 20th century, peaking during the 1980s. Progressive mortality continues in declining forests, with the oldest snags found in the wettest soils, and dying trees typically found around the perimeter of recently dead trees, or in better drained soils (for illustration of this, see Figure 12, below). The slow spread of tree death occurs along a hydrologic gradient, with trees in wetter soils affected first (D'Amore and Hennon 2006).

In order to investigate the climate-related causation behind yellow-cedar decline, and to determine future suitability of sites for yellow-cedar regeneration or planting, researchers have investigated the link between various landscape and climatic features and yellow-cedar decline, and also mapped yellow-cedar decline and different abiotic factors at three different spatial scales. The species' highly rot-resistant wood provides a unique opportunity to map and investigate long-term trends in yellow-cedar decline. Site-specific details were obtained from on-ground studies or more detailed mapping of landscape features.

1. Yellow-cedar Decline and Climate: Regional Snow-Cover and Temperature

Researchers used aerial photographs to develop a complete distribution map of yellow-cedar decline in Alaska (see Figure 12 and Figure 8, above). The resulting map depicts more than 500,000 acres of dead and dying yellow-cedar forest at a total of over 2,500 locations (Wittwer 2004), and is useful for determining broad trends connecting yellow-cedar decline to climate change, or for targeting areas to conduct more detailed site-studies. Early on, when biotic causes

for decline were still being explored, Hennon and Shaw (1994) used a similar regional-scale map to demonstrate that forest decline aligned with warmer average winter temperatures, an early indication that climate change was linked to yellow-cedar decline.

Regional-scale maps are also used to link snow depth to yellow-cedar decline. Dave Albert of The Nature Conservancy developed the snow accumulation model, derived from PRISM data estimates of monthly temperature and precipitation. The model found close association between the occurrence of yellow-cedar decline and the lowest snow accumulation zone (Figure 12; Hennon et al. 2006). Further discussion of this snow-accumulation model is found in Part III of this petition.

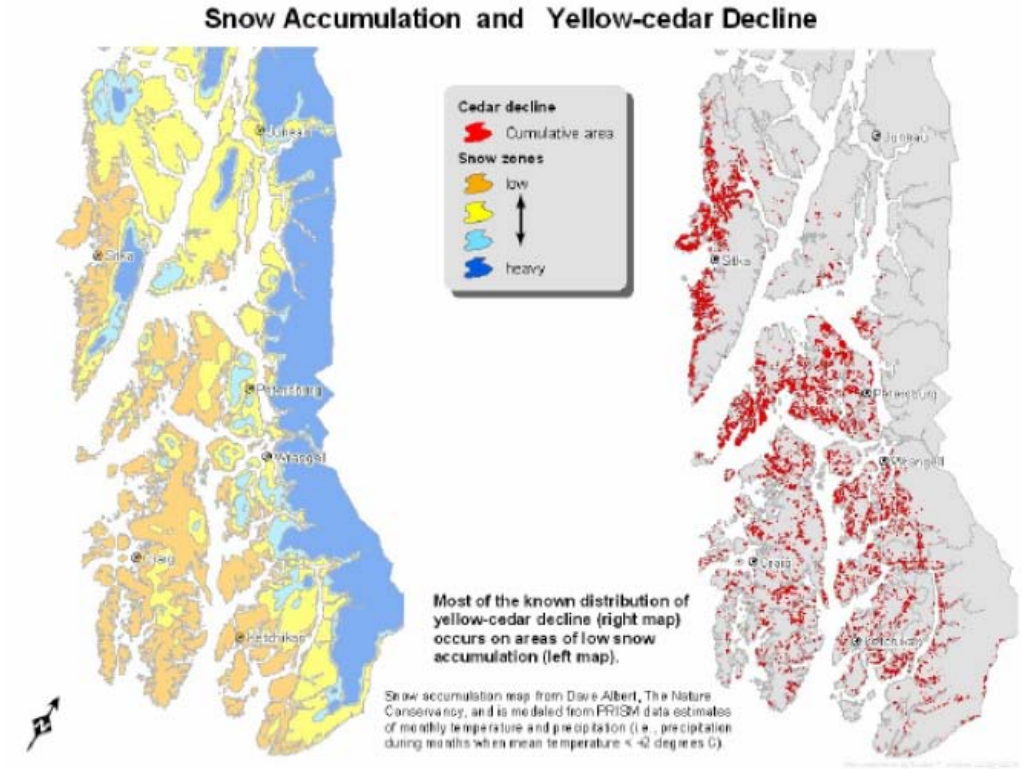

Figure 12: Map depicting snow levels (left) and the occurrence of yellow-cedar decline (right). Note the close association between decline and low snow accumulation. Snow fall amount ranges from heavy (dark blue- light blue) to low (yellow-orange). Map at right depicts areas of yellow-cedar decline in red. Snow zone map was developed by Dave Albert of the Nature Conservancy using PRISM data estimates of temperature and precipitation. Cedar decline map based on Forest Service aerial surveys. Source Hennon et al. 2006.

Currently, the there are no broad-scale regional maps of yellow-cedar decline in British Columbia, where tree death typically occurs in bands from 300 to 400 m in elevation (Hennon et al. 2005). The British Columbia Forest Service is working toward mapping the southern extent of yellow-cedar mortality, and is cooperating with the United States Forest Service to compile a map of yellow-cedar decline throughout its range (Hennon et al. 2005).

2. Yellow-cedar Decline and Landscape Features: Slope, Aspect, Elevation

Researchers associated yellow-cedar decline with various landscape features, including slope, aspect and elevation, using infrared photographs to delineate polygons of yellow-cedar decline. Maps completed to date include those of Peril Strait and adjacent areas of Baranof and Chichagof Islands, and southern Kruzof Island (Figure 13). These maps can be overlayed with climate features such as snow cover or soil saturation. Very few maps have been compiled from areas above 300 m (Hennon et al. 2008). While yellow-cedar decline occurs at all slope aspects across elevation zones, decline is more prevalent at lower elevations and at warm, southerly aspects (D'Amore and Hennon, 2006).

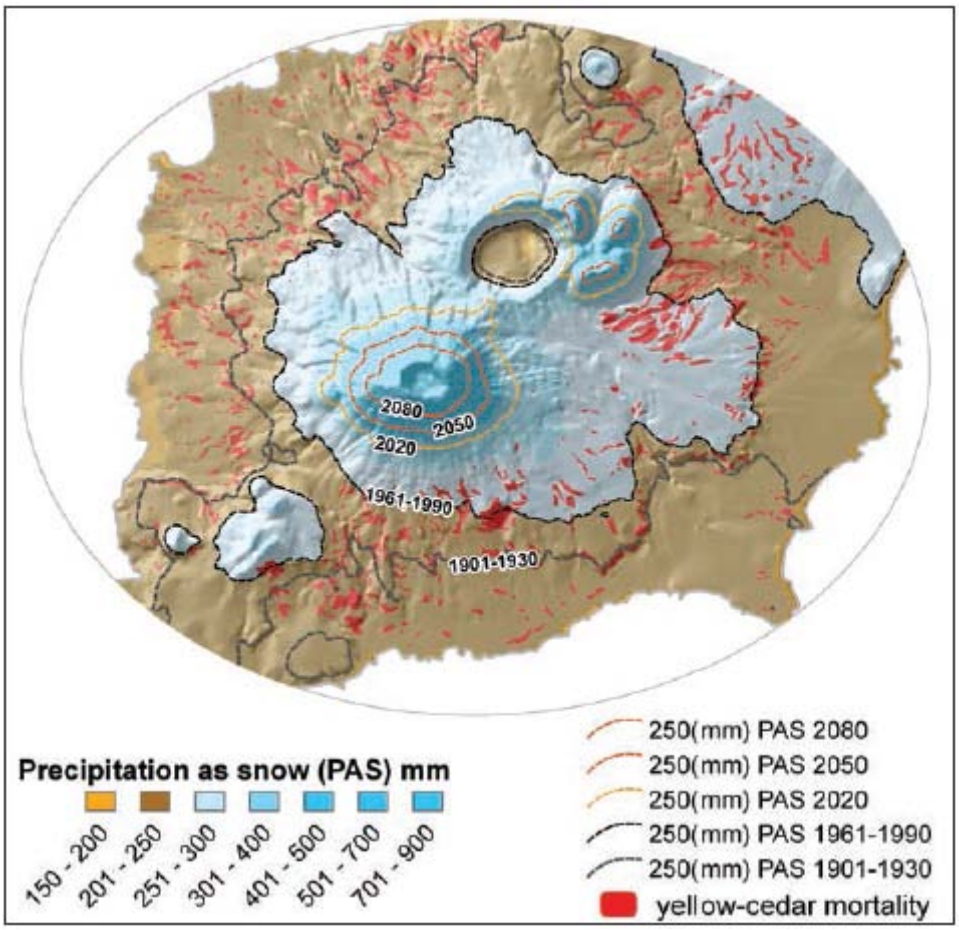

Figure 13: The distribution of yellow-cedar decline on Mount Edgecumbe near Sitka, Alaska, mapped from 1998 color photography. The annual precipitation of snow between 1961 and 1990 is shown with colors indicating the values above (gray, protects yellow-cedar) or below (dark gray, inadequate) the threshold of 250 mm of annual precipitation as snow. Forecasts for this modeled snow threshold are indicated by dashed lines.

Mount Edgecumbe on Kruzof Island near Sitka is a dormant volcano with radial symmetry and even slope gradients, and is the site of extensive mapping (Figure 13). Open-canopy forests with abundant yellow-cedar extend from sea level close to timberline. These features control

confounding factors, and have allowed researchers to isolate the influence of elevation and aspect on yellow-cedar decline. Results from Mount Edgecumbe studies are discussed in more detail in Section III, because they show that a lack of spring snow is one of the most important factors leading to yellow-cedar decline.

3. Yellow-cedar Decline and Site-specific Conditions: Canopy Cover, Snow Cover, Air and Soil Temperature, Hydrology, and Soil Chemistry

Detailed site-specific, small-scale studies, and resulting maps were designed to increase researchers' understanding of how forest conditions vary among areas with and without yellow-cedar decline. Researchers created maps based on 100 m grids of vegetation plots at two small watersheds, Goose Cove on Baranof Island, and Poison Cove on Chichagof Island (Hennon et al. 2008). On-ground studies investigated the association between live and dead trees and different environmental variables, including hydrology (Figures 14 and 15), soil chemistry, canopy cover, air and soil temperature, and snow (D'Amore and Hennon 2006).

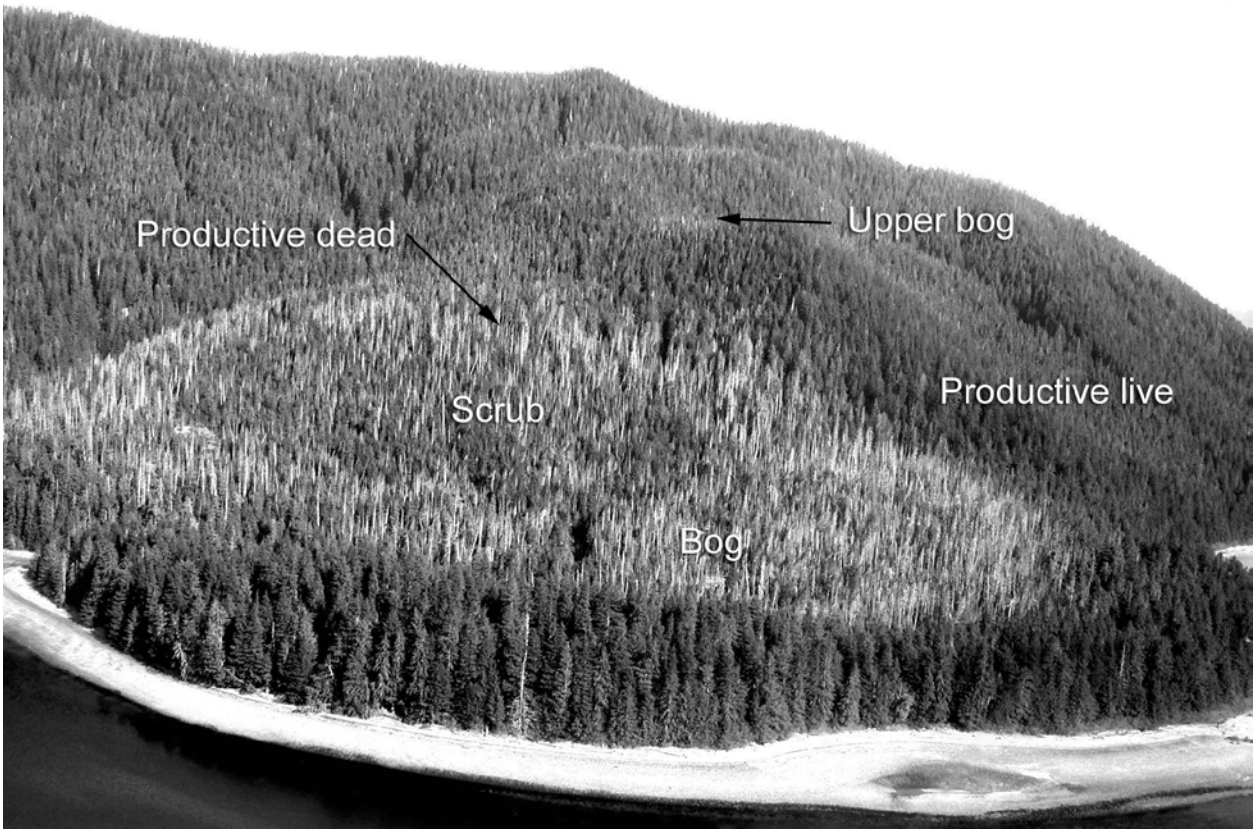

Figure 14: The Poison Cove study site illustrating an area of intense yellow-cedar decline. Note the circular area of decline, with dead trees on the inside and dead and dying trees on the perimeter. This inside-out trend in decline is related to a hydrologic gradient, where cedar in wetter soils suffer decline first, followed by those on the outer edges. Source: D'Amore and Hennon 2006.

In order to collect accurate, targeted, site-specific data, researchers used automated snow cameras to record daily snow measurements. Soil temperature monitors were also included at some sites in order to map the association between soil temperature and snow depth.

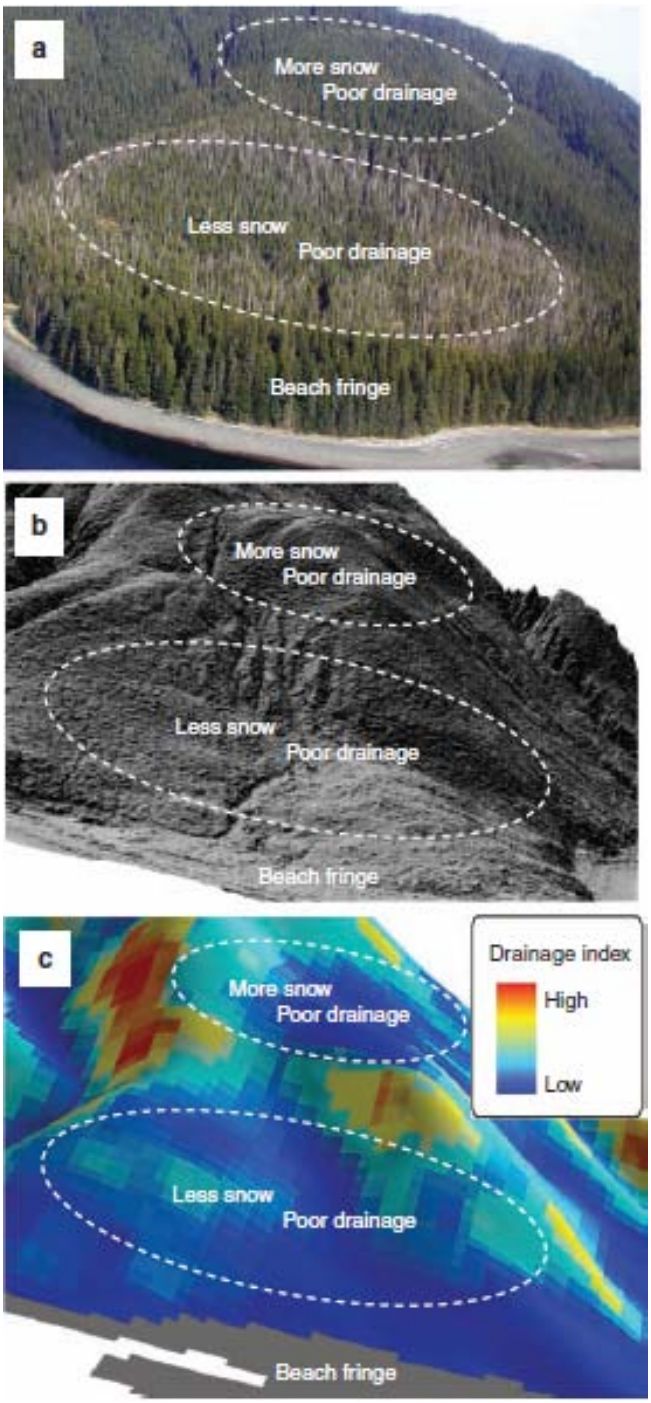

Figure 15: (a) Patch of dead and dying yellow-cedar and the surrounding forest. (b) LIDAR (light detection and ranging)- derived high-resolution digital elevation terrain model. (c) Drainage classes at Poison Cove watershed, Chichagof Island, Alaska. Yellow-cedar has died in the less-snow, poor-drainage areas, but trees remain alive in the more-snow, poor-drainage area at slightly higher elevation that has

evidence of snowpack persisting later in the spring, which protects shallow roots from freezing injury. Source: Hennon et al. 2012.

When the maps of dead/dying and live cedar are overlayed with site-specific landscape variables, the results clearly indicate once again the determining role of snow in protecting yellow-cedar from freezing injury. For example, measurements of snow pack at the Poison Cove study site find that live, non-declining yellow-cedar are protected by a thick layer of snow through April and occasionally into May (Figure 15), while yellow-cedar at a similar site where snow cover was no longer present were suffering decline.

This research was useful for associating yellow-cedar decline with environmental factors, but has also proven useful for predicting future trends in yellow-cedar decline, and determining where active-management might be most effective. Further discussion occurs in Part III and Part IV of this petition.

III. YELLOW-CEDAR MUST BE LISTED AS THREATENED OR ENDANGERED UNDER THE ESA

Under the ESA, a species is "endangered" if it is "in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1531(6). A species is "threatened" if it is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C. § 1531(20). In determining whether a species is threatened or endangered, USFWS must consider these five listing factors:

> (A) the present or threatened destruction, modification, or curtailment of its habitat or range;
>
> (B) overutilization for commercial, recreational, scientific, or educational purposes;
>
> (C) disease or predation;
>
> (D) the inadequacy of existing regulatory mechanisms;
>
> (E) other natural or manmade factors affecting its continued existence.
>
> (16 U.S.C. § 1533(a)(1)(A)-(E); 50 C.F.R. § 424.11(c)(1) - (5).)

This section describes threats to the yellow-cedar tree in the context of the five listing factors and demonstrates that the yellow-cedar is in danger of extinction within all or a significant portion of its range, or will be in the foreseeable future. The primary threat to yellow-cedar trees is the destruction and modification of habitat from greenhouse-gas-driven climate change. Adding to this threat is the current overutilization of yellow-cedar by the old-growth timber industry in southeast Alaska. Physiological and ecological attributes of yellow-cedar make it extremely unlikely that the species can adapt to changing habitats or migrate to new ones, and existing regulatory mechanisms are inadequate to address threats from greenhouse gas emissions and from unsustainable logging.

A. THE PRESENT OR THREATENED DESTRUCTION, MODIFICATION, OR CURTAILMENT OF HABITAT OR RANGE

Climate change is driving the fine-root death that results in yellow-cedar decline (Oliver and Hennon 2013, Hennon et al. 2012). Anthropogenic greenhouse gas emissions are rapidly altering the climate of southeast Alaska and coastal British Columbia, causing progressively widespread yellow-cedar decline. Due to climate change, scientists project that the frequency of occurrence of yellow-cedar trees will decrease by as much as 75% by 2085 (Hamann and Wang 2006).

Yellow-cedar decline is the result of freezing injury to the tree's fine roots when soils drop below the tree's physiological cold tolerance threshold during periods of low snow cover, during spring freeze-thaw cycles, in areas where the soils are wet, or where a lack of canopy cover creates a microclimate that encourages penetration of freezing temperatures into the soil surface.

Climate change will increase the intensity and spread of yellow-cedar decline that is caused by spring freezing injury through three primary mechanisms: (1) increased and earlier spring freezing events, (2) warmer winters leading to reduced snow cover, and (3) variations in soil drainage.

1. The Earth's Changing Climate

Human activities continue to release massive amounts of greenhouse gases into the atmosphere, primarily through the burning of fossil fuels, cement manufacturing and deforestation, with the rate of emissions increasing by 3% each year, well above that predicted under most climate scenarios (Hansen et al. 2013).

The last twenty years have been the warmest period in the entire global instrumental temperature record. The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) concludes that most of the observed global temperature increase since the mid-20th century is due to increases in anthropogenic greenhouse gas concentrations.

Plant health is predicted to suffer under climate change through a variety of mechanisms, from accelerated pathogen evolution and northward spread of pathogens, to increasing abiotic stress due to mismatches between biota of an ecosystem and the climate, such as earlier springs and changes in freeze-thaw cycles (Ahanger et al. 2013).

Anthropogenic greenhouse gases are projected to result in air temperature warming of more than 3 degrees C by 2100, while temperature increases of just 1.5 – 2.5 degrees C are projected to result in significant ecological consequences (IPCC 2011). The rate of climate change projected to occur over the next century is an order of magnitude greater than the average rate occurring since the last glacial maximum. Many species of plants and animals will be incapable of successfully tracking and adapting to such changes through migration to more suitable habitats (Spittlehouse 2008, Aitken et al. 2008).

Species that will be the most vulnerable to climate change will be those that are large and long-lived, with specialized habitats, limited mobility, and low regeneration rates (Lenoir et al. 2008).

Further, trees that have late sexual maturity, with small populations and fragmented ranges, are less likely to be able to adapt or migrate in response to climate change (Aitken et al. 2008).

2. Climate Change in Southeast Alaska and British Columbia

Warming associated with climate change is amplified in northern regions. Over the past 50 years, high-latitude regions have warmed more than any other region worldwide. Future increases are projected to continue to be proportionally greater at higher latitudes, with Alaska warming at least twice as much as the rest of the world during the 21st century (Kattsov and Kallen 2005). (Figure 16). Under current emissions scenarios, average annual temperatures in Alaska are projected to rise by an additional 1 to 2 degrees C by 2050, and another 3 to 4 degrees C by the end of the century. Even with substantial emission reductions, average temperatures in Alaska are projected to warm by 2 to 3 degrees C by the end of this century (Chapin et al. 2014).

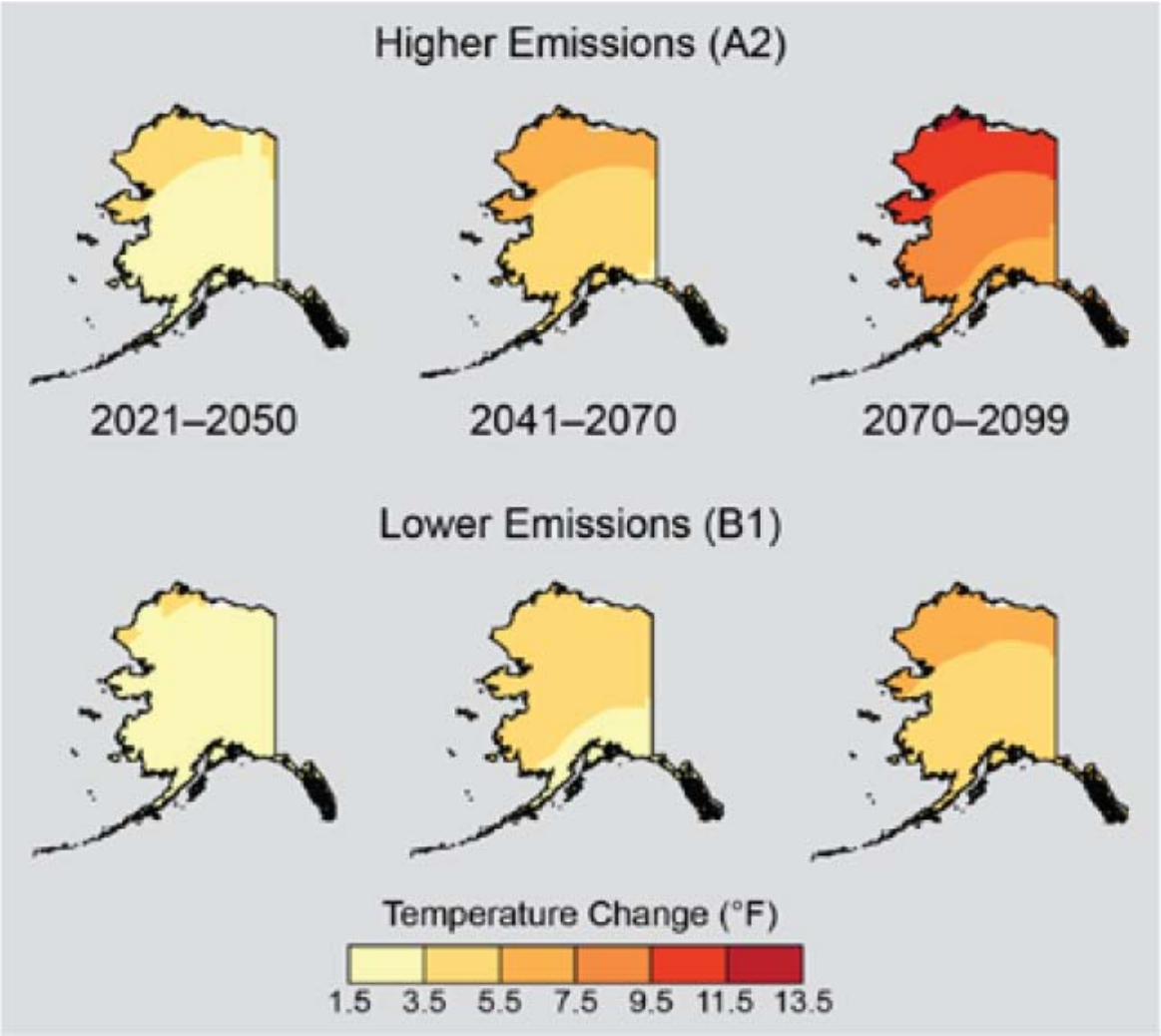

Figure 16: Northern latitudes are warming faster than temperate regions, and Alaska has already warmed much faster than the rest of the country. Maps show changes in temperature relative to 1971-1999, projected for Alaska in the early, middle, and late parts of the century, if heat trapping gas (GHG

emissions) continue to increase (higher emissions A2), or are substantially reduced (lower emissions, B1). Source: Chapin et al. 2014 as adapted from Steward et al. 2013.

Average precipitation in Alaska is projected to increase, but with increased evaporation actually reducing water availability for most of the state. As a result of these changes, the risk of wildfire and insect outbreaks will increase (Chapin et al. 2014).

Warming temperatures pose a serious threat to areas of Alaska where average temperatures are very close to freezing, as is the case in southeast Alaska. Here, a small change in temperature can have major impacts. Juneau's average winter temperature rose by 0.9-1.7 degrees C over the past 60 years (Figure 17; Kelly et al. 2007), with 2013 being the first year in which the average temperatures remained above freezing. January 2014 was the second warmest since 1944, while the average daily low of 33.5 degrees F was the warmest on record.

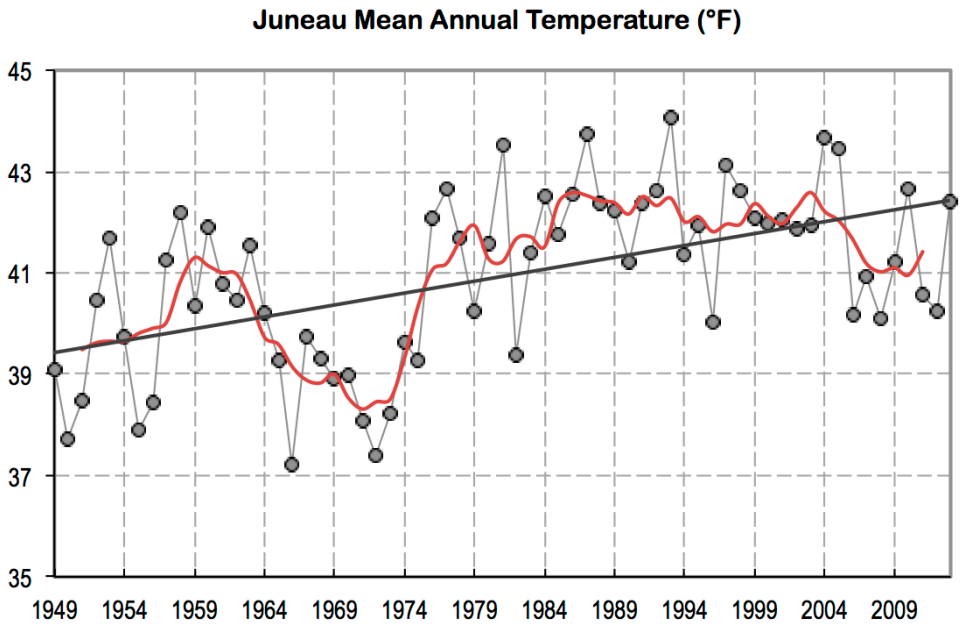

Figure 17: Mean annual temperature in Juneau from 1949 to 2013. Source: Alaska Climate Research Center

The reduction of the length of the snow season in Alaska (Liston and Hiemstra 2011) will impact timing of spring warm-up and periods of freeze thaw. The average winter snowfall at sea level in the City and Borough of Juneau decreased from 277 cm to 236 cm over the past 60 years. However, overall precipitation increased, with a shift to more rain. Average winter precipitation including rain and snow (reported as inches of liquid water), increased by 6.6 cm or more (Kelly et al. 2007). For example, precipitation in Juneau in January 2014 totaled 25.8 cm, nearly double the normal amount. This is a new record, but snowfall constituted only 11.9 cm, which is only 17% of the normal amount (Alaska Climate Research Center 2014).

Climate models predict that warming will continue under future greenhouse gas emissions scenarios. Overall, models predict that the city of Juneau will have warmer and wetter weather, especially in fall and winter. The IPCC predicts a temperature increase of 5.5 degrees C for

southeast Alaska by the end of the 21st Century, accompanied by 50 to 70 fewer days below freezing per year (Kelly et al. 2007).

Climate change in British Columbia will follow a similar trend. Mean annual temperature and precipitation are expected to increase on average by as much as 4 degrees C, and by 16% respectively by the 2050s, with the largest temperature increase in coastal areas, where yellow-cedar decline is already occurring (Murdock and Spittlehouse 2011). As the climate of coastal British Columbia has warmed, there are fewer days with temperatures below freezing (Daniels et al. 2011). These above-average temperatures result in more rain than snow, a reduced snowpack and earlier snowmelt (Mote et al. 2005). The intensities and frequencies of extreme climatic events, such as late-winter thaws and freezes, have increased disproportionally relative to climatic means.

Studies show that yellow-cedar productivity is influenced by the maximum winter temperature, with cooler values resulting in the highest productivity (Russell and Krakowki *in* Harrington et al. 2010). Summer moisture, snowpack, and spring and autumn temperatures are also strong drivers of productivity, correlating with both growing season length and early and late frost damage to the fine root system.

Climate change will substantially increase the number of frost-free days in the forests of coastal Alaska and British Columbia (Meehl et al. 2004), with precipitation falling as rain rather than snow due to a small shift in temperatures that will push the average winter temperature above freezing. At low-elevation weather stations in southeast Alaska, temperatures have historically hovered just around freezing during the winter months (Beier et al. 2008). A shift to above-freezing winter temperatures will have widespread and major consequences for yellow-cedar.

3. Climate Change and Yellow-cedar Decline

Worldwide, tree distribution is primarily shaped by both climate and soil properties, and climate change is the driving factor behind the precipitous rate of yellow-cedar decline (Hennon et al. *in* Harrington 2010; Mathys et al. 2014).

Climate change affects a tree species in four major ways. First, it can significantly reduce the tree's capacity for growth and reproduction. Second, climate change can result in mismatches in climatic cues for physiological responses. This is one of the primary reasons for yellow-cedar die-off, where the timing of winter/spring dehardening of fine roots no longer corresponds with climate-associated snowcover and spring thaws. Thus, the tree is unable to adapt physiologically to shifts in the freeze-thaw cycle due to climate change. Third, climate change, such as warming and changes in precipitation that stress a tree species, may also favor the spread and growth of insect and fungal pathogens, with cumulatively lethal effect. Some examples of climate-dependent increase in disease and infestations are increased fungal pathogens and spruce beetle outbreaks. Finally, a changing climate increases the frequency and intensity of total area of forest fires (Bunnell and Kremsater 2012). Fire is not considered a concern for yellow-cedar throughout most of its range, but may threaten trees growing in the lower 48 states and in southern British Columbia.

The Forest Service has determined that over 70% of yellow-cedar trees have died in stands with yellow-cedar decline and that global warming over the next 100 years will greatly increase the area in which trees will suffer decline symptoms (Hennon et al. 2008, Forest Service 2013a). Long-lived conifers may be especially maladapted to a changing climate, and are unlikely to be able to simply move northward or upward with climate change, because soil formation at high latitudes and high altitudes is slow (Bunnell and Kremsater 2012). Additionally, because yellow-cedars are so long-lived, and very slow growing, projections for decline must be made for more than 100 years in the future. Fragmentation of the landscape due to timber harvest, human development, or road building may further prevent species adaptation and migration to more suitable regions as a response to climate change (Lenoir et al. 2008, Bunnell and Kremsater 2012).

As a tree that depends on exceptional longevity, resistance to pests, and adaptation to marginal site conditions, the yellow-cedar has little potential to move or adapt to rapidly changing climatic conditions. Historically, mature yellow-cedar trees have a very low mortality rate, and the widespread area of yellow-cedar decline means that the species is unlikely to survive into the species' biologically appropriate future if anthropogenic greenhouse gas emissions continue at their current rate. In fact, the tree is expected to suffer a 75% decrease in frequency by 2085 (Hamann and Wang 2006). This will be followed by a more gradual decline for remaining trees, where existing trees in some areas that remain suitable for a longer period of time will live out their lifespan but with little or no regeneration, resulting in slow but inevitable extirpation of the species. A catastrophic disease event, enabled by climate change, could result in additional precipitous declines in the future (Sturrock et al. 2011).

a. Reduced Snow Cover

A key threat to yellow-cedar habitat has been reduced snow cover accelerated by climate change. Snow insulates soil and acts as a buffer between freezing and thawed soil temperatures. The presence or absence of snow is closely linked to historical yellow-cedar distribution, and to current observations of yellow-cedar decline (also see Section II). When snow is not present, soil temperatures often drop below the lethal threshold (-5 degrees C) in the shallow-rooting zone for cedar (7. 5 cm depth) during late winter and early spring (Hennon et al. 2010). When snow is present, shallow soils retain a temperature just above freezing. Yellow-cedar decline and the original post-Holocene era distribution of yellow-cedar are linked to snow cover and drainage conditions (Figure 18). Clearly, the presence of snow is critical to preventing fine-root freezing injury.

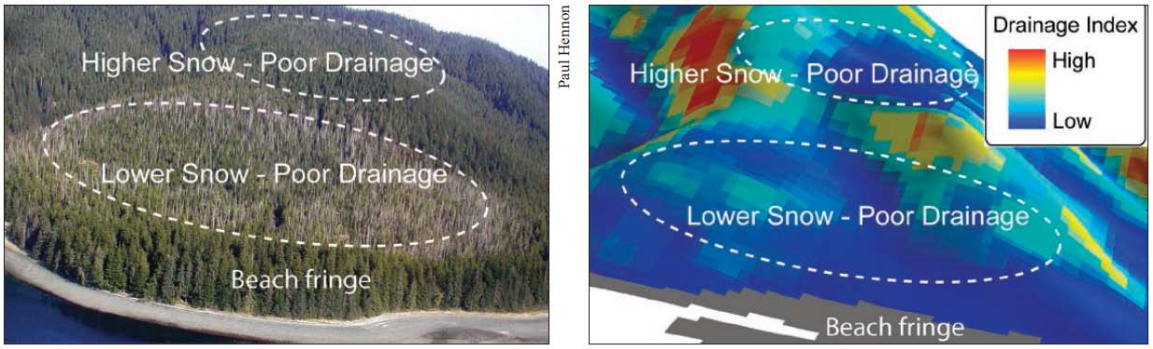

Figure 18: Drainage classes at Poison Cove watershed on Chichagof Island, Alaska. Yellow-cedar trees have died in the areas with less snow and poor drainage. Trees remain living in areas with more snow and poor drainage at slightly higher elevation where the snowpack persists later in the spring and protects shallow roots from lethal freezing injury. Source: Oliver and Hennon 2013.

Research finds that snow protects yellow-cedar from decline by delaying the dehardening process and/or protecting fine shallow roots from freezing. As little as several centimeters of snow may be all that is required to buffer the soil temperature enough to prevent root injury. In a study investigating the effects of simulated snow cover on yellow-cedar roots, Schaberg et al. 2008 found that the roots of yellow-cedar seedlings could tolerate soil temperatures down to -5 °C. When soil temperatures fell below this threshold on plots without simulated snow, roots were severely injured and seedlings died (Figure 19; Schaberg et al. 2008).

Figure 19: Insulating presence of snow protects seedlings from freezing injury. Blocks of seedlings on the left and middle were protected by perlite to mimic snow. These seedlings remained healthy because soil temperatures never dropped below -5 degrees C. Seedlings on the right were unprotected and the soil dropped below the temperature threshold of mortality. Source: Forest Service at http://www.fs.usda.gov/detail/r10/forest-grasslandhealth/?cid=fsbdev2_038760

Thus, reliable snow cover from February through March or April allows yellow-cedar to survive a period of potential vulnerability during spring freezing episodes. A loss of snow cover during these time periods makes the trees vulnerable to freezing injury and death. When snow is present after the last hard freeze in the spring, this provides protection for yellow-cedars from root injury.

A lack of insulating snowpack in spring can explain the broad spatial distribution of yellow-cedar decline on the landscape (Figure 19; Hennon et al. 2008). In areas in which the level of snow cover is insufficient to protect roots from freezing injury, suitable habitat for yellow-cedar is limited to moderately- to well-drained soils where roots can penetrate to deeper soil horizons and thus avoid freezing injury. In areas with adequate snow cover yellow-cedar trees can continue to survive at poorly drained sites, unless they are outcompeted.

Normally, snowpack insulates fine roots from extreme cold. When snowpack is absent, freeze events are fatal to the unprotected roots of yellow-cedar. Snow, and reduced snow cover, has a major influence on yellow-cedar health and decline (Figures 19 and 20). Snow can be modeled at the regional or small island spatial scale. Mapping of temperature/snowpack and topographic layers clearly demonstrate that warming temperatures—and snowpack—are critical factors in yellow-cedar decline.

In western North America, regional warming resulting in decreased snowpack and consequent increased drought stress appears to be the dominant cause of increasing tree mortality, especially of large trees. In a long-term study from 1977 to 2007, van Mantgem et al. (2009) found that a temperature increase of 1 °C across the coast of British Columbia was enough to significantly reduce winter snowpack, causing earlier snow melt and increasing the duration of summer droughts in the region (van Mantgem et al. 2009). As discussed in great detail throughout this petition, the current consensus of the scientific community is that yellow-cedar decline is a direct result of regional climate change, specifically loss of snow cover and fine root freezing (Beier et al. 2008). Figure 20 illustrates the link between snow cover and yellow-cedar decline, with areas of red indicating yellow-cedar mortality.

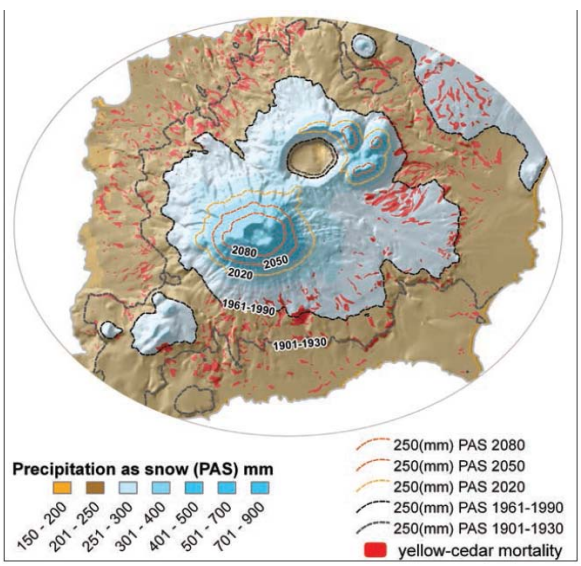

Figure 20: The distribution of yellow-cedar decline on Mount Edgecumbe near Sitka, Alaska, is mapped from color infrared photography. The annual precipitation as snow between 1961 and 1990 is shown with colors indicating the values above (gray, protects yellow-cedar) or below (dark gray, inadequate) the threshold of 10 inches of annual precipitation as snow. Forecasts for this modeled snow threshold are indicated by dashed lines. Source: Dustin Wittwer *in* Oliver and Hennon 2013.

Figure 21 below projects snow decline in the future, and how a loss of snow-cover may impact yellow-cedar. This figure demonstrates that yellow-cedar will decline significantly under future climate change scenarios, occupying very little of its current range and even less of the range it once occupied in the late 1880s and early 1900s. By the year 2080, yellow-cedar will be restricted to just fragments of suitable habitat.

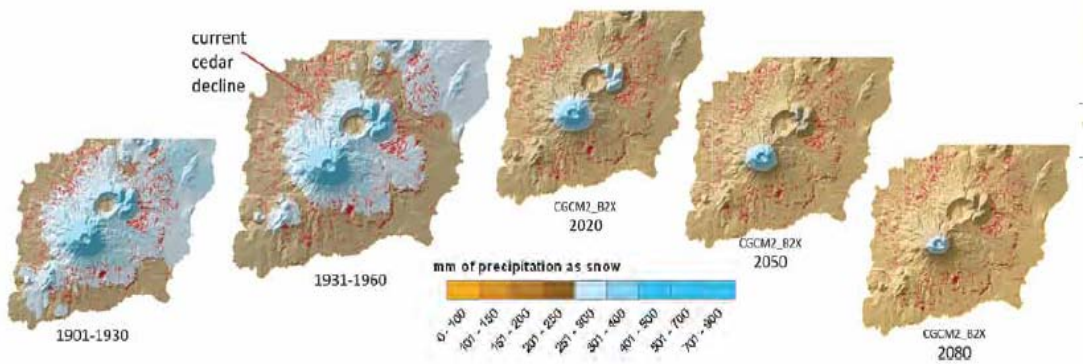

Figure 21: Past and projected (CGMC2 B2 scenario shown here) annual snow accumulation using PRISM data, with downscaling by an elevational adjustment (Wang and others 2006). Light blue zones represent sufficient snow to protect cedar from spring freezing injury (annual precipitation as snow = 2500 mm); current areas of cedar decline mapped from aerial photographs are shown in red. Note the abundance of habitat protected by snow (shades of blue) in the early 1900s and progressive shrinking of habitat through this sequence, to being nearly absent by 2080. Data sources: PRISM Group, Oregon State University; IPCC 2001. Source: Hennon and Wittweb 2013.

b. Soil Type and Drainage

In southeast Alaska, slope and soil properties, including peat accumulations, produce gradients of soil drainage that are largely responsible for driving forest productivity. Topography, moisture, elevation, and humus quality are the primary environmental variables that determine species composition in the forest of southeast Alaska (Ver Hoef et al. 1988). Forest types in the area range from large-stature, closed canopy forests on well drained soils to stunted, open canopy forests on saturated organic soils (Ver Hoef et al. 1988).

Historically, yellow-cedar has preferred wet soils, typically reaching its greatest abundance here relative to other trees (Hennon et al. 2008). The wet soils in yellow-cedar habitat were probably present several thousand years before the start of yellow-cedar decline, when cool and wet climatic conditions along the Pacific coast facilitated extensive peat development (Heusser et al. 1985). The cool, moist climate during the late Holocene created the bog and forested wetlands that favored the establishment of yellow-cedar, which was competitive at those sites due to its fine-root system's ability to access nitrogen (D'Amore et al. 2009). Open canopy conditions on boggy sites created a more extreme microclimate, allowing for greater warming during late winter and early spring, but also meaning that during cold temperatures, freezing conditions were able to penetrate more deeply into the soil (Hennon et al. 2010).

Variations in soil drainage play a critical role in yellow-cedar decline and health, and are also influenced by precipitation changes due to climate change. Current yellow-cedar decline is most strongly associated with trees growing on wetter soils, with a soil saturation threshold found to separate living and dead forests (Figure 22). Past a certain threshold, soils become more favorable to other tree species, which outcompete yellow-cedar for growth and space. Thus, as the climate warms, the specialized niche of soils where yellow-cedar is able to survive freezing, but still competitive with other tree species, becomes increasingly rare.

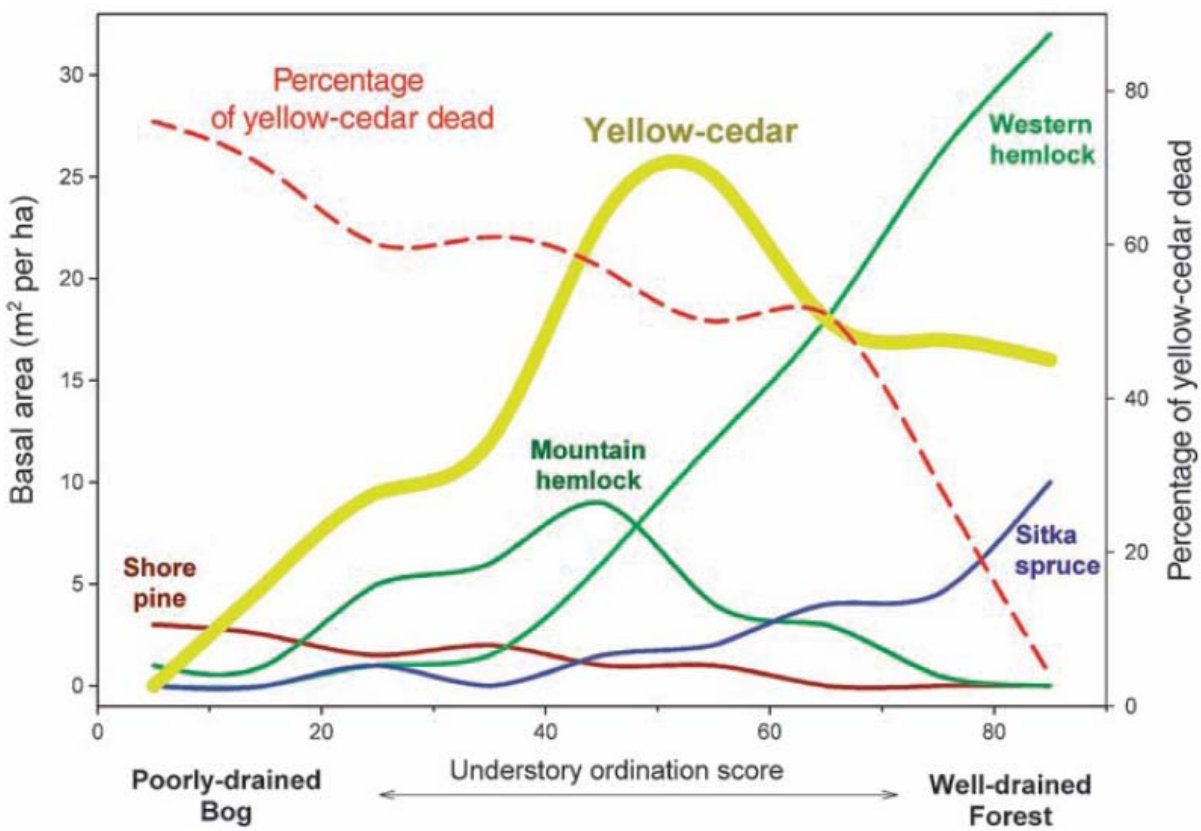

Figure 22: Yellow-cedars' optimum edaphic (soil-related) niche and the occurrence of yellow-cedar mortality along the soil-drainage gradient. The percentage of dead yellow-cedar basal area reveals an apparent threshold of drainage, beyond which yellow-cedar is healthy but outcompeted by faster-growing tree species. Source: Hennon et al. 2012.

The link between site drainage and yellow-cedar decline was noted early in aerial photographs compiled from 1927, 1948, 1965 and 1976, that show the peripheral boundaries of yellow-cedar mortality expanding over a 60-year period at all sites (Hennon et al. 1990). Mortality spread from poorly-drained sites to sites with better drainage, generally upslope (Wooton and Klinkenberg 2011).

Microclimate changes due to reduced canopy cover play an important role in decline. Tree growth rates, standing biomass of live trees, and canopy cover are all reduced in wet soils, due to less nutrient cycling and more shallow rooting depth (D'Amore and Hennon 2006). Hennon et al. (2010) found that estimated canopy cover at a site was highly correlated to basal area of live trees for all species along a soil drainage gradient. Reduced canopy cover was associated with

more extreme microclimates on the ground, exacerbating extreme highs and lows in temperature. As more yellow-cedar trees die, canopy cover decreases, further increasing the high-low temperature extremes on the ground that promote yellow-cedar decline.

Thus, there is a tight feedback related to wet soils and yellow cedar decline. In wet soils with historically little canopy cover, the lack of canopy cover causes small shifts in microclimate that lead to yellow cedar decline, resulting in further reduced canopy and the outward spread of yellow-cedar decline (Hennon et al. 2010). This can be visualized in Figure 15, which shows the typical inward-out spread of yellow cedar decline at a wet, low-elevation site.

Soil type and drainage should be introduced into models at the fine spatial scale. Yellow-cedar trees are primarily found in an area called the Marine West Coast Forest, the most productive forested zone in the Pacific Northwest, with high annual precipitation. Temperate coastal forests contain soils that vary from infertile, well drained shallow soils to nutrient-rich bogs with high organic matter content (Mathys et al. 2014). Yellow-cedar in well-drained soils appears resilient to decline, even when snow-cover is inadequate for yellow-cedar growing in wet soils, although competition with other tree species may limit the tree's establishment. Yellow-cedar decline is more severe and more strongly linked to snow cover at wet and boggy sites.

c. Analogous Species: Yellow Birch

In a similar well-documented climate-related decline, extensive dieback due to climate change has also been recorded for yellow birch (*Betula alleghaniensis* Britt.) in the Northeastern United States. Yellow birch decline occurs due to changing spring conditions, where prolonged winter thaws are followed by sharp freezing temperatures, which result in fine-root damage and tree death. Yellow birch decline has resulted in a 19% loss of the growing stock of the tree in North America (Ward and Stephens 1997), with major economic losses. As with yellow-cedar, yellow birch has a shallow fine root system, and is especially vulnerable to freezing injury when snow cover is absent or inadequate (Bourque et al. 2005). Also, similar to yellow-cedar, dieback first began in the northern parts of the tree's range, with up to 95% of trees affected (Bourque et al. 2005). Another economically and culturally important tree of northeastern North America, sugar maple (*Acer saccharum*), is projected to decline by over 90% by 2100 due to climate change (Iverson and Prasad 2001).

These species show that there is strong precedent for a climate-change link to extensive tree death, especially for tree species found at high altitude, northern, and/or marginal habitats, where a competitive strategy of shallow fine-roots and early dehardening are used to take advantage of early spring nutrient uptake. This type of strategy also makes trees especially vulnerable to reduced snow cover. Like yellow-cedar, yellow-birch shows few signs of adaptation or migration in response to climate change.

4. Projected Range-wide Decline of Yellow-cedar

a. Current Decline

Yellow-cedar decline in Alaska occurs most intensely at lower elevations and on wetter soils, with little decline above about 200 m (Hennon and Wittweb 2013). Meso-scale mapping shows a correlation between decline and slope aspect, with yellow-cedar decline occurring at higher elevations on warmer southerly aspects (Hennon and others 2010, Lamb and Wurtz 2009), and decline is more strongly associated with gentle slopes compared to steep slopes (D'Amore and Hennon 2006, D'Amore and others 2009). Decline is strongly associated with snowpack, soil and air temperatures, and wetter soils.

b. Modeling and Projecting Yellow-cedar Decline

Most climate change scenarios predict a dramatic reduction in yellow-cedar range. The response of vegetation to climate change is likely to be complicated with varying outcomes; however, generally species' ranges are expected to shift northward and upward in elevation to cooler areas, with recent studies documenting these patterns (Aitken et al. 2008, Lenoir et al. 2008). This shift may be difficult if higher elevation soils or conditions are not appropriate for yellow-cedar, which requires a highly specialized ecological niche to survive. Thus, models based merely on future "climatic envelopes" do not adequately assess the future survival of the species, but merely provide a rough projection of the future.

Snowpack and drainage are the two controlling factors to determine landscape suitability for yellow-cedar, and are essential factors to developing management strategies for long-term conservation of yellow-cedar (Oliver and Hennon 2013). Indeed, there is a close association between yellow-cedar decline and the lowest snow accumulation zone (Schaberg et al. 2008, Hennon et al. 2010, Oliver and Hennon 2013). Mapping shows that there is massive projected range-wide decline by 2080, as projected snow cover greatly declines (Oliver and Hennon 2013).

Climate change is likely to proceed at a pace that exceeds the ability of yellow-cedar to regenerate at more suitable locations. For example, Hamann and Wang developed a model based on climatic factors alone, which predicts a 75% decline in the frequency of yellow-cedar by the year 2085 (Figure 23), and matches the results of the PRISM snow-accumulation model (Hamann and Wang 2006). The authors of this study note that modeling is based merely on climate profiles, and does not consider other important factors for the establishment of yellow-cedar such as adequate snow cover, acidic or boggy soils, soil drainage, and complications to regeneration such as Sitka deer browsing, or competition with other tree species. As such, it is more useful for predicting how rapidly the climate in areas where yellow-cedar are now living will change to the point of initiating yellow-cedar decline, than for predicting where yellow-cedar may regenerate in the future.

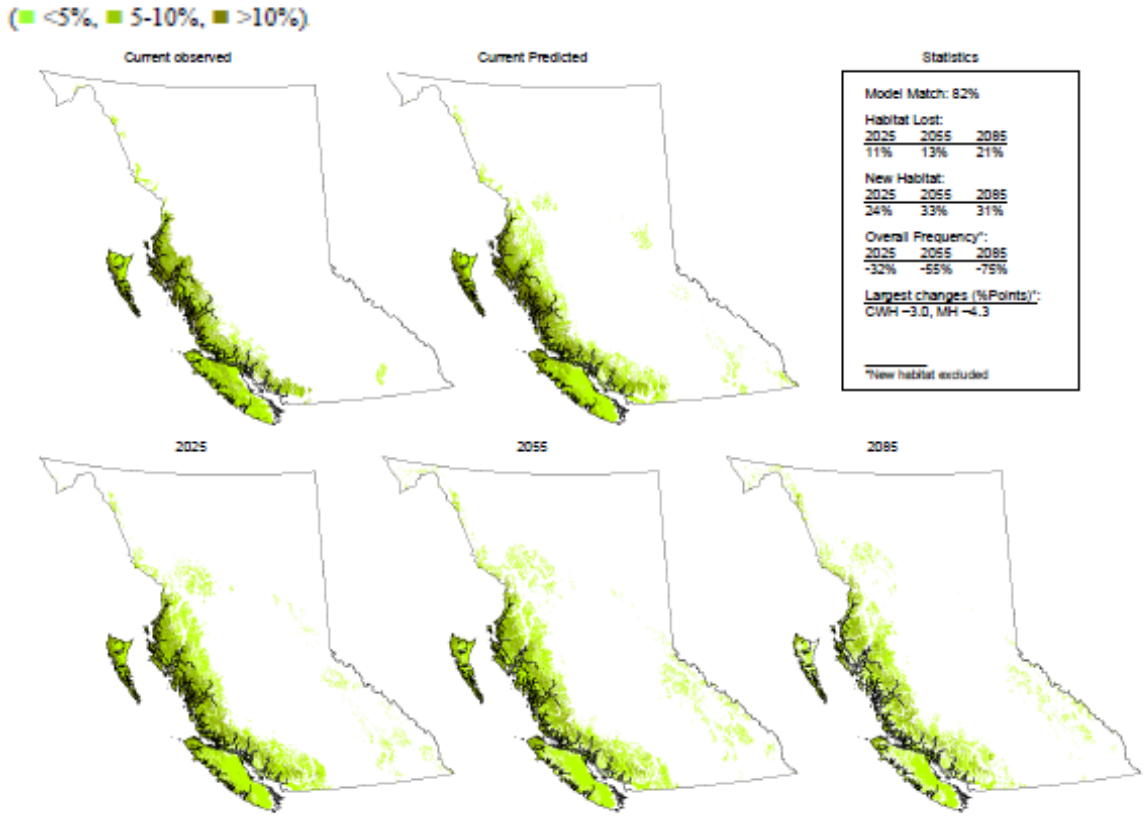

Figure 23: Observed and predicted frequency for yellow-cedar. "Model Match" is the correctly predicted habitat, based on current climate (1961-1990 normals) as a percentage of the observed species range. "Habitat Loss" is the area predicted as unsuitable habitat for the species under climate change as a proportion of the total current habitat. "New Habitat" is the area predicted as suitable habitat under climate change, where the species is currently not present. The authors of this study note that a species is unlikely to colonize most of this area within a few decades. "Overall Frequency" is a weighted average of predicted frequency changes where the species is already present. This excludes new habitat areas, as it is unlikely that yellow-cedar will colonize most of this area. Source: Hamann and Wang 2006.

5. Habitat Threats Summary

Greenhouse-gas-driven climate change is causing significant and widespread changes to yellow-cedar habitat throughout its range. The species cannot adapt to these rapid changes, is as apparent from its current decline. Thus, yellow-cedar is in danger of extinction throughout all or a significant portion of its range as a result of habitat modification.

B. OVERUTILIZATION OF THE SPECIES FOR COMMERCIAL, RECREATIONAL, SCIENTIFIC, OR EDUCATIONAL PURPOSES

Logging threatens the continued survival of yellow-cedar, particularly because it targets long-lived trees that may be able to withstand climate change impacts while greenhouse gas emissions are reduced. These trees would provide an important source of genetic material for future regeneration of the species. In the 2008 Tongass Land Management Plant (TLMP), the Forest Service developed an integrated old-growth conservation strategy of large, medium, and small reserves to protect and maintain old-growth habitat in southeast Alaska. The goal was to maintain the mix of habitats at different spatial scales capable of supporting the full range of naturally occurring flora, fauna, and ecological processes (Forest Service 2008). However, the large scale and rapid loss of yellow-cedar trees in landscapes that are protected from timber harvest demonstrates the inadequacy of current measures in the TLMP to protect cedar habitat types from climate change (Hennon et al. 2008). Moreover, healthy yellow-cedar trees continue to be logged in disproportionally high numbers under current management. Approximately 274,377 total acres, or 10% of the Tongass National Forest is expected to be subject to timber harvest in the next 100 years (Johnson 2013). There is great pressure on yellow-cedar for timber harvest due to the wood's desirable characteristics and high value at market (Figure 25; Green et al. 2002). Yellow-cedar constitutes just 9% of the growing stock on unreserved national forest land in southeast Alaska (van Hees and Mead 2005), yet it accounts for a disproportionately high percentage of timber harvest. This "high-grading" of yellow-cedar is unsustainable and is accelerating the species' decline, and limiting any chance of future recovery.

1. The Tongass National Forest Timber Sale Program Targets Areas with Yellow-Cedar for Large Timber Sales

Western redcedar and yellow-cedar drive the layout of most major timber sales in the Tongass (Carstensen and Christensen 2008, Forest Service 2008) because of their higher economic value, as shown in Figure 25 below. From 2010 through 2013, the average Forest Service sale price for yellow-cedar was $140.23 per thousand board feet (MBF). Western redcedar is the second most valuable species, with an average sale value of $116.21 per MBF from 2010-2013 (Carstensen and Christensen 2008, Forest Service 2008, Forest Service Cut and Sold Reports FY 2010-2013 2013). For comparison, western hemlock sold for a mere $3.76 per MBF. These price differentials are significant because Congress has prohibited the Alaska Region of the Forest Service from advertising deficit timber sales,[1] which has greatly reduced the Tongass National Forest's ability to sell timber (Housely et al. 2007). As a result, timber sale planners often target yellow-cedar for removal because it is the only species that generates positive appraisals across the Tongass National Forest (Housely et al. 2007). Conversely, western hemlock, which comprises roughly half the volume in an average Tongass National Forest timber stand, is not worth the cost of cutting (Housely et al. 2007).

[1] *See, e.g.* FY 2003 Interior and Related Agencies Appropriations Act, § 318, PL 108-7; Consolidation Appropriations Act of 2012, PL 112-74; 125 STAT 1042, § 414 ("No timber sale in Alaska's Region 10 shall be advertised if the indicated rate is deficit").

A significant factor that increases the value of yellow-cedar is a Congressional exemption from the domestic processing requirements that apply to other Tongass National Forest tree species. This exemption allows timber operators to freely export unprocessed Alaska yellow-cedar trees to foreign purchasers.[2] Timber markets favor unprocessed raw log exports, and Tongass National Forest timber sale purchasers are likely to export as much as they can.[3] The Forest Service acknowledges that the premium value for yellow-cedar and the Congressional export authorization ensure that yellow-cedar always has the highest value in a timber sale (Wilson 2002). Thus, because of the prohibition on deficit sale advertisements and the particularly high value of yellow cedar for raw log export markets, Tongass National Forest timber sales must target a combination of western redcedar and yellow-cedar in order to generate positively appraised timber sales.

This dynamic leads to yellow-cedar trees being disproportionately logged, in a strategy dubbed "high-grading." In 2002 and 2006, the Forest Service evaluated the amount of cedar scheduled for removal in timber sales in response to public concerns about high-grading yellow-cedar and western redcedar (Wilson 2002). The report estimated that although yellow-cedar comprised only 9.7% of the net volume of growing stock on timberlands and western redcedar comprised only 5.9%, the agency was removing 19.6% of each species (Wilson 2002).

The agency provided several interrelated explanations for the higher levels of cedar harvest. First, the report indicated that the agency was high-grading both cedar species on a geographic scale because timber harvest was occurring primarily (94% of the volume) in the southern portion of the Tongass National Forest, where there is a higher percentage of both cedar species (Wilson 2002). In the northern Tongass, yellow-cedar comprises 7% of the net volume of growing stock and there is no western red cedar, while yellow-cedar comprises 13.7% of the net volume of growing stock in the central Tongass and 9.5% in the southern Tongass (Wilson 2002). In 2007, the agency conducted an economic analysis of timber sales that illustrated that the Tongass National Forest needed to target a combination of redcedar and yellow-cedar on the southern and central Tongass in order to generate positively appraised timber sales (Housely et al. 2007). Since that time, nine of the ten largest Tongass National Forest timber sales have been planned by southern and central Tongass ranger districts.

Second, the report indicated that the agency was high-grading both cedar species at a finer scale because timber sale planners were selecting project areas with higher than average cedar components, or designating the removal of a greater proportion of cedar than naturally occurred within a project area in order to address timber sale economics concerns (Wilson 2002). For example, many of the largest timber sales occur in the Thorne Bay Ranger District, which is located within the southern Tongass inventory area where yellow cedar-comprises 9.5% of net volume of growing stock (Wilson 2002). The two largest timber projects implemented by the Tongass National Forest over the past five years – the 2009 Logjam Timber Project and 2013 Big Thorne Project – also occur within the Thorne Bay Ranger District. The species composition for the Logjam project was comprised of 11% yellow-cedar and 34% of both cedar species (Sheets 2009). Logjam Timber Project cutting units specifically targeted healthy yellow-cedar

[2] *See, e.g.* FY 2003 Interior and Related Agencies Appropriations Act, § 318, PL 108-7;

[3] USDA Forest Service. 2012. Tonka Project Final Environmental Impact Statement, Volume I at 3-16-17. Tongass National Forest, Petersburg Ranger District. R10-MB0705c. Ketchikan, AK: Alaska Region. March 2012.

stands occurring in areas of adequate soil drainage where cedar decline is less likely to occur (Forest Service 2009a). For the 2013 Big Thorne Project, the project area species composition was comprised of 17% Alaska yellow-cedar and 28% of both cedar species (Forest Service 2013b).

Similarly, ongoing or planned projects in central Tongass ranger districts also occur in areas with disproportionately high levels of yellow-cedar and western redcedar (Myers et al. 2011). The pending Navy Timber Project occurs in a project area where the species composition consists of 17% yellow-cedar and 19% western redcedar (Forest Service 2009b). Yellow-cedar comprised 17.5% of the volume removed under the final decision for the 2011 Central Kupreanof Timber Project (Forest Service 2011a).

Thus, in the Tongass National Forest, in order to extract the economically valuable yellow-cedar, intact biological communities containing "junk" hemlock are destroyed just to remove a few individual yellow-cedar trees (Carstensen and Christensen 2008), creating ecosystem impacts beyond those to yellow-cedars themselves.

2. Commercial Logging Exacerbates Yellow-Cedar Decline

The large-scale clearcutting of old-growth yellow-cedar forests causes a conversion from yellow-cedar to other species in the newly regenerated stands (Forest Service 1999). In other words, once logged, yellow-cedar trees do not return. Western hemlock and Sitka spruce trees have faster growth rates and higher reproduction rates and thus out-compete yellow-cedar trees in regenerating stands (Hennon et al. 2012).

Deer browse compounds the poor natural regeneration because deer prefer yellow-cedar (Hanley et al. 1989, Stroh et al. 2008).[4] Stroh et al. studied the potential for western redcedar regeneration using deer exclusion studies and came to the conclusion that:

> [t]he likelihood that young, year-round palatable redcedars can escape deer browsing in an understory already severely depleted in resources for deer is understandably very limited. Our results indicate that any effort to restore redcedar generation in old-growth forest patches will need to achieve a significant reduction in deer abundance and maintain this reduction over a long period of time [Stroh et al. 2008].

In the Thorne Bay Ranger District's Logjam project area, regenerated and pre-commercially thinned stands showed a substantial decline in yellow-cedar composition and a large-scale conversion to hemlock-dominated forests after logging (Forest Service 2009a). Yellow-cedar comprises just 1% of the young growth stands in the Big Thorne Project area, and there is an ongoing conversion to spruce-dominated forests (Forest Service 2011b).

[4] *See http://www.fs.fed.us/r10/spf/fhp/cedar/management.html; http://www.fs.fed.us/r10/spf/fhp/cedar/regen.html.*

Further, clearcutting transforms dense forested landscapes into large, open canopy gaps that exacerbate the freeze/thaw cycle responsible for yellow-cedar decline by creating conditions that cause more extreme temperature fluctuations:

> Air and soil temperatures respond primarily to exposure. Open canopies provide inlets for solar radiation that warm vegetation and the soil surface and also allow more rapid loss of energy at night. Dense forest canopies intercept solar radiation by shading during warm periods and insulate the loss of energy during cold periods, thus, creating buffered, less extreme temperature conditions. Soils located under open canopies warm more quickly in spring than the soils in dense canopies, as expressed by the rapid accumulation of soil degree days in the open canopy forest zones. The surface of these soils is also exposed to slightly colder night temperatures due to less insulation from the canopy [D'Amore and Hennon 2006].

Thus, logging not only permanently removes yellow-cedar from the ecosystem in areas where the trees are directly logged; it also exacerbates the climatic conditions that cause root-freezing injury and yellow-cedar decline. For this reason, all remaining living yellow-cedar should be protected from logging in order to: 1) conserve genetic diversity; 2) eliminate stressors related to timber harvest including changes in microclimates and soil chemistry; 3) avoid ecosystem changes such as deeper soil freezing due to loss of canopy cover, reduced snow-cover resulting in increased fine-root death, and changes in understory plants (Hennon et al. 2006, Oliver and Hennon 2013); and 4) prevent fragmentation of the landscape that may further hinder yellow-cedar adaptation and migration to more suitable regions as a response to climate change (Bunnell and Kremsater 2012). However, rather than protecting live yellow-cedar, current timber harvest practices on the Tongass selectively target these vulnerable trees. This overutilization of yellow-cedar for commercial purposes works in concert with climate change to put the species in danger of extinction throughout all or a significant portion of its range.

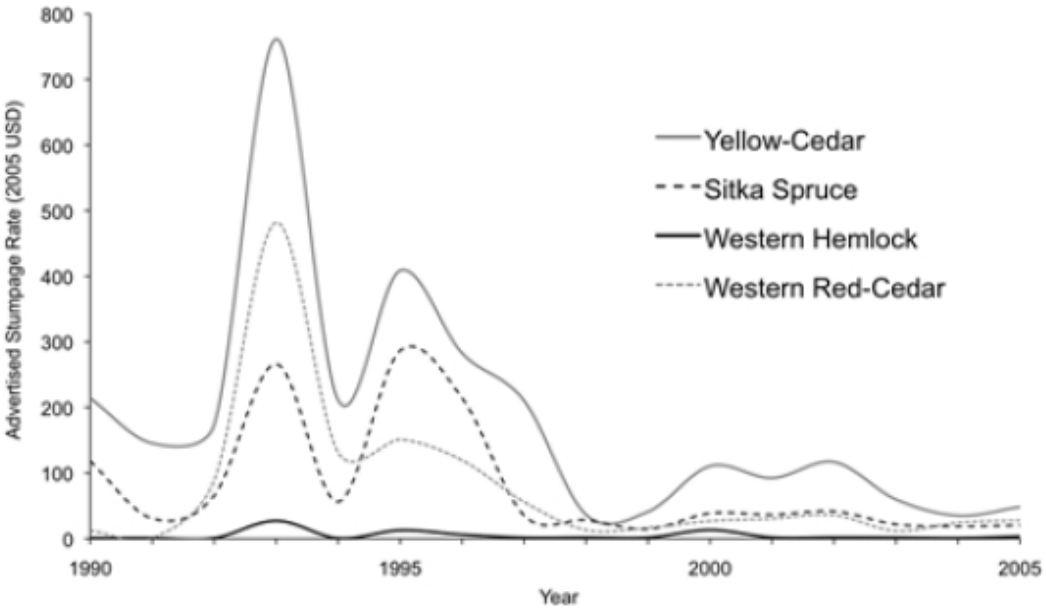

Figure 24: Mean advertised value of stumpage by species in Tongass National Forest timber sales from 1990-2005, in USD (not adjusted for inflation).

Unlike wood from live trees, which sells for high prices, wood from dead trees is rarely utilized, primarily going as firewood or to specialty niche markets including small-scale woodworkers, especially for musical instruments (Green et al. 2002). On the more than half-million acres where yellow-cedars are affected by widespread mortality, an average of 65% of the basal area of yellow-cedars are dead (Hennon et al. 1990). All ages of trees are affected. Managers and researchers suggest that salvage logging of dead yellow-cedar stands could be commercially valuable, help pay for ecological improvements, and direct harvest away from sites where yellow-cedars are not suffering from decline (Green et al. 2002, Donovan 2004, Beier 2011, Hennon and Wittweb 2013). Wood from dead yellow-cedars may be quite valuable, based on past sales (Figure 24 Hennon et al. 2012). However, salvage logging of yellow-cedar is rife with possible ecosystem problems (Mulvey and Lamb 2012) and is logistically difficult, generally involving helicopter-assisted harvest (Hennon et al. 2012).

C. DISEASE AND PREDATION

While yellow-cedar trees have strong resistance to most biotic pathogens, they may become more susceptible to disease under stress. The bright yellow color and strong aroma of yellow-cedar wood come from powerful natural biocides, including nootkatin (Barton 1976). The foliage also contains volatile leaf oils that may repel insect feeding (Cheng and von Rudloff 1970). Due to its natural defenses, at this time yellow-cedar has few serious problems with insect or fungal pests, although the paradigm shift in the occurrence of plant diseases due to climate change could increase the risk of healthy trees succumbing to what were once minor diseases.

During rigorous studies, biotic or contagious organism were ruled out as the primary cause of yellow-cedar decline (Hennon and Shaw 1997, Hennon et al. 2006). Researchers evaluated the following groups of organisms for their role in yellow-cedar decline, and ruled out each as a causative agent based on inoculation studies, or lack of association with affected tissues or areas of dying forests (Hennon et al. 2006): higher fungi (Hennon et al. 1990a, 1990b); oomycetes (Hennon et al. 2006); insects (Shaw 1985); nematodes (Hennon 1986); viruses and microplasmas (Hennon and McWilliams 1999); and bears (Hennon et al. 1990b).

Pathogens identified in diseased and dying yellow-cedar may play a small secondary role in yellow-cedar decline (Hennon et al. 1990b). While abiotic stresses are generally the root-cause of forest health problems, climate induced stressors are responsible for triggering many recent extensive forest insect and disease outbreaks (Allen 2009). Disease organisms often spread northward with climate change and tend to infect host trees that are already stressed by environmental factors (Sturrock et al. 2011). Some species of pathogens only impact a tree when it is stressed by other factors such as temperature extremes, or changes in the bioclimatic conditions. It is likely that the additive impacts of pathogens on tree species will increase in intensity with climate change, both independent of and in connection with fine-root freezing injury, the primary driver of yellow-cedar decline. When acting independently of climate effects, pathogens may affect yellow-cedar growing in sites where it is currently well-adapted, resulting

in increased tree death and exacerbating currently observed climate impacts on the species (Ahanger et al. 2013). A review of the known pathogens leading to increased morbidity in yellow-cedar and their potential future impacts on yellow-cedar mortality follows.

1. Root Disease

Armillaria species cause root disease in many forests worldwide, primarily infecting conifers (Sturrock et al. 2011). Infection leads to wood decay, growth reduction and mortality. *Armillaria* root disease commonly affects dying yellow-cedars in stands of trees that are already suffering from yellow-cedar decline (Sturrock *in* Harrington et al. 2010). Thus, its role in decline is secondary to the primary abiotic process discussed in detail in Part II.A of this petition (Hennon et al. 1990b).

2. Fungus and Insects

A variety of fungal pests affect yellow-cedar, mostly targeting young trees, and generally not leading to tree mortality.

In a 2001 report, shoot blight of yellow-cedar regeneration remained at endemic levels in southeast Alaska (Wittwer 2004). The fungus that causes this disease is closely related to snow molds or blights and does not affect mature yellow-cedar trees. The terminal and lateral shoots of young trees (seedlings and saplings) become infected and die during late winter or early spring, with dieback extending as far as 10 to 20 cm from the tip of the shoot. Small seedlings of up to 0.5 m tall may be killed outright. The causal fungus is of the *Apostrasseria* genus but remains to be confirmed or identified to species levels.

More than a dozen different species of *Basidiomycetous* decay fungi have been identified on living yellow-cedar trees (Harrington 2010). All of the decay fungi-affected yellow-cedar trees can be categorized as causing either white rot or brown rot. White rot fungi digest all the components of wood tissue, including lignin, cellulose, and hemicellulose, and leave behind decayed wood. Brown rot fungi cannot digest lignin and leave behind brown crumbly wood decay that is mostly composed of modified lignin and may be resistant to further deterioration. Yellow-cedar trees are rarely killed by these fungi, although infected trees may have extensive internal decay without any visible external signs of rot (Harrington 2010).

More than 50 species of fungi were identified on dying or dead yellow cedar, but none were consistently related to yellow-cedar decline, while inoculation trials found that none of ten species of fungi killed unstressed seedlings.

Fungal decay is of greater concern for commercial wood products than for its impact on yellow-cedar survival. The ecological role of fungi in old-growth forests has not been the subject of extensive research. Researchers have observed old and decayed yellow-cedar with boles that snapped to create canopy gaps, indicating that decay fungi may be important mortality agents of old cedar trees that create small-scale disturbance in old-growth forests (Hennon et al. 2005).

Phloeosinius sp. (bark beetles) play a minor role in yellow-cedar mortality, and are frequently found on declining cedars, but they only attack trees that are already nearly dead or stressed due to other factors (Hennon and Shaw 1997). The beetles act as secondary damage agents to trees

already stressed by freezing injury. Bark beetle outbreaks will move upward in latitude and elevation with climate change in the United States and Canada, and have already contributed to severe decline in tree species growing at elevation, including whitebark pine (*Pinus albicaulis*; Jessie et al. 2010).

3. Invasive Pathogens

Recent observations by researchers in Scotland and Argentina show that the pathogen *Phytophthora austrocedrae* may in the future significantly impact yellow-cedars in Alaska. This pathogen was first described as a new species in 2007, after it was isolated from dying Chilean cypress trees (*Austrocedrus chilensis*) located in Argentina, where it was destructive and presumed to be invasive. In 2011, the same pathogen was isolated from dying, cultivated yellow-cedars in Scotland. The pathogen's origin is unknown, as is the susceptibility of Alaska yellow-cedar to this pathogen, and whether this pathogen could survive Alaska's coastal rainforest environment. To date, there is no documentation of this pathogen being found in Alaska's soil or water, but it may pose a significant future risk (Mulvey and Lamb 2012).

4. Bears and Deer

Yellow-cedars, especially young saplings, are an important source of browse for Sitka deer, and adult trees are frequently damaged by Alaska brown bears (Hennon et al. 2012). Alaska brown bears gnaw on yellow-cedar trunks in the spring to access the soft under-bark layer, the phloem, which is high in fructose. As noted above, basal scars from either brown bears or Alaska Natives were evident on over 49% of the yellow-cedars on Chichagof and Baranof Islands (Hennon et al. 1990a), and in some stands the majority of yellow-cedars have basal scars from bear feeding (ADNR 2000). Brown bear damage to trees in Alaska and British Columbia creates open wounds that may allow for growth of destructive fungi (see Section III.A.1.b), but feeding by brown bears does not generally lead to mortality of yellow-cedar.

Saplings and young cedar may suffer high mortality due to browsing by Sitka deer. If proposed regeneration of yellow-cedar at long-term bioclimatically suitable sites is to be successful, managers must develop techniques to reduce Sitka deer grazing that leads to high levels of mortality (Hennon et al. 2009, 2012).

D. INADEQUACY OF EXISTING REGULATORY MECHANISMS

Existing regulatory mechanisms are woefully inadequate to curb the primary threats to yellow-cedar posed by anthropogenic greenhouse gas emissions and selective timber harvest, as discussed below. The strong links between the global carbon budget, energy and water cycles, and forest dynamics demonstrate that there is a critical need for the immediate implementation of regulatory mechanisms that will directly reduce the incidence of yellow-cedar decline.

1. Regulatory Mechanisms Addressing Greenhouse Gas Emissions and Climate Change are Inadequate

Greenhouse gas emissions pose a major threat to the continued existence of yellow-cedar trees through impacts from climate change, especially reduced snow cover and shifts in the freeze-thaw cycles in late winter and early spring that result in fine-root death of the trees. Regulatory mechanisms at the national and international level do not adequately protect yellow-cedar from these impacts, nor do they require the greenhouse gas emissions reductions necessary to protect yellow-cedar from extinction. As USFWS recognized when it listed the polar bear (*Ursus maritimus*) as a threatened species, while "there are some existing regulatory mechanisms to address anthropogenic causes of climate change . . . these mechanisms are not expected to be effective in counteracting the worldwide growth of greenhouse gas emissions within the foreseeable future." (Determination of Threatened Status for the Polar Bear (*Ursus maritiums*) Throughout Its Range, 73 Fed. Reg. 28212, 28241 (May 15, 2008)). Similarly, the National Marine Fisheries Service (NMFS) acknowledged in its 2012 *Management Report for 82 Corals Status Review under the Endangered Species Act* that no countries are reducing emissions enough to keep the increase in global temperature below 2 degrees C; and the top ten emitters, including the United States, are performing poorly or very poorly at meeting needed greenhouse gas reductions (NMFS 2012). No additional regulations have been implemented to adequately curb greenhouse gas emissions since USFWS's 2008 finding or NMFS's 2012 finding.

As detailed below, the continued failure of the U.S. government and the international community to implement effective and comprehensive greenhouse gas reduction measures places yellow-cedar at ever-increasing risk of extinction.

a. Global Greenhouse Gas Emissions are tracking the worst IPCC Emissions Scenario

The atmospheric concentration of CO_2 reached 400 parts per million (ppm) for the first time in human history in May 2013, compared to the pre-industrial concentration of ~280 ppm (Scripps Institution of Oceanography 2013). The current CO_2 concentration has not been exceeded during the past 800,000 years and likely not during the past 15 to 20 million years (Denman et al. 2007, Tripati et al. 2009). Atmospheric CO_2 emissions have risen particularly rapidly since the 2000s (Raupach et al. 2007, Friedlingstein et al. 2010). The global fossil fuel CO_2 emissions growth rate was 1.0% per year in the 1990s compared with 3.1% per year since 2000, and this growth rate has largely tracked or exceeded the most fossil-fuel-intensive emissions scenarios projected by the IPCC (A1FI and RCP 8.5) since 2000 (Raupach et al. 2007, Peters et al. 2012). The CO_2 emissions growth rate fell slightly in 2009 due largely to the global financial and economic crisis; however, the decrease was less than half of what was expected and was short-lived (Fiedlingstein et al. 2010). In 2013, global CO_2 emissions rose by the highest amount on record (http://www.esrl.noaa.gov/gmd/ccgg/trends/).

b. Greenhouse Gas Emissions Reductions Needed to Protect the Yellow-cedar

Recent international agreements have focused on a goal of limiting global temperature increase to 2°C above pre-industrial levels to "prevent dangerous anthropogenic interference with the climate system" as required by the United Nations Framework Convention on Climate Change

(UNFCCC 2012).[5] However, many studies demonstrate that a 2°C temperature increase above pre-industrial levels is well past the point where severe and irreversible impacts will occur (Smith et al. 2009).

Because a 2°C target would commit the world to serious harm, many climate scientists and governments have urged a target of 1.5°C to avoid dangerous climate change (Hansen et al. 2008, Rockström et al. 2009), which roughly corresponds to reducing the atmospheric CO_2 concentration to 350 ppm (Hare and Schaeffer 2009).[6] Limiting warming to 1.5°C has been called for by the Alliance of Small Island States, the Least Developed Countries, and Executive Secretary of the United Nations Framework Convention on Climate Change Christiana Figueres. As climate scientist Dr. James Hansen and colleagues concluded, "if humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO_2 will need to be reduced . . . to at most 350 ppm [equivalent to ~1.5°C], but likely less than that" (Hansen et al. 2008). This 350 ppm target must be achieved within decades to prevent dangerous tipping points and "the possibility of seeding irreversible catastrophic effects" (Hansen et al. 2008).

Reducing the atmospheric CO_2 concentrations to at most 350 ppm, and perhaps much lower (300 to 325 ppm CO_2) would help protect yellow-cedar from the threats of climate change, especially precipitation falling as rain rather than snow, and increased spring freeze/thaw cycles, that threaten the tree's essential habitat and create conditions unsuitable for the tree's continued survival.

c. U.S. Measures to Reduce Greenhouse Gas Emissions Are Insufficient

While existing domestic laws including the Clean Air Act, Energy Policy and Conservation Act, Clean Water Act, Endangered Species Act and others provide authority to executive branch agencies to require greenhouse gas emissions reductions from virtually all major sources in the United States, these agencies are either failing to implement or only partially implementing these laws for greenhouse gases. For example, the EPA has issued a rulemaking regulating greenhouse gas emissions from automobiles that will reduce greenhouse emissions emitted per vehicle mile traveled by passenger vehicles in the future; but because the improvements are modest, and more vehicles are projected to be driven more miles in the future, the rule will only slow the rate of increase somewhat compared to what it would be without the rule. EPA, Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule, 75 Fed. Reg. 25324 (May 7, 2010). Meanwhile the government concedes that emissions reductions for heavy-duty vehicles "are not sufficient by themselves to reduce total [heavy-duty] vehicle emissions below their 2005 levels by 2020." NHTSA, Medium- and Heavy-Duty Fuel Efficiency Improvement Program – Final Environmental Impact Statement (June 2011). This means that the vehicle rule is far from achieving emissions goals agreed to by the United States in the Copenhagen Accord, which aim to keep global warming below 2°C.

[5] The non-legally binding Cancún Agreement of 2010 and Copenhagen Accord of 2009 recognize the objective of limiting warming to 2°C above pre-industrial levels.
[6] An analysis of low emissions pathways found that only those that approach 350 ppm by 2100 have a reasonable probability (40–60%) of limiting warming to 1.5°C.

To date, the EPA has proposed to use the Clean Air Act's new source performance standard program to reduce greenhouse gas pollution from one stationary source, electric generating units (power plants), from both new and existing power plants. While there is enormous potential to reduce emissions through this program overall and through the power plants rule proposals in particular, the EPA's rules for new and existing plants are insufficiently stringent, increasing the nation's use of natural gas plants while failing to require meaningful emissions reductions from them, even though such reductions are readily achievable. The EPA admits that the proposed rule for new plants will not reduce emissions from these sources between now and 2022 compared to what would be expected without the rule. EPA. Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 1430 (Jan. 8, 2014). Indeed, in the rulemaking the EPA concedes that the rule for new power plants "will result in negligible CO_2 emission changes, quantified benefits, and costs by 2022." (Id. at 1495). The proposed rule for existing plants proposes to reduce existing power plant emissions 30 % below 2005 levels by 2030, which is equivalent to 7.7 % below 1990 levels, the base year for the international climate treaty, by 2030 (EPA. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, EPA-HQ-OAR-2013-0602). However, according to the IPCC Fourth Assessment Report and other scientific studies, developed countries such as the United States must reduce their emissions 25 % to 40 % below 1990 levels by 2020 to have a medium chance of limiting warming to 2 degrees C (Gupta et al. 2007), meaning that this proposed rule falls far short of requiring emissions reductions needed to meet the internationally agreed-upon climate target and avoid dangerous climate impacts.

While full implementation of our flagship environmental laws, particularly the Clean Air Act, would provide an effective and comprehensive greenhouse gas reduction strategy, due to their non-implementation, existing domestic regulatory mechanisms must be considered inadequate to protect yellow-cedar from climate change

d. International Measures to Reduce Greenhouse Gas Emissions Are Inadequate

International initiatives are also currently inadequate to effectively address climate change. The United Nations Framework Convention on Climate Change, negotiated in 1992 at Rio de Janeiro, Brazil, provides the forum for the international negotiations. In the Framework Convention, signed and ratified by the United States, the world agreed to take the actions necessary to avoid dangerous climate change. Parties to the Convention also agreed as a matter of fairness that the world's rich, developed countries, having caused the vast majority of emissions responsible for the problem, would take the lead in solving it (Figure 25). It was not until the 1997 meeting in Kyoto, Japan, that the first concrete, legally binding agreement for reducing emissions was signed: the Kyoto Protocol. The Protocol requires the world's richest countries to reduce emissions an average of 5 percent below 1990 levels by 2012, while developing nations also take steps to reduce emissions without being subject to binding emissions targets as they continue to raise their standard of living. The United States has been a major barrier to progress in the international negotiations. After the Clinton administration extracted many concessions from the rest of the world in exchange for the United States signing on in Kyoto, the Senate rejected the equity principles behind the Convention, saying the United States should not agree to reduce its own emissions unless all other countries — regardless of

their responsibility or ability — were similarly bound. Citing the same excuses, President George W. Bush repudiated the Kyoto Protocol entirely. Thus the United States is the only industrialized country in the world that has yet to ratify the Kyoto Protocol. The United States' negotiating team under both the George W. Bush and the Obama administrations has pursued two primary objectives in the international talks: to refuse any legally binding emissions reduction commitments until all other countries—but particularly China and India—do so, and to push back the date for a new agreement. Not surprisingly, the United States failed to meet its (never ratified) Kyoto pledge to reduce emissions to 7.2% below 1990 levels by 2012; to the contrary, U.S. emissions have increased by 10.5% since 1990 (EPA 2012).

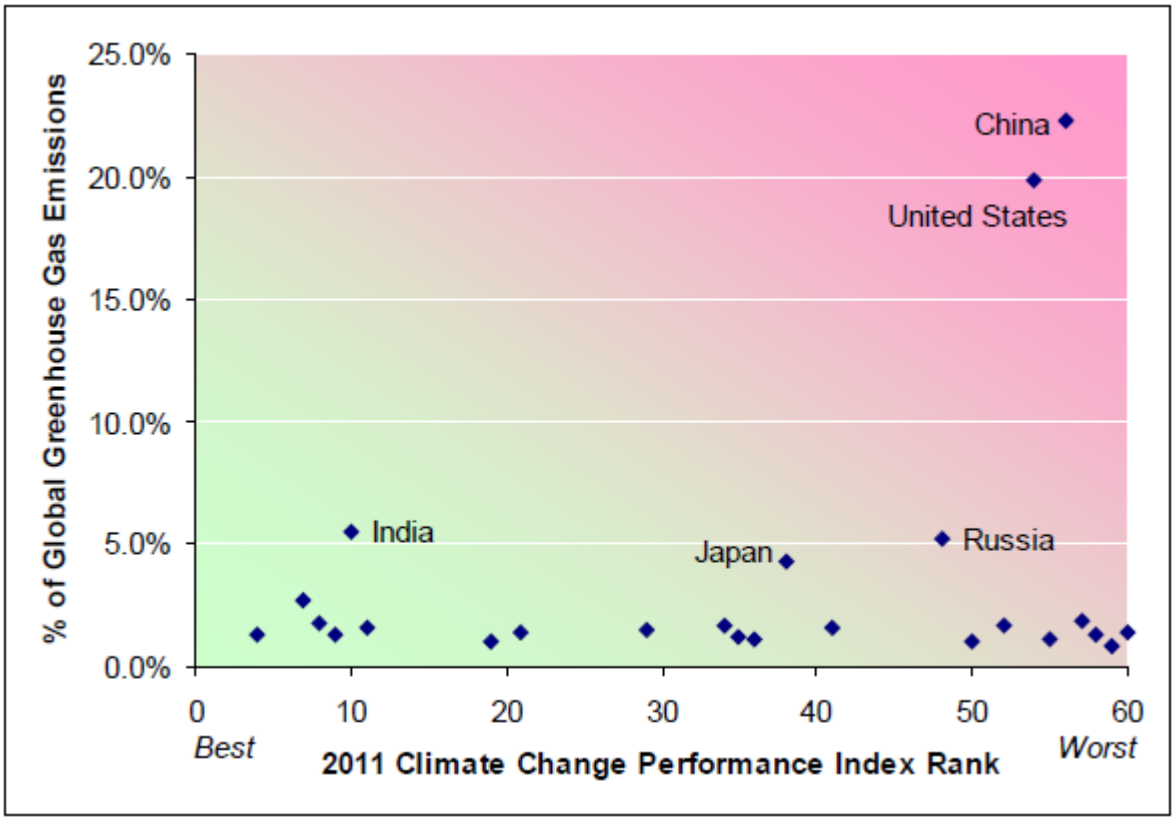

Figure 25: This figure is a qualitative illustration of which countries have the most potential to increase their positive impact on greenhouse gas emissions globally. The Climate Change Performance Index (CCPI) ranks the 60 emitting countries annually in various factors including emissions level, emission trend, and climate change policy. The United States and China are the top two greenhouse gas emitters, and were both ranked in the "very poor" category in the 2011 CCPI.

Moreover, the Kyoto Protocol's first commitment period only sets targets for action through 2012, and there is still no binding international agreement governing greenhouse gas emissions in the years beyond 2012. While the 2009 U.N. Climate Change Conference in Copenhagen called on countries to hold the increase in global temperature below 2°C (an inadequate target for avoiding dangerous climate change), the non-binding "Copenhagen Accord" that emerged from the conference, and the subsequent "Cancún Accords" of 2010 and "Durban Platform" of 2011 failed to enact binding regulations that limit emissions to reach this goal. Even if countries were to meet their Copenhagen and Cancún pledges, analyses have found that collective national

pledges to cut greenhouse gas emissions are inadequate to achieve the 2°C target, and instead suggest emission scenarios leading to 2.5°C to 5°C warming (Rogelj et al. 2010, UNEP 2010, 2011). As of July 2013, many governments were not implementing the policies needed to meet their inadequate 2020 emission reduction pledges, making it more difficult to keep global temperature rise to 2°C and likely leading to a temperature rise of at least 3.5°C (USGCRP 2013). As noted in the NMFS Management Report, the United States has yet to issue regulations to limit greenhouse gas emissions in accordance with its pledge under the Copenhagen Accord (NMFS 2012).

2. Regulatory Mechanisms Addressing Management and Logging of Yellow-Cedar in the Face of Climate Change Are Inadequate

Existing forest management law in the United States contains inadequate regulatory mechanisms to protect yellow-cedar. Yellow-cedar is almost exclusively found on public lands and is therefore subject to the National Forest Management Act (NFMA), of 1976 16 U.S.C. §§ 1600, *et seq*., and the Healthy Forest Restoration Act (HFRA), 16 U.S.C. §§ 6501, *et seq*.

NFMA contains a mandate that the Forest Service adopt guidelines for the management of national forests that "provide for the diversity of plant and animal communities" and, in particular, provide for "steps to be taken to protect the diversity of tree species." 16 U.S.C. § 1604 (g)(3)(B). Despite this specific language, this provision has not resulted in enforceable mandates to preserve yellow-cedar. To the contrary, in 2012 the Forest Service finalized new regulations that weakened measures to protect wildlife and water quality. Forest Service, National Forest System Land Management Planning, Final Rule, 77 Fed. Reg. 21162-21275 (April 9, 2012). The Forest Service explicitly recognized that there are "limits to the Agency's authority and the inherent capability of the land." *Id*. at 21175. Further, the Tongass National Forest interprets NFMA's diversity provisions as procedural in nature, and insists that NFMA imposes no obligation to maintain any specified level of abundance or distribution of particular species (Forest Service 2009b).

NFMA also requires each national forest to develop management plans and periodically revise them. Plans are open to public review and comment. The 2008 Tongass Land Management Plan (TLMP) is part of NFMA. The 2008 TLMP requires the agency to monitor forest health and evaluate silvicultural prescriptions in light of future stand diversity, particularly overstory species such as yellow-cedar (Forest Service 2008). However, the TLMP contains no language to protect healthy yellow-cedar from timber harvest. There is no language in the TLMP that limits the agency from harvesting a particular volume of any species (Wilson 2002). Instead, the agency interprets the TLMP to allow for sales with a higher than average cedar component (Wilson 2002). This is because without these species present, the agency cannot generate an economically viable timber sale; indeed, the Tongass National Forest interprets its Forest Plan to require an emphasis on cedar in order to meet timber resource objectives and comply with its Standards and Guidelines (Wilson 2002).

The HFRA of 2003 was designed to reduce risk of forest fires, and does not mandate the conservation of yellow-cedar specifically, or the more general conservation of forest diversity.

Forest fires are rarely a problem in the temperate rain forests where the majority of yellow-cedar occurs.

The Forest Service has conducted extensive research on yellow-cedar decline and spearheaded research efforts into yellow-cedar decline, modeling, and recommendations for future yellow-cedar conservation (Forest Service 2013a). However, research has not equated to protective management practices, and extensive areas of healthy yellow-cedar continue to be subject to timber sales. Current Forest Service yellow-cedar research focuses on ecosystem effects of a loss of yellow-cedar from the landscape, and how shifts in forest communities will affect long-term management and conservation (Mulvey and Lamb 2012).

The Forest Service has also developed recommendations for yellow-cedar conservation, while recognizing the futility of conserving or restoring yellow-cedar in areas where it is now maladapted due to climate change, or will be maladapted in the future (Hennon et al. 2012). The Forest Service also has stated that it has plans to publish a yellow-cedar conservation plan, but details of when that may be released are not available. In general, Forest Service efforts to date have been focused on yellow-cedar research, and are not part of any national mandate. Any actions to protect yellow-cedar are still in the development stage and do not address greenhouse gas emissions. In short, existing regulatory mechanisms and efforts toward protecting yellow-cedars are not adequate to deal with existing threats to the species.

E. OTHER NATURAL OR MANMADE FACTORS AFFECTING ITS CONTINUED EXISTENCE

The potential for a tree species such as yellow-cedar to adapt, and thus survive changing climatic conditions in northwest North America through migration, is low. Hurdles to successful migration include the ability of a tree to produce and disperse seeds, and the difficultly in those seeds ending up in appropriate conditions for regeneration (Bunnell and Kremsater 2012). This is especially so for yellow-cedar. Yellow-cedar has historically occupied an extremely selective microhabitat, is generally not competitive with other tree species except under marginal conditions that pose additional obstacles to successful regeneration, has an extended life-history and long lifespan, has greatly contracted its range in the past due to climate change, and has a very low rate of regeneration.

Recent research suggests that yellow-cedar is significantly less likely to regenerate in forests affected by the dieback and that the loss of this species can dynamically rearrange the plant community. A recent site-specific study (Oakes et al., in review) found that yellow-cedar seedling and sapling abundance decreased in forests affected with widespread mortality from yellow-cedar decline. In these forests, yellow-cedar sapling occurrence decreased significantly from 0.56 in forests not affected by yellow-cedar decline, to 0.07. On average, dead yellow-cedar comprised 80% of the total (live and dead) yellow-cedar basal area in forests affected by the dieback, indicating that some individuals may still survive once the forests become affected. At this time, researchers do not understand if surviving yellow-cedar trees are superior genetically, or if they are growing with deeper roots on better microsites. Yellow-cedar decline may be more

likely to affect smaller trees first, while death of larger trees occurs subsequently in a staggered process. Beier et al. (2008) found that surviving yellow-cedar trees in declining stands can produce larger growth rings, but with greater interannual variability after the onset of decline. Despite the survival of some individuals once a forest becomes affected, current scientific understanding documents significant losses of this species across all life stages (from reproduction to large trees) in areas affected by the dieback at low elevations, and yellow-cedar appears to be maladapted to areas affected for the foreseeable future. Yellow-cedar trees growing at higher elevations and to the north, where snowpack protects their roots from freezing injury, is helping to sustain the species in Alaska. Ongoing projections of snowfall in the future will predict the fate of these yellow-cedar populations.

Another major obstacle to natural regeneration of yellow-cedar a sites where yellow-cedar die-off has occurred is browsing by Sitka deer. As discussed earlier in this petition, Sitka deer selectively graze on yellow-cedar saplings. Where deer are present in any number, yellow-cedar are unlikely to survive.

There is no scientific evidence indicating that yellow-cedar will migrate to higher elevations or more suitable locations, as root-freezing injury kills off more trees at lower elevations. Yellow-cedar is adapted to a specific niche, dependent on wetter soil conditions, where it can outcompete other tree species. In addition to the barriers to natural migration, including low reproductive potential, it is likely that many other factors will come into play, limiting the trees ability to migrate. These include, lack of adequate soils at higher elevations, out-competition by other trees and understory plants due to yellow-cedar slow growth rate, and steeper slope aspects.

IV. CRITICAL HABITAT

The ESA mandates "to the maximum extent prudent and determinable," USFWS "shall, concurrently with making a determination . . . that a species is an endangered species or threatened species, designate any habitat of such species which is then considered to be critical habitat" 16 U.S.C. § 1533(a)(3)(A)(i); see also id. at § 1533(b)(6)(C). The ESA defines the term "critical habitat" to mean:

> i. the specific areas within the geographical area occupied by the species, at the time it is listed . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and
> ii. specific areas outside the geographical area occupied by the species at the time it is listed . . . upon a determination by the Secretary that such areas are essential for the conservation of the species.

Id. at § 1532(5)(A).

The Center for Biological Diversity expects that USFWS will comply with this unambiguous mandate and designate critical habitat concurrently with the listing of yellow-cedar. Critical

habitat must include suitable habitat from areas of the tree's natural range in southeast Alaska that are projected to be free from freezing injury due to climate change in the near future, are free from deer browsing, and are in areas where yellow-cedar will be able to survive over its entire 1,000-year-plus lifespan.

V. MANAGEMENT RECOMMENDATIONS

Climate change must be addressed in forest planning. Climate and landscape models can be used to evaluate how well specific conservation areas may meet their goals in the future and where widespread problems might develop as climate change continues. The Forest Service has no regulations in place to address rising greenhouse gas emissions and instead takes a reactive approach to management by monitoring and implementing "adaptive management" as needed. Yellow-cedar that is currently growing in zones where it is adapted, and where climate models show that it will continue to be adapted over the next hundred years, should not be subject to harvest. However, under the current TLMP, cedars in these areas are not explicitly protected. As Hamann and Wang state in their 2006 paper on the effects of climate change on tree species, "if currently observed climate trends continue or accelerate, major changes to management of natural resources will become necessary." With continued and rapidly accelerating climate change, implementation of management measures for yellow-cedar are currently not taking place quickly enough to protect the species or to ensure its long-term survival.

Active management to favor yellow-cedars is most likely to be successful in areas of south-facing, gentle sloped, well-drained soil, where yellow-cedar has continued to thrive and show resilience to climate change, even without adequate snow cover (Hennon et al. 2012). Active management would consist of favoring yellow-cedar through planting and thinning to expand yellow-cedar's realized niche, and protecting existing healthy stands of yellow-cedar from timber harvest. However, while small patches of this long-lived tree species may benefit from these measures, rapid changes in climate caused by continued greenhouse gas emissions, and the threat to the long-term survival of yellow-cedar, must be addressed through national and international regulations, not at the Forest Service management plan level.

Active management or restoration through human intervention is unlikely to be possible in many areas, due to the region's remoteness and inaccessibility, and instead a new community of plants will succeed to take the place of yellow-cedar (Hennon et al. 2012). As discussed in Hennon and Wittweb (2013), the zones where there will be adequate snow to protect against yellow-cedar decline are shrinking, even though currently healthy yellow-cedar occur in select areas (eg. south-facing slopes with gentle decline and adequate drainage) above 200 meters. "By 2080, only a small area near the cone of the volcano is predicted to have sufficient snow to protect yellow-cedar from root-freezing injury" (Hennon and Wittweb 2013).

Further efforts to restore, replant, or conserve yellow-cedar should be focused on the few sites where the species is likely to be well adapted for the next millennia, due to the tree's extreme longevity and the rapid die-off caused by small shifts in climate. Such sites will become increasingly rare and may disappear entirely over the next few hundred years. All modeling to date has only projected out to 2085, predicting massive declines, with yellow-cedar in Alaska

only surviving at high elevations (Figure 21). Thus, active management is unlikely to meet with long-term success unless it is accompanied by a drastic reduction in greenhouse gas emissions, and an immediate end to timber harvest of living yellow-cedar. The following are a few actions that may allow some resiliency for yellow-cedar in the face of currently occurring climate change.

A. GENETIC CONSERVATION

In stands where a high percentage of yellow-cedar trees have died, the remaining trees may contain important genetic material for maintaining diversity in out-plantings (Oliver and Hennon 2013). While genetic studies are ongoing, genetic material from these trees should be collected and stored for possible future outplanting.

In Alaska there has been little research on the genetic structure of yellow-cedar, while somewhat more research has been conducted in British Columbia. Conservation of the genetic structure of yellow-cedar in the context of widespread and substantial decline must be investigated further (Hennon et al. *in* Harrington 2010). In order to conserve genetic structure, a genetics program that investigates breeding trees for late spring dehardening and for freezing resistance should be employed to potentially restore yellow-cedar in areas prone to decline now and in future.

B. SILVICULTURE AND REPLANTING

Yellow-cedar does not rapidly reproduce, and successful silviculture may require new and as yet unknown or untested techniques. Barriers to successful regeneration through planting include seed collection and germination, competing vegetation, browse by Sitka deer, and spring freezing injury. Reproduction through layering mainly occurs on boggy sites, where branches have contact with the ground. A planting trial for yellow-cedar began in 1986 on Etolin Island (Forest Service 2000). Results found that yellow-cedar can be regenerated on logged sites, when it is planted quickly following harvest. Another study near Ketchikan showed that rooted cuttings (stecklings) could substitute for seedlings (Hennon et al. 2009). Many aspects of yellow-cedar reproductive biology, and how to best achieve maximum yield through the use of seeds, seedlings, or layering, remain unknown. Further research must be conducted if yellow-cedar is to be successfully outplanted at suitable sites.

Planting yellow-cedar at suitable sites may be the best way to ensure that the tree does not go extinct. Modest climate warming across the natural range of yellow-cedar predicted by current general circulation models will likely result in increased productivity on sites with low hazard for yellow-cedar decline and improve performance of populations planted upward and northward of their origins (Russell and Krakowski 2012).

Silviculture of yellow-cedar in young-growth forest is poorly known, and needs more research and management attention, particularly in Alaska. Studies should include how best to dissuade Sitka deer from browsing on yellow-cedar saplings, such as the use of stock with genetically higher terpene concentrations. The ability of yellow-cedar to compete and maintain its canopy status in the long-term has also not been evaluated (Hennon et al. *in* Harrington 2010).

In addition, little is known about how to select an ideal site for yellow-cedar outplanting. Yellow-cedar utilizes calcium in a unique way to allow for competitive advantage at the fringes of bogs and other poorly drained soils. Yellow-cedar is able to alter nitrogen availability through this process, but this has not been field-tested (D'Amore et al. 2009). Selecting sites that are high in calcium, or adding calcium to the soil, may provide a competitive advantage to yellow-cedar.

C. SALVAGE LOGGING

There are no published long-term scientific studies on the ecological value of yellow-cedar snags (Mulvey and Lamb 2012, Oliver and Hennon 2013). Areas containing dead yellow-cedar trees may provide important wildlife habitat, for bats, raptors, songbirds, marten, flying squirrels, and other species, perhaps related to the extreme longevity and rot-resistance of standing trees (Hennon et al., 2007). While salvage logging of dead yellow-cedar is certainly preferable to harvest of ancient stands of living cedar, these areas are protected in many cases, because of yellow-cedar's propensity to occur on marginal, generally less productive sites (Green et al. 2002, Donovan 2004, Harrington 2010). These areas are often protected as existing wilderness or administratively protected lands (Oliver and Hennon 2013). However, as the yellow-cedar increases in price and demand, due to its rarity and unique wood qualities, dead yellow-cedar snags will likely be subject to harvest, and their ecological value must be taken into consideration.

VI. CONCLUSION

As demonstrated in this petition, yellow-cedar faces high magnitude and growing threats to its continued existence. Yellow-cedar decline is the most severe tree die-off ever reported in North America, and has been extensively studied for over 30 years, with scientists concluding that climate change is the leading cause. Yellow-cedar decline occurs over an expanding 600,000 acres in Alaska and British Columbia. Anthropogenic greenhouse gas emissions continue to rise at an unprecedented rate, leading to warmer springs, reduced snow cover, and a shift to average winter temperatures of above freezing throughout much of yellow-cedar's habitat.

Climate change threatens to severely reduce the suitable bioclimatic range for yellow-cedar, with a projected 75% decrease in population by 2085. Any measures to protect yellow-cedar trees that are currently well-adapted, or to plant yellow-cedar in currently suitable habitats, will eventually fail unless they are accompanied by drastic cuts in greenhouse gas emissions. Unless these cuts are made, yellow-cedar will suffer a rapid decline in population followed by a slower decline, ultimately leading to extinction. Additionally, failure to protect living stands of yellow-cedar from timber harvest reduces genetic diversity and further imperils the species. USFWS must promptly make a positive 90-day finding on this petition, initiate a status review, and expeditiously proceed toward listing and protection of this species.

VII. REFERENCES

Adams, H., A. Macalady, D. Breshears, C. Allen, N. Stephenson, S. Saleska, T. Huxman, and N. McDowell. 2010. Climate-induced tree mortality: earth system consequences. EOS, Transactions, American Geophysical Union 91:153–154.

Ahanger, R. A., H. A. Bhat, T. A. Bhat, S. A. Ganie, A. A. Lone, and A. Imtiyaz. 2013. Impact of climate change on plant diseases. International Journal of Modern Plant and Animal Sciences 1:105–115.

Aitken, S. N., S. Yeaman, J. A. Holliday, T. Wang, and S. Curtis-McLane. 2008. Adaptation, migration or extirpation: climate change outcomes for tree populations. Evolutionary Applications 1:95–111.

Allen, C. D. 2009. Climate-induced forest dieback: an escalating global phenomenon? Unasylva 60:43–49.

Anderegg, W. R. L., J. A. Berry, D. D. Smith, J. S. Sperry, L. D. L. Anderegg, and C. B. Field. 2011. The roles of hydraulic and carbon stress in a widespread climate-induced forest die-off. Proceedings of the National Academy of Sciences 109:233–237.

Baltzinger, C., N. Stroh, and J. Martin. 2009. Can the missing understory in the old-growth forests on Haida Gwaii (British Columbia, Canada) recover after deer exclusion? Pages 1–7 *in* G. Blokhin, editor. XXIXth International Union of Game Biologists Congress "Papers and Posters." Russion Federation, Moscow, Russia.

Barton, G. 1976. A review of yellow cedar (Chamaecyparis nootkatensis) [D. Don] Spach) extractives and their importance to utilization. Wood and Fiber Science 8:172–176.

Beier, C. 2011. Factors influencing adaptive capacity in the reorganization of forest. Ecology and Society 16:40.

Beier, C. M., S. E. Sink, P. E. Hennon, D. V. D'Amore, and G. P. Juday. 2008. Twentieth-century warming and the dendroclimatology of declining yellow-cedar forests in southeastern Alaska. Canadian Journal of Forest Research 38:1319–1334.

Boland, J. L., J. P. Hayes, W. P. Smith, and M. M. Huso. 2009. Selection of day-roosts by Keen's myotis (Myotis keenii) at multiple spatial scales. Journal of Mammalogy 90:222–234.

Bourque, C. P.-A., R. M. Cox, D. J. Allen, P. A. Arp, and F.-R. Meng. 2005. Spatial extent of winter thaw events in eastern North America: historical weather records in relation to yellow birch decline. Global Change Biology 11:1477–1492.

Bunnell, F., and L. Kremsater. 2012. Migrating like a herd of catsClimate change and emerging forest in British Columbia. Journal Ecosystems and Management 13:1–24.

Carstensen, R., and B. Christensen. 2008. Assessment of TLMP 2008 and TCC Conservation Strategy.

Chapin, F. I., S. Trainor, P. Cochran, H. Huntington, C. Markon, M. McCammon, A. McGuire, and M. Serreze. 2014. Ch.22: Alaska. Pages 514–536 Climate Change Impacts in the United States: The Third National Climate Assessment. U.S. Global Change Research Program.

Cheng, Y., and E. von Rudloff. 1970. The volatile oil of leaves of chamaecyparis nootkatensis. Phytochemistry 9:2517–2527.

D'Amore, D. V., and P. E. Hennon. 2006. Evaluation of soil saturation, soil chemistry, and early spring soil and air temperatures as risk factors in yellow-cedar decline. Global Change Biology 12:524–545.

D'Amore, D. V., P. E. Hennon, P. G. Schaberg, and G. J. Hawley. 2009. Adaptation to exploit nitrate in surface soils predisposes yellow-cedar to climate-induced decline while enhancing the survival of western redcedar: A new hypothesis. Forest Ecology and Management 258:2261–2268.

Daniels, L. D., T. B. Maertens, A. B. Stan, S. P. J. McCloskey, J. D. Cochrane, and R. W. Gray. 2011. Direct and indirect impacts of climate change on forests: three case studies from British Columbia. Canadian Journal of Plant Pathology 33:108–116.

Deal, R. 2009. Reconstruction of stand structure and growth following partial cutting of southeast Alaska forests: sustainable forest management or highgrading? Page 187– Forest Growth and Timber Quality: Crown Models and Simulation Methods for Sustainable Forest Management Proceedings of an International Conference. Portland, OR.

Denman, K., A. Brasseur, P. Chidthaisong, P. Ciais, P. Cox, R. Dickinson, D. Hauglustaine, C. Heinze, E. Holland, D. Jacob, U. Lohmann, S. Ramachandran, P. da Silva Dias, S. Wofsy, and X. Zhang. 2007. Couplings Between Changes in the Climate System and Biogeochemistry. *in* S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. Averyt, M. Tignor, and H. Miller, editors. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and NY, New York, USA.

Donovan, G. H. 2004. Consumer willingness to pay a price premium for standing-dead Alaska. Forest Products Jornal 54:38–42.

El-Kassaby, Y., J. Maze, D. MacLoed, and S. Banerjee. 1991. Reproductive-cycle plasticity in yellow-cedar (Chamaecyparis nootkatensis). Can. J. For. Res. 21:1360–1364.

Forest Service. 1999. Sea Level Timber Sale FEIS.

Forest Service. 2000. Finding value in dead yellow-cedar.

Forest Service. 2008. Tongass Land Resource Management Plan, Final Environmental Impact Statement.

Forest Service. 2009a. Logjam Timber Project FEIS.

Forest Service. 2009b. Navy Timber Project FEIS. Pages 3–98.

Forest Service. 2011a. Central Kupreanof Timber Project ROD.

Forest Service. 2011b. Big Thorne EIS.

Forest Service. 2013a. Yellow-cedar decline research. http://www.fs.fed.us/pnw/research/climate-change/yellow-cedar/.

Forest Service. 2013b. Big Thorne Project FEIS, Silviculture Section. Pages 312–435.

Forest Service Cut and Sold Reports FY 2010-2013. 2013. Forest Service Yellow Cedar Pricing Data 2010-2013.

Friedlingstein, P., R. A. Houghton, G. Marland, J. Hackler, T. A. Boden, T. J. Conway, J. G. Canadell, M. R. Raupach, P. Clais, and C. Le Quéré. 2010. Update on CO2 emissions. Nature Geoscience 3:811–812.

Gadek, P., D. Alpers, M. Heslewood, and C. Quinn. 2000. Relationships within Cupressaceae sensu lato: a combined molecular and molecular approach. American Journal of Botany 87:1044–1057.

Global Carbon Project. 2011. Carbon Budget 2010, report available at http://www.globalcarbonproject.org/index.htm.

Green, D., K. McDonald, P. Hennon, J. Evans, and J. Stevens. 2002. Flexural properties of salvaged dead yellow-cedar from southeast Alaska. Forest Products Journal 52:81–88.

Gupta, S., D. A. Tirpak, N. Burger, J. Gupta, N. Höhne, A. I. Boncheva, G. M. Kanoan, C. Kolstad, J. A. Kruger, A. Michaelowa, S. Murase, J. Pershing, T. Saijo, and A. Sari. 2007. No Title. Page 776 *in* B. Metz, O. R. Davidson, P. R. Bosch, R. Dave, and L. A. Meyer, editors. Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and New York, USA.

Hak, O., and J. Russell. 2004. Environmental effects on yellow-cedar pollen quality. Forest Genetics Council of British Columbia:1–12.

Hamann, A., and T. Wang. 2006. Potential effects of climate change on ecosystem and tree distribution in British Columbia. Ecology 87:2773–2786.

Hanley, T., C. Robbins, and D. Spalinger. 1989. Forest habitats and the nutritional ecology of Sitka black-tailed deer: a research synthesis with implications for forest management. Pages 1–58. Porland, OR.

Hansen, J., P. Kharecha, and M. Sato. 2013. Climate forcing growth rates: doubling down on our Faustian bargain. Environmental Research Letters 8:1–9.

Hansen, J., M. Sato, P. Kharecha, D. Beerling, V. Masson-Delmotte, M. Pagani, M. Raymo, D. L. Royer, and J. C. Zachos. 2008. Target atmospheric CO2: Where should humanity aim? Open Atmospheric Science Journal 2:217–231.

Harrington, C. 2010. A Tale of Two Cedars: International Symposium on Western Redcedar and Yellow-Cedar. Page 177 p. Gen. Tech. Rep. PNW-GTR-828. Pacific Northwest Research Station, Portland, OR.

Harris, A. S. 1990. Chamaecyparis nootkatensis (D. Don) Spach: Alaska-cedar. Pages 97–102 *in* R. Burns and B. Hakata, editors. Silvics of North America Volume 1: conifers. Agricultural Handbook 654. USDA Forest Service.

Van Hees, W. W. S., and B. R. Mead. 2005. Extensive, strategic assessment of southeast Alaska's vegetative resources. Landscape and Urban Planning 72:25–48.

Hennon, P. 1986. Ecological and pathological aspects of yellow-cedar decline in southeast Alaska. Oregon State University.

Hennon, P. E., D. V. D. Amore, D. T. Wittwer, and J. P. Caouette. 2008. Yellow-Cedar Decline: Conserving a Climate-Sensitive Tree Species as Alaska Warms. Intergrated restoration of forested ecosystems to achieve multirresource benefits: proceedings of the 2007 national silviculture workshop Gen.Tech. :306.

Hennon, P. E., D. V. D'Amore, S. Zeglen, and M. Grainger. 2005. Yellow-cedar decline in the north coast forest district of British Columbia. Research Note PNW-RN-549:1–23.

Hennon, P. E., D. David, P. G. Schaberg, D. Wittwer, and S. Shanley. 2012. Shifting Climate, Altered Niche, and a Dynamic Conservation Strategy for Yellow-Cedar in the North Pacific Coastal Rainforest. BioScience 62:147–158.

Hennon, P. E., and M. G. McWilliams. 1999. Decline symptoms do not develop with grafting from dying yellow-cedar. Canadian Journal of Forest Research 29:1985–1988.

Hennon, P. E., P. Northwest, D. T. Witter, M. B. Lamb, P. Forestry, and F. H. Protection. 2010. Influence of Forest Canopy and Snow on Microclimate in a Declining Yellow-cedar Forest of Southeast Alaska. Northwest Science 84:73–87.

Hennon, P. E., C. I. Shaw, and E. Hansen. 1990a. Dating decline and mortality of Chamaecyparis nootkatensis in Southeast Alaska. Forest Science 36:502–515.

Hennon, P., M. McClellan, S. Spore, and E. Orlikowska. 2009. Survival and Growth of Planted Yellow-Cedar Seedlings and Rooted Cuttings (Stecklings) near Ketchikan, Alaska. Western Journal of Applied Forestry 24:144–150.

Hennon, P., and G. I. Shaw. 1997. The enigma of yellow-cedar decline: what is killing these long-lived, defensive trees? Journal of Forestry 95:4–10.

Hennon, P., C. Shaw III, and E. Hansen. 1990b. Symptoms and fungal associations of declining chamaecyparis nootkatensis in southeast Alaska. Plant Disease 74:267–273.

Hennon, P., and D. Wittweb. 2013. Evaluating key landscape features of a climate-induced forest decline (Project WC-EM-07-01. Pages 117–122 *in* K. Potter and B. Conkling, editors. Forest health monitoring: national status, trends, and analysisGen. Tech. USDA, Forest Service, Southern Research Station, Asheville, NC.

Hennon, P., D. Wittwer, A. Johnson, P. Schaberg, G. Hawley, C. Beier, S. Sink, and G. Juday. 2006. Climate warming, reduced snow, and freezing injury could explain the demise of yellow-cedar in southeast Alaska, USA. World Resource Review 18:427–450.

Hennon, P., B. Woodward, and P. Lebow. 2007. Deterioration of wood from live and dead Alaska yellow-cedar in contact with soil. Forest Products 57:23–30.

Heusser, C., L. Heusser, and D. Peteet. 1985. Late-quatenary climatic change on the American North Pacific Coast. Nature 315:485–487.

Ver Hoef, J. M. Ver, B. J. Neiland, L. Resources, and D. C. Glenn-lewin. 1988. Vegetation gradient analysis of two sites in Southeast Alaska. Northwest Science 62:171–180.

Houghton, J., L. Meira Fihlo, B. Lim, K. Treanton, I. Manaty, Y. Bonduki, D. Griggs, and B. Callender. 1997. Intergovernmental Panel on Climate Change (IPCC). Revised 1996 IPCC Guidelines for National Greenhouse Inventories. IPCC/Organisation for Economic Co-operation and Development/International Energy Association, Bracknell, UK.

Housely, R., K. Vaughan, and S. Alexander. 2007. Timber market analysis of the effects of export and interstate commerce on timber sale value and volume. Forest Service, Region 10.

Iverson, L. R., and A. M. Prasad. 2001. Potential changes in tree species richness and forest community types following climate change. Ecosystems 4:186–199.

Jessie, E., B. J. Bentz, J. L. Hayes, and J. A. Hicke. 2010. Climate change and bark beetles of the western United States and Canada: direct and indirect effects. Bioscience 60:602–613.

Johnson, A. 2013. Natural tree death, forest harvest, changes in hillslope hydrology, and implications for slope stability. http://serc.carleton.edu/vignettes/collection/37714.html.

Joyce, L. A., D. Running, V. Breshears, R. Dale, R. W. Malmsheimer, B. Sampson, B. Sohngen, and C. W. Woodall. 2014. Forests: Climate change impacts in the United States. Pages 175–194 *in* J. Melillo, T. Richmond, and G. Yohe, editors. U.S. Global Change Research Program.

Kelly, B. P., T. Ainsworth, D. J. Boyce, E. Hood, P. Murphy, and J. Powell. 2007. Climate change: predicted impacts on Juneau. Juneau, AK.

Kelsey, R. G., P. E. Hennon, M. Huso, and J. J. Karchesy. 2005. Changes in heartwood chemistry of dead yellow-cedar trees that remain standing for 80 years or more in southeast Alaska. Journal of Chemical Ecology 31:2653–70.

Krajina, V. 1969. Ecolosty of Forest Trees in British Columbia. Ecology of Western North America, Vol. 2. Department of Botany, University of British Columbia.

Lamb, M., and T. Wurtz. 2009. Forest Health Conditions in Alaska — 2008. US Forest Service, Alaska Region FHP Protec:43–44.

Laroque, C. P., and D. J. Smith. 1999. Tree-ring analysis of yellow-cedar (Chamaecyparis nootkatensis) on Vancouver Island, British Columbia. Canadian Journal of Forest Research 29:115–123.

Lenoir, J., J. C. Gégout, P. A. Marquet, P. de Ruffray, and H. Brisse. 2008. A significant upward shift in plant species optimum elevation during the 20th century. Science 320:1768–71.

Liston, G. E., and C. A. Hiemstra. 2011. The Changing Cryosphere: Pan-Arctic Snow Trends (1979–2009). Journal of Climate 24:5691–5712.

Little, D. 2006. Evolution and circumscription of the true cypresses (Cupressaceae: Cupressus). The American Society of Plan Taxonomists 31:461–480.

Little, D. P., A. Schwarzbach, R. P. A. Adams, and C. U. H. Hsieh. 2004. The circumscription and phylogenetic relationships of Callitropsis and the newly described genus Xanthocyparis (Cupressaceae). American Journal of Botany 91:1872–1881.

Van Mantgem, P. J., N. L. Stephenson, J. C. Byrne, L. D. Daniels, J. F. Franklin, P. Z. Fulé, M. E. Harmon, A. J. Larson, J. M. Smith, A. H. Taylor, and T. T. Veblen. 2009. Widespread increase of tree mortality rates in the western United States. Science (New York, N.Y.) 323:521–4.

Massah, N., J. Wang, J. H. Russell, A. Van Niejenhuis, and Y. A. El-Kassaby. 2010. Genealogical relationship among members of selection and production populations of yellow cedar (Callitropsis nootkatensis [D. Don] Oerst.) in the absence of parental information. The Journal of heredity 101:154–63.

Mathys, A., N. Coops, and R. Waring. 2014. Soil water availability effects on the distribution of 20 tree species in western North America. Forest Ecology and Management 313:144–152.

McKinley, D., M. Ryan, R. Birdsey, C. Giardina, M. Harmon, L. Heath, R. Houghton, R. Jackson, J. Morrison, B. Murray, D. Pataki, and K. Skog. 2011. A synthesis of current knowledge on forests and carbon storage in the United States. Ecological Applications 21:1902–1924.

McMullen, C. P., and J. Jabbour. 2009. Climate Change Science Compendium 2009. United Nations Environment Porgramme, Nairobi, EarthPrint, available at http://www.unep.org/compendium2009/.

Mote, P. W., A. F. Hamlet, M. P. Clark, and D. P. Lettenmaier. 2005. Declining Mountain Snowpack in Western North America. Bulletin of the American Meteorological Society 86:39–49.

Mulvey, R., and M. Lamb. 2012. Forest Health Conditions in Alaska - 2011. Pages 1–68. Anchorage, AK.

Murdock, T. Q., and D. L. Spittlehouse. 2011. Selecting and Using Climate Change Scenarios for British Columbia. Page 39.

Myers, E., N. Walker, M. Kirchhoff, and J. Schoen. 2011. High-grading on the Tongass National Forest: Implications of Pending Land Selections on Forest Diversity. Pages 1–22. Anchorage, AK.

NMFS. 2012. Management Report for 82 Corals Status Review under the Endangered Species Act : Existing Regulatory Mechanisms. Pages 1–73.

Oliver, M., and P. Hennon. 2013. Forests in Decline: Yellow-Cedar Research Yields Prototype for Climate Change Adaptation Planning. Pages 1–6 Science Findings 150. Portland, OR.

Ostry, M. E., R. C. Venette, and J. Juzwik. 2011. Decline as a disease category: is it helpful? Phytopathology 101:404–9.

Peters, G. P., R. M. Andrew, T. Boden, J. G. Canadell, P. Ciais, C. Le Quéré, G. Marland, M. R. Raupach, and C. Wilson. 2012. The challenge to keep global warming below 2 ° C. Nature Climate Change:2–4.

Pojar, J., and A. MacKinnon. 1994. Plants of Coastal British Columbia including Washington, Oregon and Alaska. Lone Pine Publishing, Vancouver, B.C.

Raupach, M. R., G. Marland, P. Ciais, C. Le Quéré, J. G. Canadell, G. Klepper, and C. B. Field. 2007. Global and regional drivers of accelerating CO2 emissions. Proceedings of the National Academy of Sciences of the United States of America 104:10288–10293.

Ritland, C., T. Pape, and K. Ritland. 2001. Genetic structure of yellow cedar (Chamaecyparis nootkatensis). Can. J. Bot. 79:822–828.

Rogelj, J., J. Nabel, C. Chen, W. Hare, K. Markman, and M. Meinshausen. 2010. Copenhagen Accord pledges are paltry. Nature 464:1126–1128.

Rotenberg, E., and D. Yakir. 2011. Distinct patterns of changes in surface energy budget associated with forestation in the semiarid region. Global Change Biology 17:1536–1548.

Russell, J. 1993. Clonal forestry with yellow-cedar. Clonal Forestry II:188–201.

Russell, J. 2012. A new conifer species affects taxonomic classification in the Cupressaceae. Pages 3–4 Forest Genetics Council of British Columbia.

Russell, J. H., and J. Krakowski. 2012. Geographic variation and adaptation to current and future climates of Callitropsis nootkatensis populations. Canadian Journal of Forest Research 42:2118–2129.

Ryan, M. G., M. E. Harmon, R. A. Birdsey, C. P. Giardina, L. S. Heath, R. A. Houghton, R. B. Jackson, D. C. Mckinley, J. F. Morrison, B. C. Murray, D. E. Pataki, and K. E. Skog. 2010. A synthesis of the science on forests and carbon for U.S. forests. Pages 1–16.

Schaberg, P. G., D. V. D'Amore, P. E. Hennon, J. M. Halman, and G. J. Hawley. 2011. Do limited cold tolerance and shallow depth of roots contribute to yellow-cedar decline? Forest Ecology and Management 262:2142–2150.

Schaberg, P. G., P. E. Hennon, D. V. D. Amore, G. J. Hawley, and C. H. Borer. 2005. Seasonal differences in freezing tolerance of yellow-cedar and western hemlock trees at a site affected by yellow-cedar decline. Can.J. For. Res. 2070:2065–2070.

Schaberg, P., P. Hennon, D. D'Amore, and G. Hawley. 2008. Influence of simulated snow cover on the cold tolerance and freezing injury of yellow-cedar seedlings. Global Change Biology 14.

Scripps Institution of Oceanography. 2013. The Keeling Curve. http://keelingcurve.ucsd.edu/now-what/.

Shaw, C. I. 1985. Decline and mortality of chamaecyparis nootkatensis in Southeastern Alaska, a problem of long duration but unknown cause. Plant Disease 69:13–17.

Sheets, R. M. 2009. Logjam TS DEIS Timber and Vegetation Resource Report.

Smith, J. B., S. H. Schneider, M. Oppenheimer, G. W. Yohe, W. Hare, M. D. Mastrandrea, A. Patwardhan, I. Burton, J. Corfee-Morlot, C. H. D. Magadza, H.-M. Füssel, A. B. Pittock, A. Rahman, A. Suarez, and J.-P. van Ypersele. 2009. Assessing dangerous climate change through an update of the Intergovernmental Panel on Climate Change (IPCC) "reasons for

concern". Proceedings of the National Academy of Sciences of the United States of America 106:4133–7.

Snyder, C., and J. Lundquist. 2007. Forest Health Conditions in Alaska-2006. Page 96 pp (J. Lundquist, Ed.). U.S. Department of Agriculture, Forest Service, Alaska Region: State of Alaska, Dept. of Natural Resources, Division of Forestry.

Spittlehouse, D. L. 2008. Climate Change , Impacts , and Adaptation Scenarios:Climate Change and Forest and Range Management in British Columbia Scenarios:Climate Change and Forest and Range Management in British Columbia. Page 47.

Stephenson, N. L., A. J. Das, R. Condit, S. E. Russo, P. J. Baker, N. G. Beckman, D. A. Coomes, E. R. Lines, W. K. Morris, N. Rüger, E. Álvarez, C. Blundo, S. Bunyavejchewin, G. Chuyong, S. J. Davies, Á. Duque, C. N. Ewango, O. Flores, J. F. Franklin, H. R. Grau, Z. Hao, M. E. Harmon, S. P. Hubbell, D. Kenfack, Y. Lin, J.-R. Makana, A. Malizia, L. R. Malizia, R. J. Pabst, N. Pongpattananurak, S.-H. Su, I.-F. Sun, S. Tan, D. Thomas, P. J. van Mantgem, X. Wang, S. K. Wiser, and M. A. Zavala. 2014. Rate of tree carbon accumulation increases continuously with tree size. Nature.

Stewart, H. 1995. Cedar: tree of life to the Northwest Coast Indians. Pages 1–192. Douglas and McIntyre.

Stroh, N., C. Baltzinger, and J.-L. Martin. 2008. Deer prevent western redcedar (Thuya plicata) regeneration in old-growth forests of Haida Gwaii: Is there a potential for recovery? Forest Ecology and Management 255:3973–3979.

Sturrock, R. N., S. J. Frankel, A. V. Brown, P. E. Hennon, J. T. Kliejunas, K. J. Lewis, J. J. Worrall, and A. J. Woods. 2011. Climate change and forest diseases. Plant Pathology 60:133–149.

Thompson, S. L., Y. Bérubé, A. Bruneau, and K. Ritland. 2008. Three-gene identity coefficients demonstrate that clonal reproduction promotes inbreeding and spatial relatedness in yellow-cedar, Callitropsis nootkatensis. Evolution 62:2570–9.

Tripati, A. K., C. D. Roberts, and R. a Eagle. 2009. Coupling of CO2 and ice sheet stability over major climate transitions of the last 20 million years. Science (New York, N.Y.) 326:1394–7.

Turner, N. J., M. B. Ignace, and R. Ignace. 2007. Traditional ecological knowledge and wisdom of aboriginal peoples in British Columbia. Ecological Applications 10:1275–1287.

UNEP. 2010. The Emissions Gap Report: Are the Copenhagen Accord Pledges Sufficient to Limit Global Warming to 2C or 1.5C? Available at http://www.unep.org/publications/ebooks/emissionsgapreport/pdfs/GAP_REPORT_SUNDAY_SINGLES_LOWRES.pdf.

UNEP. 2011. Bridging the emissions gap. http://www.unep.org/publications/contents/pub_details_search.asp?ID=6227.

UNFCCC. 2012. The Cancun Agreements - Key Steps of the United Nations Climate Change Conference, available at http://cancun.unfccc.int/cancun-agreements/main-objectives-of-the-agreements/#c33; unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf.

USGCRP. 2013. Ocean and Marine Resources in a Changing Climate. Pages 1–345.

W. Hare and M. Schaeffer. 2009. Low mitigation scenarios since the AR4 – Global emission pathways and climate consequences.

Walters, B. B. 1991. Small mammals in a subalpine old-growth forest and clearcuts. Northwest Science 65:0–4.

West Coast Region Ministry of Natural Resource Operations. 2011. Summary of Cedar Management Considerations for Coastal British Columbia Discussion Draft. Pages 1–13.

Westfall, J., and T. Ebata. 2012. 2011 Summary of forest health conditions in British Columbia. Pages 1–88.

White, K. S., G. W. Pendleton, and E. Hood. 2009. Effects of snow on Sitka black-tailed deer browse availability and nutritional carrying capacity in southeastern Alaska. Journal of Wildlife Management 73:481–487.

Wilson, B. 2002. Cedar harvest on the Tongass National Forest (UNPUBLISHED). Alaska Region Forest Management.

Wittwer, D. 2004. Forest Health Conditions in Alaska- 2003.

Wooton, C. E., and B. Klinkenberg. 2011. A landscape-level analysis of yellow-cedar decline in coastal British Columbia. Can. J. For. Res. 1648:1638–1648.

Zobel, J., and D. Antos. 1986. Habitat relationships of Chamaecyparis nootkatensis in southern Washington, Oregon, and California. Canadian Journal of Botany 64:1898–1909.

ALASKA'S CHANGING ENVIRONMENT

Documenting Alaska's physical and biological changes through observations

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WELCOME

Alaska has recently experienced profound environmental change related to extreme weather events and deviations from the historical climate. Sustained warmth, sea ice loss, coastal flooding, river flooding, and major ecosystem changes have impacted the daily lives of Alaskans around the state.

Temperatures have been consistently warmer than at any time in the past century. This warming varies greatly across the state, with northern and western regions warming at twice the rate of southeastern Alaska. The growing season has increased substantially in most areas, and the snow cover season has shortened. Precipitation overall has increased, and like temperature, the changes vary regionally. The ocean around Alaska is now regularly warmer than at any time in the past 150 years, affecting everything from algae to fisheries and human health.

Coastal flooding during the autumn storm season has occurred on the Bering Sea coast throughout history, but recent winters have brought record low ice, which in the past has served as a buffer to big Bering Sea storms. This has resulted in out-of-season flooding occurring in places expecting stable sea ice.

Across the following pages we have compiled observations through August 2019 about the major changes currently affecting Alaska's physical and biological systems. We focus on the past five years, though we also provide information from earlier decades for historical context. This effort is by no means comprehensive, but serves to highlight the monumental shifts occurring in our state. We welcome additional contributions to future iterations of this product.

The International Arctic Research Center and the University of Alaska Fairbanks are providing individuals, Alaska businesses, communities, government, and others with the resources needed to better assess impacts and develop adaption strategies.

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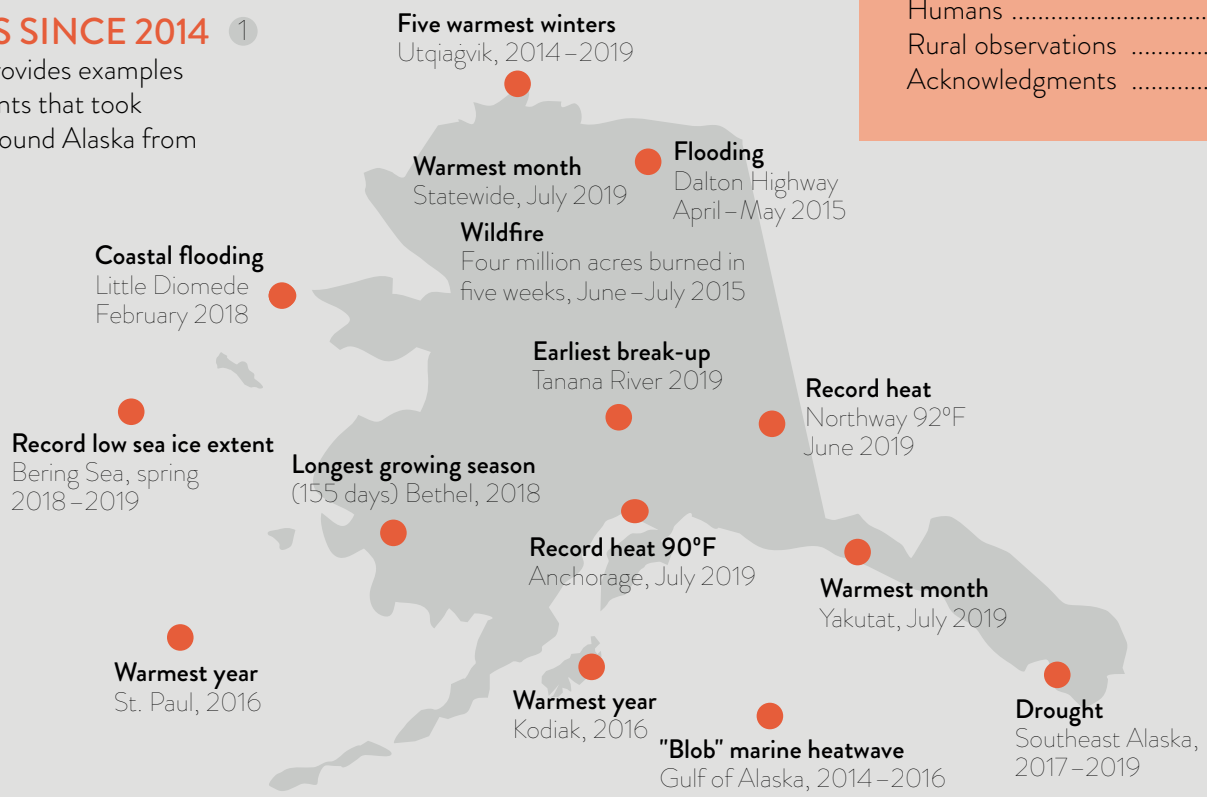
RECORDS SINCE 2014 1

This graphic provides examples of notable events that took place in and around Alaska from 2014 to 2019.



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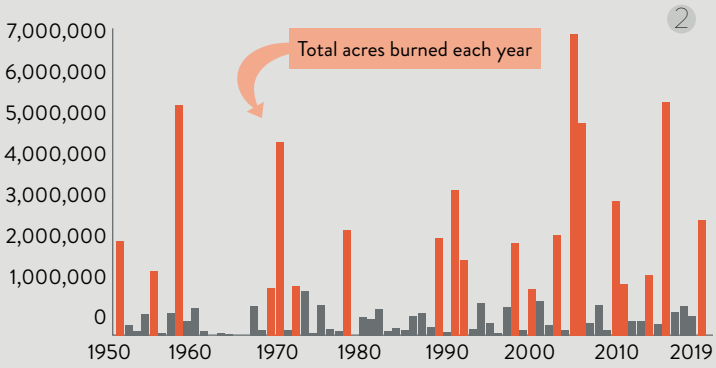
SEASONS

Many factors in Alaska's environment are specific to certain times of year: ice break-up of Alaska's big rivers is a sure sign of spring; wildfires are a summer issue, and the season is lengthening; costly coastal flooding along the Bering and Chukchi Seas has historically been an autumn concern. While powerful storms impacting maritime operations near the Aleutians and Gulf of Alaska can occur any time of year, the strongest storms nearly always happen in the fall and winter months. Many of these seasonal events have experienced profound changes in recent years.

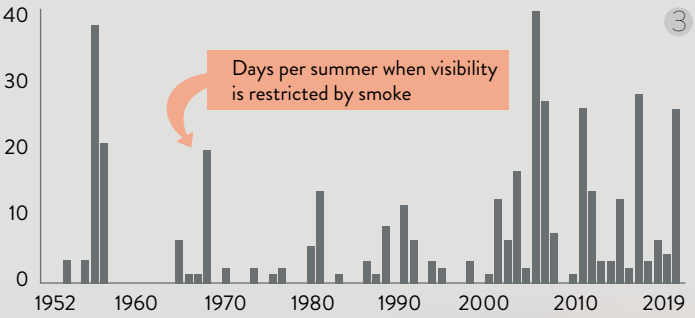
BIG FIRE SEASONS MORE FREQUENT

Warmer springs and earlier snow melt had lengthened the wildfire season to the point in 2006 when Alaska's interagency fire management organization changed the "start date" for wildfire response from May 1 to April 1. While the year-to-year variability of acreage burned has changed little, the frequency of large wildfire seasons has increased dramatically. Wildfire seasons with more than one million acres (red bars in graph) burned have increased by 50% since 1990, compared to the 1950–1989 period.



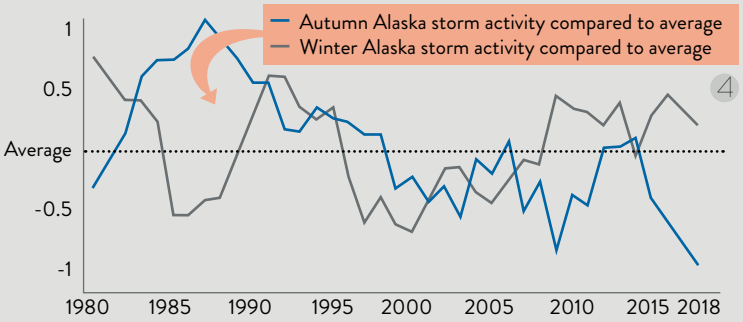
DRAMATICALLY MORE SMOKY DAYS

As the frequency of big (1+ million acres) wildfire seasons has increased, so has the frequency of smoky days, posing a significant health hazard. Prior to 2004, Fairbanks had only one summer (1957) in the previous half century when there were more than three weeks of significant smoke. Since 2004, it has occurred five times, including twice since 2014.



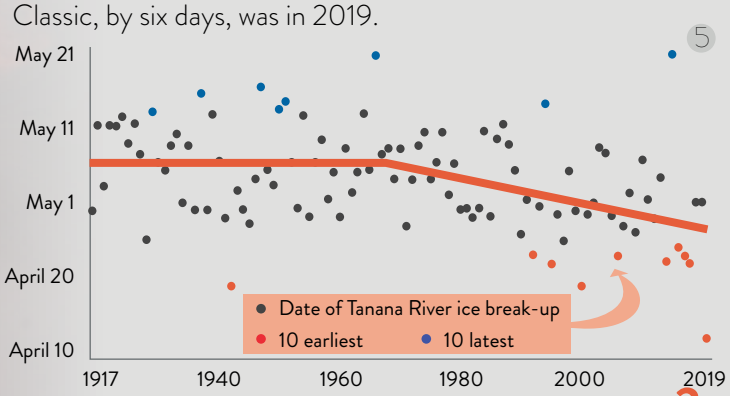
STORMINESS NOT INCREASING

Storminess, related to the frequency, duration, and intensity of wind, is one of the most important aspects of day-to-day weather for Alaskans. In and around Alaska there has been a slight overall decline in autumn (September–November) storminess over the past 40 years. Winter (December–February) storminess has shown no clear trend since 1990. There has also been no detectable trend in the number of moderate and strong storms during the past 70 years over the Bering and Chukchi Seas, where sea ice has retreated. However, even without an increase in storms, coastal flooding and erosion in these waters are increasing as the sea ice-free open water season lengthens.



RIVER BREAK-UP HAPPENING EARLIER

Alaskans have closely watched spring river ice break-up for millennia, and for generations have monitored the timing of the break-up of the Tanana River at Nenana. Break-up has trended earlier, especially in recent years. Four of the past six years have seen break-up earlier than all but one year prior to 1990. The earliest break-up in the history of the Nenana Ice Classic, by six days, was in 2019.



TEMPERATURE

Recent years have brought many temperature extremes to Alaska, including the warmest year (2016), the warmest month (July 2019), and in places like Anchorage, the warmest day (July 4, 2019). Air temperatures in Alaska are rising twice as fast as in other parts of the United States and, apart from sea ice, are the most obvious sign of change. Factors contributing to this warming include decreases in sea ice and snow cover, warming ocean, and increasing greenhouse gases. Of course, there is considerable day-to-day and even year-to-year variability, depending on average storm tracks, but these trends are unmistakable.

WARMER TEMPERATURES

Annual average temperatures are widely used as a measure for long term changes, and modern techniques allow reasonable estimates of temperatures over large areas back to the 1800s. Temperatures in and around Alaska have been rising since the 1970s, with typical annual average statewide temperatures now 3 to 4°F warmer than during the early and mid-20th century. Recent years have all been exceptionally warm. In fact, four of the past five years (2014–16, 2018) were warmer than any year prior to 2014.

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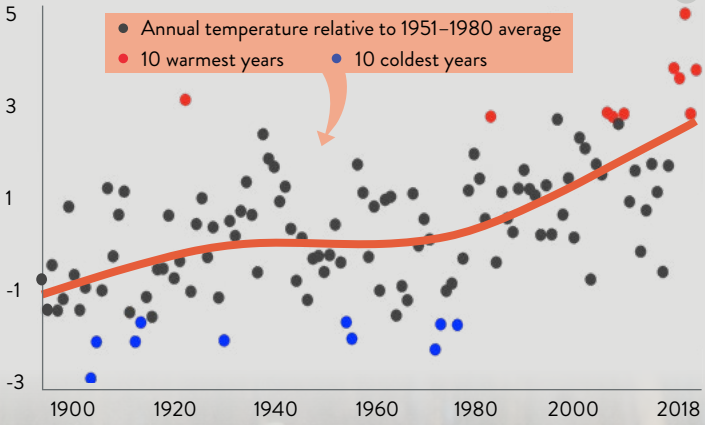

FEWER VERY COLD DAYS

One of the most dramatic changes in interior and northern Alaska has been the decrease in the number of very cold days in winter. This graphic shows that the typical number of days in Northway, Alaska with low temperatures of -30°F or lower has fallen from more than 40 days prior to 1960 to less than 30 days in the past decade. This trend is representative of most interior Alaska locations, including Fairbanks.

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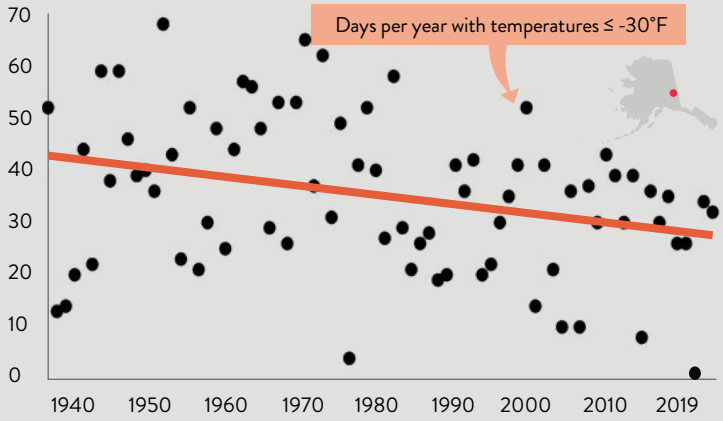

RECORD HIGHS OUTNUMBER LOWS

Daily high and low temperature records are a widely reported measure of extreme weather. Given a stable climate (i.e., no warming or cooling trend) we would expect fewer than 10 percent of both high and low daily temperature records, for the period 1953–2018, to have been set during the past five years. However, since 2014, there have been five to 30 times more record highs set than record lows.

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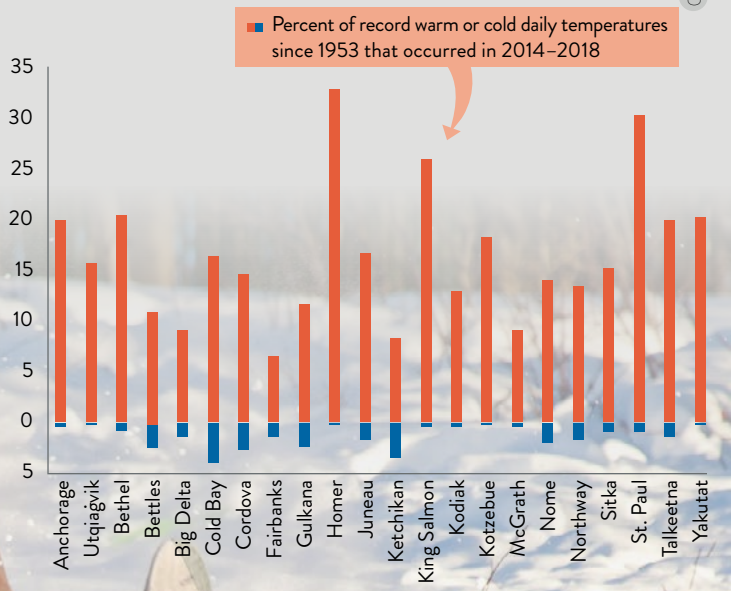

FALL & WINTER WARMER THAN AVERAGE

2014–2018 average temperatures in most regions and seasons have been dramatically warmer than the average for 1981–2010. The exception is summer, when the past five years have been close to normal over much of the state.

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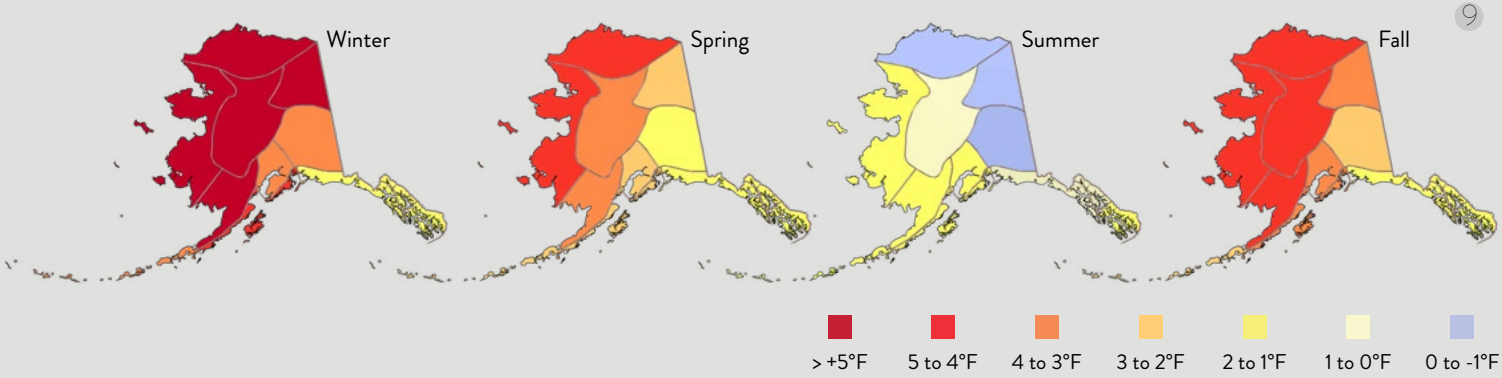

GREATEST WARMING IN WEST & NORTH

Temperatures are rising all across the state, but not uniformly. The changes are largest over northern and western Alaska, where snow and especially sea ice losses are impacting the regional climate. Temperatures have risen least dramatically in southeast Alaska and the Aleutians, where seasonal snowpack changes and sea ice are more indirect factors.

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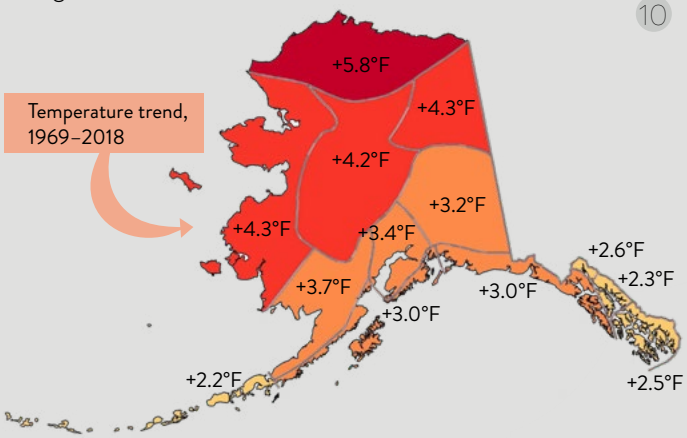
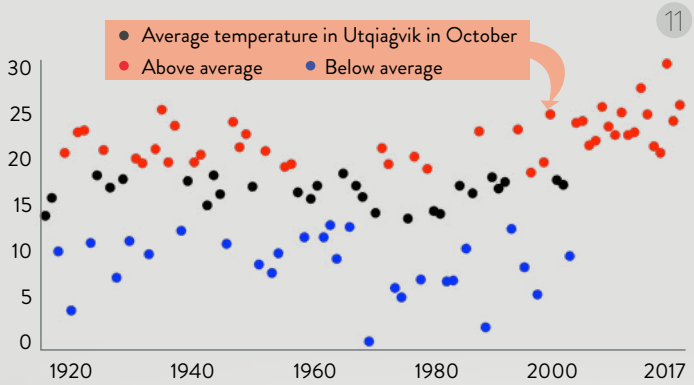


UTQIAĠVIK HIGH TEMPERATURES

The abrupt change in air temperatures due to the loss of sea ice is nowhere more obvious than in Utqiaġvik (formerly Barrow) during the month of October. Direct heating from the sun is weak during October, so the autumn air temperatures are controlled by the amount of open water offshore of Utqiaġvik. Prior to 2002, many Octobers had extensive ice through the entire month or at least by late October, allowing for much lower temperatures. In recent years, open water remained late into fall, and air temperatures were consistently warmer relative to the past.

11



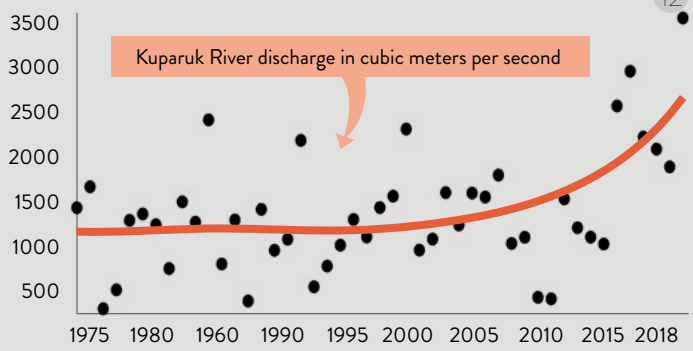
PRECIPITATION

Alaska's precipitation is increasing throughout the state. Even so, precipitation varies greatly over short distances and is very strongly influenced by the way air flows across Alaska's mountain ranges.

MORE RUNOFF ON NORTH SLOPE

The amount of water flowing in non-glacier fed rivers is a useful indicator of annual precipitation. The non-glacial Kuparuk River on the North Slope has been monitored since the days of Trans-Alaska oil pipeline construction. Since 2013, the Kuparuk River has experienced unprecedented high annual flow, indicating high (relative to the prior 40 years) snow and summer rains in this region.

12



FREEZING RAIN

Freezing rain can pose significant threats to safety and wildlife. During the last decade, the number of winters with freezing rain in Fairbanks more than doubled what was typical for the 1930–2000 period. School day cancellations associated with freezing rain have also increased in recent years. In winters with heavy ice accumulation on vegetation, caribou die-offs have occurred because animals are unable to access their food.

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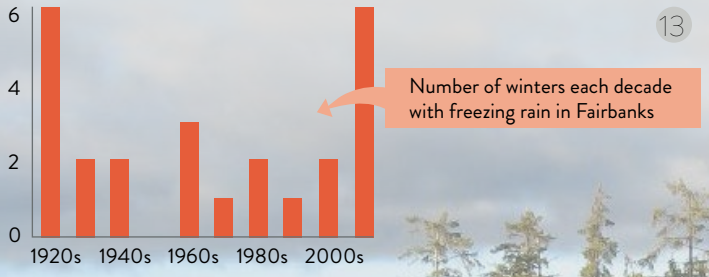
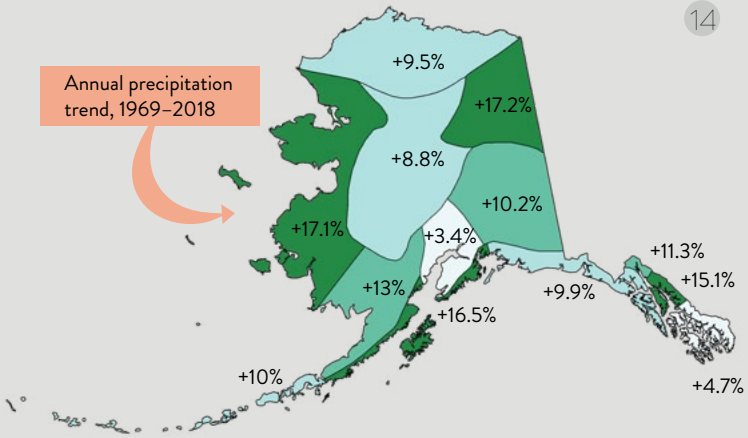


ANNUAL PRECIPITATION INCREASING

Over the past half century, annual precipitation has increased in all regions of the state. The best available estimates over the century time-scale suggest Alaska as a whole was relatively wet early in the 20th century, then drier from the 1940s–1990s, and wetter again recently.

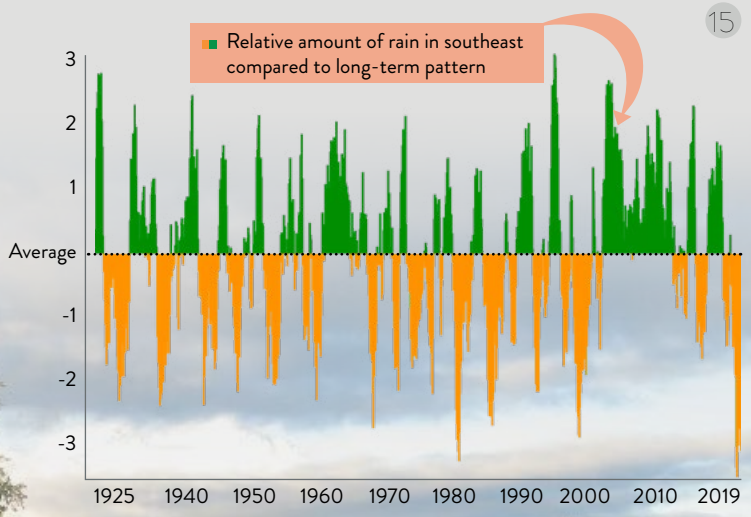
14



A RAINFOREST DROUGHT

While precipitation over long time-scales is increasing, year-to-year variability remains important. Southeast Alaska is one of the wettest areas in the world. Below is the Standardized Precipitation Index for the region. The values reached in 2017–2019 were the lowest rainfall on record. This drought contrasts with the prolonged wet period of the early 2000s. Partly for this reason, the impacts of the recent drought have been tremendous, despite longer dry periods in the past. Some reservoir levels are now too low to reliably run hydropower, prompting short-term water conservation efforts.

15

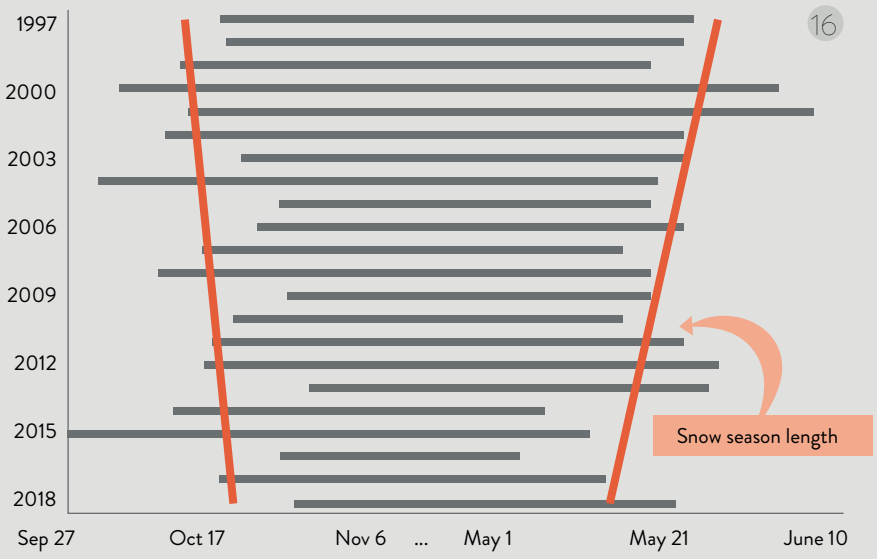


SNOW

Alaska now becomes 50% snow covered about a week later in October than in the 1990s. The snow-off date (when statewide snow coverage drops below 50%) is now nearly two weeks earlier than in the 1990s. The five earliest snow-off dates have all occurred since 2014. This shorter snow season impacts a wide variety of activities, ranging from overland travel by snow machine or dog sled to recreational skiing. Road maintenance is also affected by the delayed snow onset and earlier melt. However, a shorter snow season does not necessarily translate to less snowfall, as heavy snow events can occur in a compressed snow season. Despite the shorter snow season for the state as a whole, winter snowfall in some areas like Anchorage has not decreased significantly.

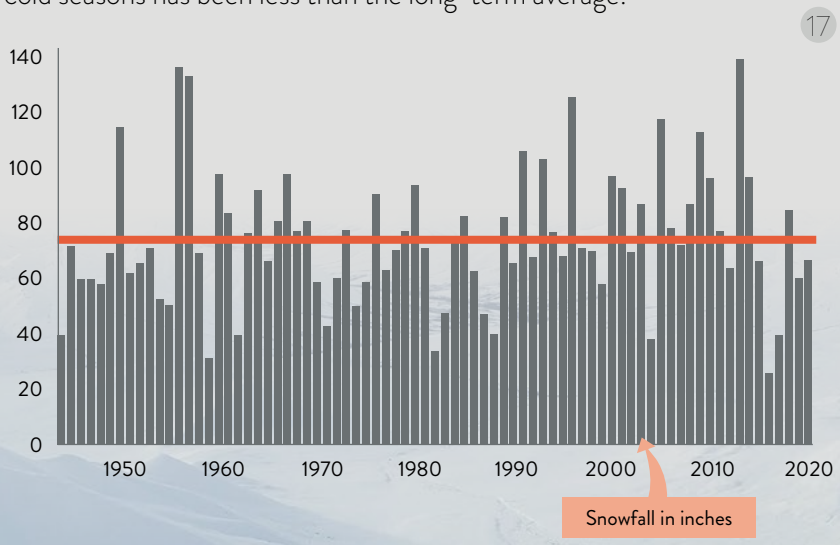
SHRINKING SNOW SEASON STATEWIDE

The snowpack now develops about a week later in autumn and melts nearly two weeks earlier in the spring compared to the late 1990s.



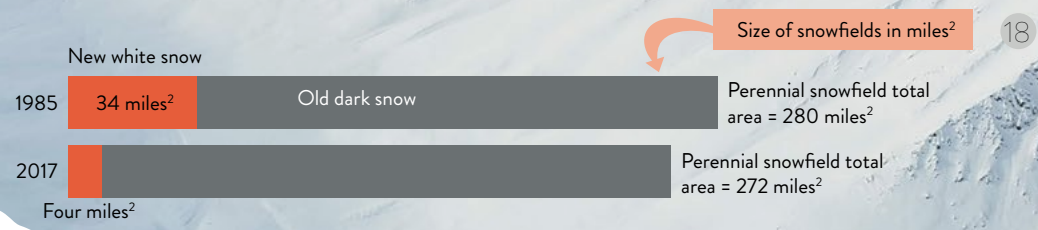
NO CHANGE IN ANCHORAGE

Anchorage's total seasonal snowfall shows no significant trend from the early 1940s to the present, even though snowfall for five of the past six cold seasons has been less than the long-term average.



SHRINKING SNOW FIELDS IN THE BROOKS RANGE

A different metric for changing snow is the area of year-round snow cover, also known as perennial snowfields. These thin snowfields are highly susceptible to changes in weather and climate. In Gates of the Arctic National Park and Preserve (colored red on the map) in the central Brooks Range, smaller areas of winter snowpack are now surviving the summer melt season (July 1–August 15) compared to 1985. The biggest change is related to the color of the snowfields, which are becoming darker. Since new snow is typically brighter than old snow, this suggests that fresh snow from the previous winter is not surviving the summer season, so the underlying dark dirty snow is left exposed. Because dark snow absorbs more sunlight, this change in color could make the snowfields even more likely to melt in summer. Of the 34 square miles of white snowfields seen in 1985, only four square miles remained by 2017.



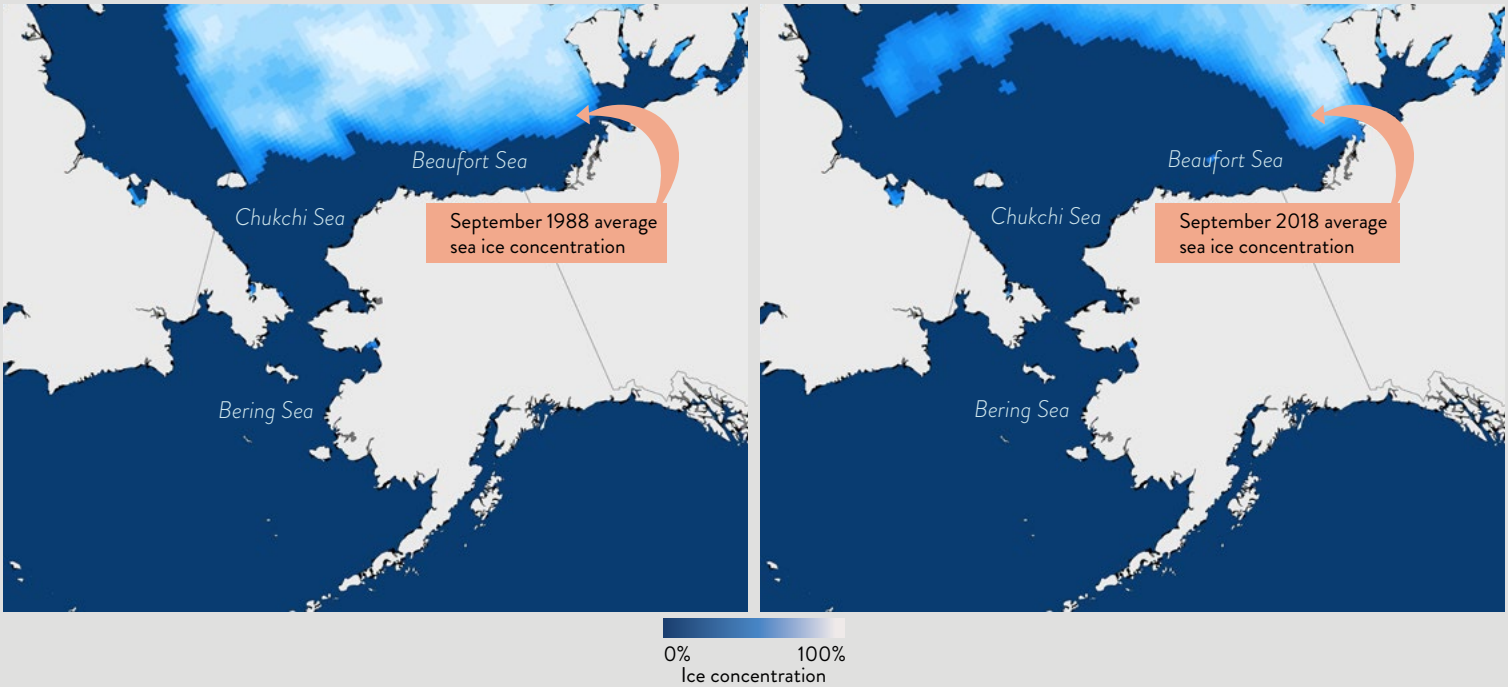
SEA ICE

Sea ice plays a profound role in the climate, environment, and economies of Alaska. The presence of sea ice significantly modulates regional temperatures and moisture, determines the structure of the marine food web, and shapes the kinds of activities that people can or cannot do: from subsistence and travel to resource extraction to national security. Nothing in the Alaska environment is changing faster than sea ice.

SEA ICE FORMS LATER IN FALL

The extent, duration, and thickness of sea ice has changed significantly in the seas around Alaska. The changes have been most widespread in the late summer and autumn. The average sea ice concentration in September of 1988 (left) and 2018 (right), both of which are fairly typical for their eras, shows much lower ice concentrations (or no ice) in the Chukchi and Beaufort Seas in 2018 compared to 30 years prior.

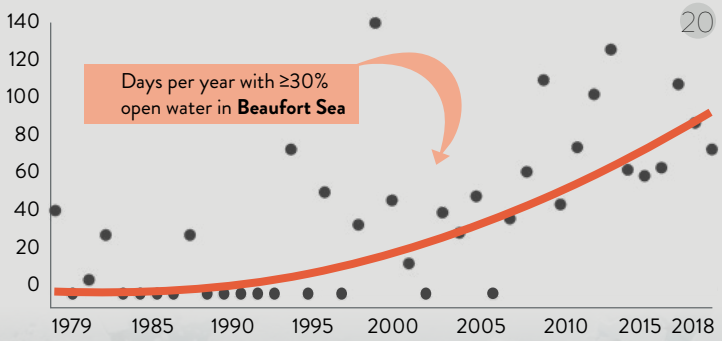
19



MORE LARGE OPEN WATER AREAS

Recent years have seen a dramatic increase in the duration of open water in the Chukchi and Beaufort Seas to the north and northwest of Alaska. In both seas there is now typically open water for three to four months.

20



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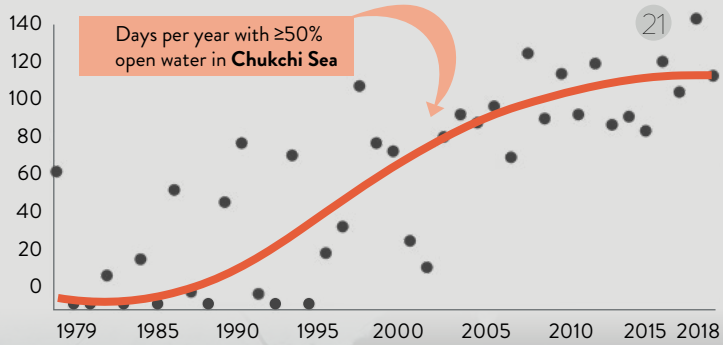
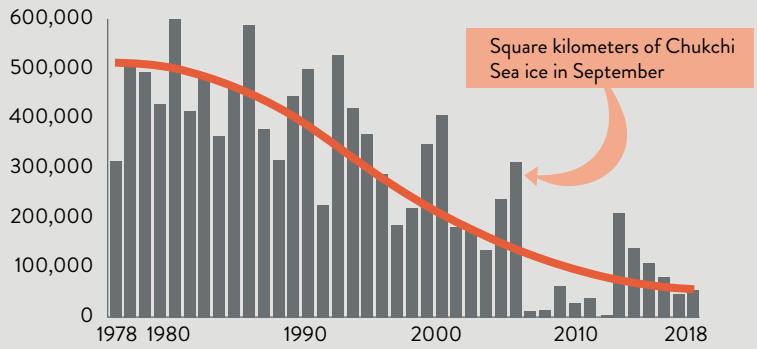


CHUKCHI SEA ICE EXTENT DECLINE

Sea ice extent in the Chukchi Sea has declined dramatically outside of winter in recent years, especially during the late summer. Typical ice extent in summer is only 10% of what it was in the early 1980s, and the September Chukchi Sea ice edge is now regularly hundreds of miles northwest of the Alaska coast.

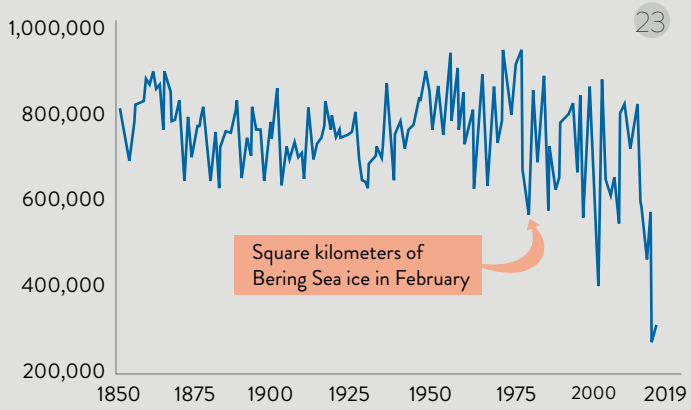
22



BERING SEA ICE EXTENT DECLINE

For decades, communities in the Bering Sea region have reported that sea ice quality has been changing, with little or no old ice and thinner ice than in the past. Data show that the extents of spring and autumn ice have been declining, but until recently there has been no long term trend in the winter and early-season ice extent. However, in 2018 and 2019, late winter ice coverage in the Alaska waters of the Bering Sea was far lower than any winter in the past 170 years.

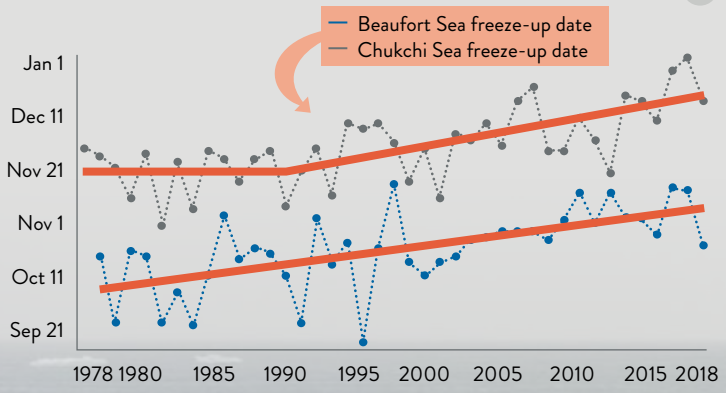
23



LATE BEAUFORT & CHUKCHI FREEZE-UP

Both the Beaufort and Chukchi Seas become entirely ice covered during the winter (though there are always cracks and leads). However, ice-over is now happening significantly later in the fall than in past decades, with recent years generally two to three weeks later than was typical in the 1980s.

24



OCEAN

The seas surrounding Alaska have been unusually warm in recent years, with unprecedented warmth in some cases. This warmth can be seen throughout the Alaska region, including the Gulf of Alaska as well as the Bering, Chukchi, and Beaufort Seas. The years 2015–2016 coincided with the occurrence of the "blob" of exceptionally warm water in the North Pacific Ocean. This warmth has persisted and even become more extreme in the 2017–2019 period in association with the unprecedented loss of sea ice. The past two winters (2017–18 and 2018–19) have seen "marine heat waves" in the Bering Sea. The heat content of the entire water column was greater in 2018 than ever recorded. The "cold pool" of water usually near the bottom of the Bering Sea disappeared during this time. This disappearance has major implications for the region, as the cold pool served as a barrier to northward migration of various aquatic species.

WARM SURFACE WATERS

Summer sea surface temperatures in Alaska waters have been much warmer (colored red below) than average (colored white) during 2014–2018, especially along the west coast, where the surface waters were 4–11°F warmer than average in the summer of 2019.

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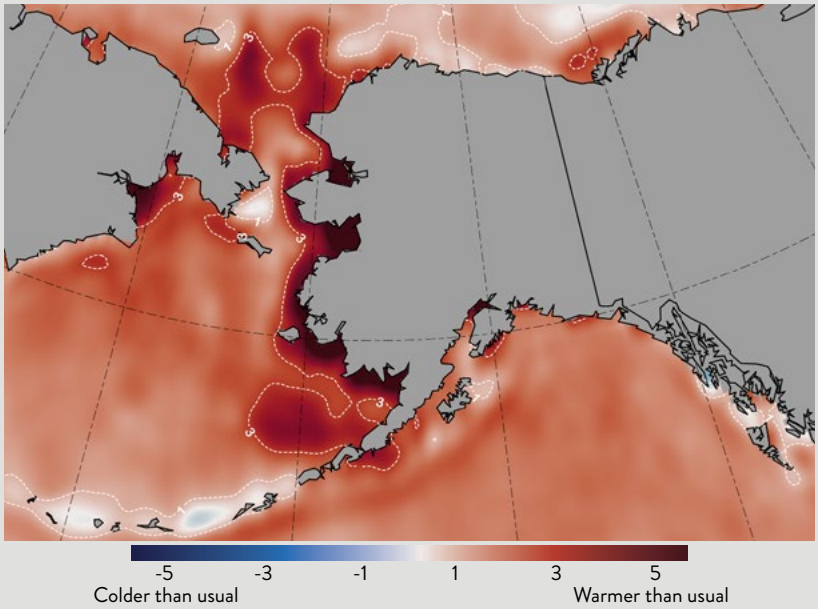

OCEAN ACIDIFICATION

26

As atmospheric carbon dioxide concentrations increase, the ocean absorbs the additional CO_2, leading to a decrease in pH. Ocean acidification poses major risks to marine ecosystems, and the risks are especially high in polar regions, because CO_2 dissolves more readily in cold water. Trends toward acidification have been detected north of Alaska in the Chukchi Sea and in the waters of the Canadian Arctic and the Greenland Sea, although the pre-2010 study periods pre-date the 2014–2019 focus of this report. Because ocean acidification threatens commercial fishing and subsistence activities in Alaska, the associated risks were recently mapped. The economic and social risks are highest in southwestern and southeastern Alaska. Systematic measurements of the chemistry of seawater west and south of Alaska are now underway, so that ocean acidification can be monitored in near-real time.

WIDESPREAD ALGAL BLOOMS

The abnormally warm waters have had other consequences, including earlier and more widespread spring and summer algal blooms in Alaska waters (turquoise colored Bering Sea bloom shown in photo). Algal blooms sometimes produce harmful toxins. In recent years there have been increasing reports of harmful algal blooms linked to instances of human shellfish poisoning in the Gulf of Alaska. Algal toxins have been documented in both stranded and harvested marine mammals, as well as healthy and die-off seabirds across the state, but their effects on Alaska wildlife are not yet known.

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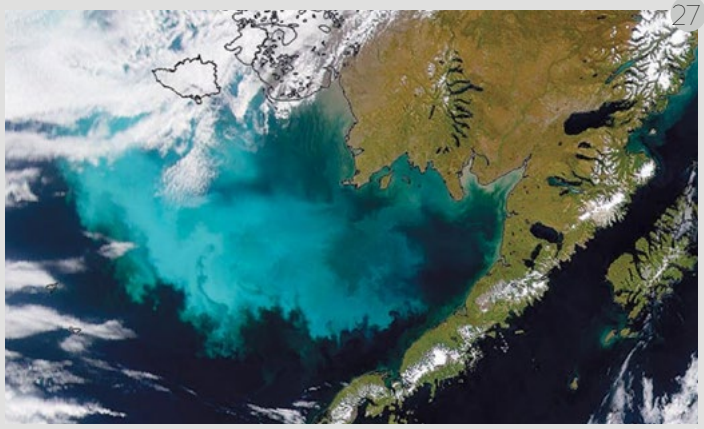

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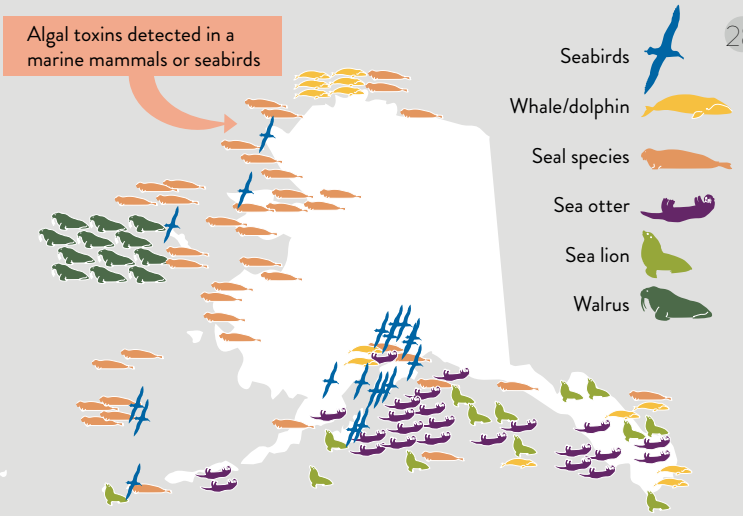
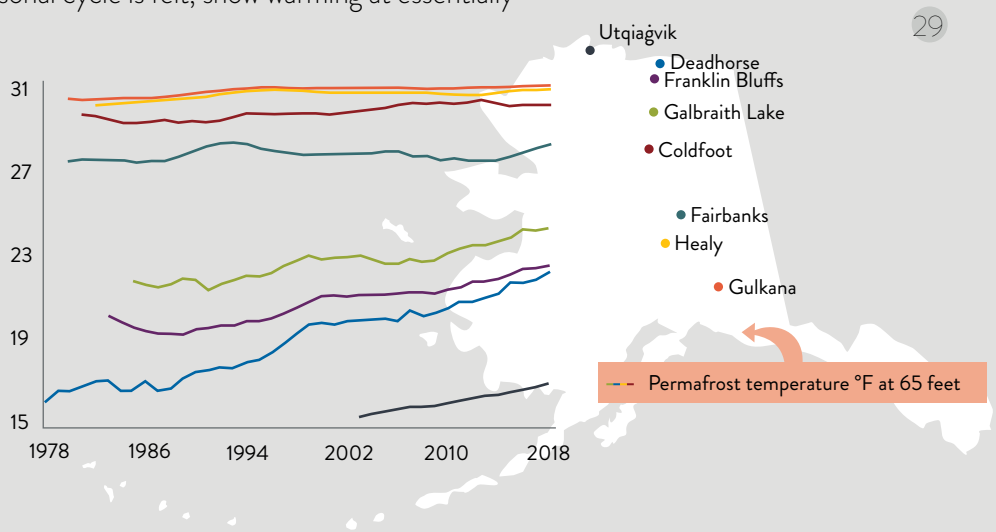


WARMING PERMAFROST

Permafrost is warming in Alaska. Measurements of permafrost temperatures at depths of 30–65 feet, well below levels where the seasonal cycle is felt, show warming at essentially all monitoring sites in northern and interior Alaska. The warming is especially strong on the North Slope, where sites along the Dalton Highway have warmed by 2–5°F from the 1980s to 2018. Warming at Deadhorse, for example, would bring the temperature at 65-feet depth to the melting point of ice by 2100 if it were to continue at the current rate. In the interior the warming rates are smaller because permafrost temperatures are already reaching the melting point of ice and, as permafrost thaws, some heat is used in melting ice.

29



Another measure of permafrost change is the depth of seasonal thaw, also known as active layer depth. Measurements at Council on the Seward Peninsula show that the thaw depth reached 33 inches in 2018, in contrast to much smaller values of 20–24 inches in the early part of the decade. The large thaw depths in recent years are consistent with high air temperatures of the 2016–2018 period.

LOSS OF GLACIAL ICE

Each year the mass of glaciers increases due to snow in winter and then decreases during the summer melt season. Largely because of increasing air temperatures, summer melt has exceeded winter gain in recent years, resulting in the retreat and mass loss of Alaska glaciers. More than 90% of Alaska's glaciers are retreating. Between 2002 and 2017, Alaska glaciers thinned on average by several feet per year. Overall mass loss during this period was nearly 60 billion tons of ice per year. Alaska's glaciers contain enough ice to raise sea level by about 1.5 inches if all their ice were to melt.

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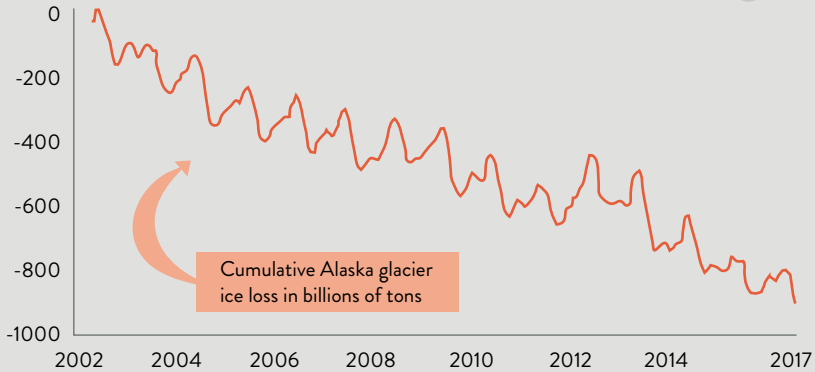

GULKANA GLACIER RETREAT

The Gulkana Glacier in the eastern Alaska Range has been photographed and measured annually for over 50 years. The comparison photos below clearly show that the glacier has retreated, and mass data indicate that it thinned almost 100 feet between 1966 and 2018.

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Gulkana Glacier 1967

Gulkana Glacier 2016

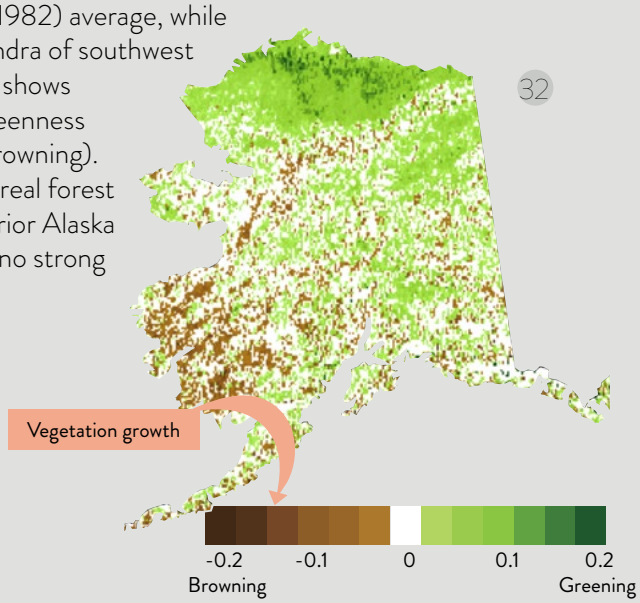
PLANTS

Satellite measurements have been used to monitor the growth of vegetation over the past several decades. Satellites provide a measure of photosynthetic activity, which correlates with plant growth. An increase in this metric is referred to as "greening," while a decrease is referred to as "browning" of the vegetation. Compared to other regions of the state, the tundra of the North Slope shows the most greening, or more plant growth, in the past five years relative to the longer-term average.

Growing Degree Days are widely used in agriculture to assess accumulated warmth over the course of the warm season. Higher values indicate more overall warmth. Many crops require a minimum amount of warmth to reach maturity. For example, peas require about 800 growing degree days before they are ready to be harvested, but canola requires 2000. Over the past five years, all regions of the state have had more total warmth than the long term normal, with the largest changes in southwest Alaska.

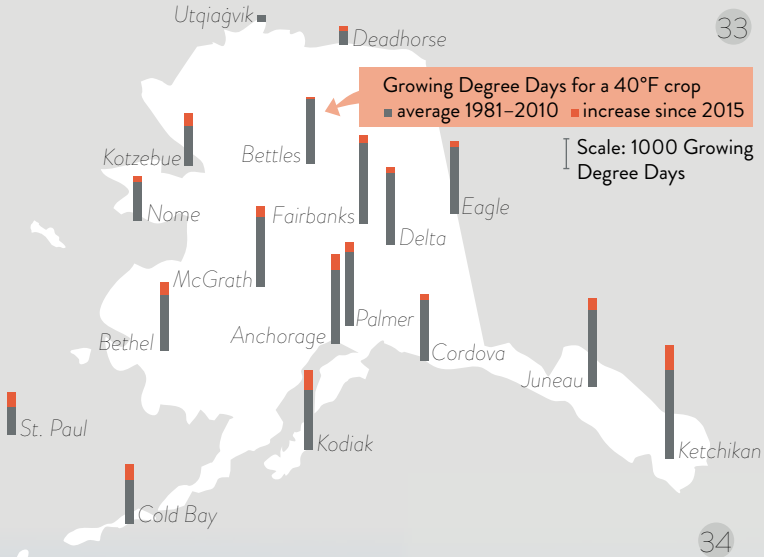
NORTH SLOPE TUNDRA GREENING

The tundra of Alaska's North Slope shows increased greenness in 2014–2018 relative to the longer-term (post-1982) average, while the tundra of southwest Alaska shows less greenness (i.e., browning). The boreal forest of interior Alaska shows no strong trend.



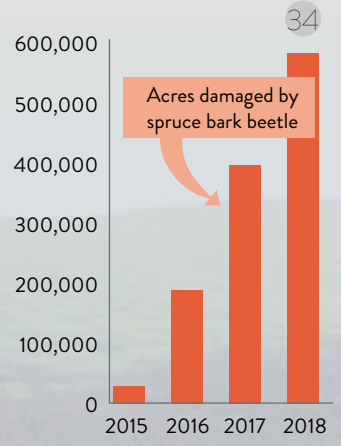
GROWING SEASON WARMTH

Growing Degree Days relate the average daily temperature of a location compared to a threshold below which a specific crop would not grow, like peas below 40°F. This value for a single day accumulates across an entire growing season and can be used to estimate which crops will reach maturity. Since 2014, the number of Growing Degree Days have increased across Alaska.



SPRUCE BARK BEETLE DEVASTATION

A major outbreak of spruce bark beetles has been spreading through southcentral Alaska during the past several years. The area affected by the outbreak increased from 33,000 acres in 2015 to 593,000 acres in 2018. Spruce bark beetle outbreaks have occurred previously in Alaska, most recently on the Kenai Peninsula in the late 1990s. While small populations of the beetles are always present in spruce forests, sudden increases in their populations are favored by a dry summer, which reduces trees' capacity to produce sap, a defense against the beetle. Longer and warmer summers also increase beetles' reproductive capacity, while milder winters increase over-winter survival rates. Damage from the spruce bark beetle is apparent in the large areas of gray and brown in this NASA aerial photo of the Susitna Valley during the summer of 2018.



ANIMALS & FISH

DELAYED BELUGA MIGRATION

Beluga whales migrate from the Bering Sea to the Chukchi and Beaufort Seas during the summer, followed by a return to the Bering in autumn. Data from beluga whales tagged with satellite-linked transmitters show that, comparing 1998–2002 to 2007–2012, beluga whales from the Chukchi Sea population delayed fall migration by about 33 days, resulting in a prolonged presence in the Beaufort Sea correlated with significantly later sea ice freeze-up.

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SHRINKING WALRUS HABITAT

In the past four years, a dramatic shift in Bering Strait ice conditions has impacted ice habitat for walruses. Walruses use sea ice for molting, mating, and nursing, and as a platform for dives to the bottom of shallow shelf seas for clams and other food. As sea ice recedes beyond the shallow shelf seas of northern Alaska, female walruses and calves must either remain on sea ice in water too deep for feeding or come onshore where stampedes are a risk.

For the past decade walruses have gathered on the shores of a barrier island near Point Lay. These haul-outs are associated with declining sea ice. During summer 2019, several thousand walruses hauled out on the island, marking the earliest walrus haul-out since they were first observed in 2007.

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HEAT & SALMON DIE-OFFS

In June and July of 2019, thousands of salmon died as they migrated to their spawning grounds of western Alaska. Although the cause is not confirmed, the leading suspect is unusually warm water temperatures above the range that causes stress to adult salmon. Warm water causes several problems: it contains less life-sustaining dissolved oxygen than cool water, greatly accelerates metabolism, resulting in faster burning of stored energy in the migrating fish, and promotes the growth of parasites and fungus that can weaken fish. Surveys of the Koyukuk River (a major tributary of the Yukon River) confirmed thousands of dead summer Chum salmon, which most likely succumbed to the heat, as the river did contain sufficient levels of dissolved oxygen.

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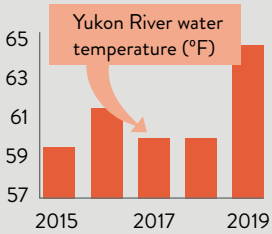
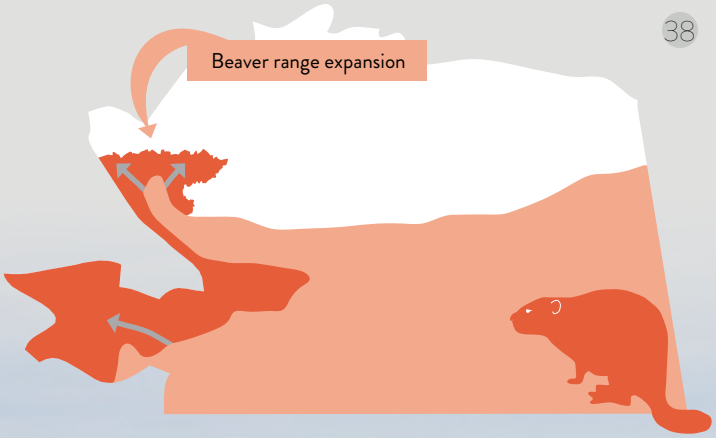


BEAVER COLONIZATION IN ARCTIC

North American beavers are migrating into Arctic tundra areas and altering the landscape of northwestern Alaska. Beavers have historically occupied forested regions (light orange). There is new evidence, however, that beavers have moved from forest into tundra regions since 1999 (dark orange), re-engineering rivers and streams of northwest Alaska. Possible reasons for the expansion of beavers include a population rebound from over-trapping and environmental changes such as warming temperatures, creating beaver habitat and changing the Arctic tundra.

38



HUMANS

Responding to a changing environment is a complex undertaking, occurring at many levels across Alaska. From rural communities to the Municipality of Anchorage to State agencies, Alaskans are grappling with environmental change. In 2003, 184 out of 213 Alaska Native villages were affected by flooding or erosion. Since that time, tribal governments, cities, municipalities, boroughs, and the State of Alaska have developed plans to respond to climate change. In 2008, the Alaska Climate Change Impact Mitigation Program and the Coastal Impact Assistance Program were established to provide technical assistance and funding to communities preparing impact assessments that characterize, diagnose, and project risks or impacts of environmental change on people and communities. Across the state over 200 of these assessments—often focused on erosion threats—have been completed.

Many state agencies take into account climate change in their daily work. A few climate change strategies and reports are listed here. In 2010, the Alaska Department of Fish and Game released their climate change strategy, which recognized unprecedented environmental change in the Arctic and outlined needed research and a strategy to respond to climate impacts. Since 2010, the Alaska Department of Environmental Conservation has released two greenhouse gas emission inventories describing the state's emissions from anthropogenic and natural sources. In 2018, the Department of Health and Social Services released a report on the health impacts of climate change.

Adaptation to environmental changes in the Beaufort-Chukchi-Bering region were recently addressed internationally by the Arctic Monitoring and Assessment Program, an Arctic Council Working Group. The group helps to inform policy and decision-making related to Arctic adaptation actions.

CLIMATE ADAPTATION

Climate adaptation planning is underway at various levels in Alaska, including statewide plans, borough plans (shaded areas on the map), and city and Alaska Native village plans (points on the map).

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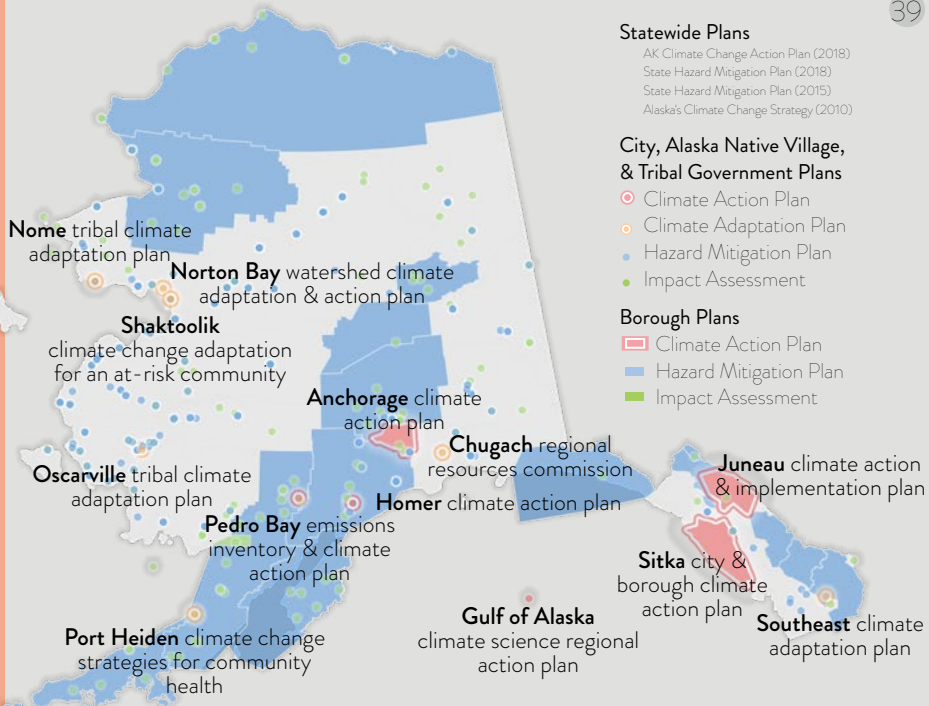

SHIFTING SUBSISTENCE RESOURCES

Environmental change is challenging travel and access to hunting, fishing, trapping, and gathering resources in interior Alaska (diagram below). Harvest windows are shrinking. Later freeze up and thinner river ice minimize the period of time it is safe to travel on rivers for hunting and trapping, while a shorter snow season reduces the window for travel over land. Accelerated permafrost thaw and changes in river break-up dynamics are influencing river navigability and fishing locations.

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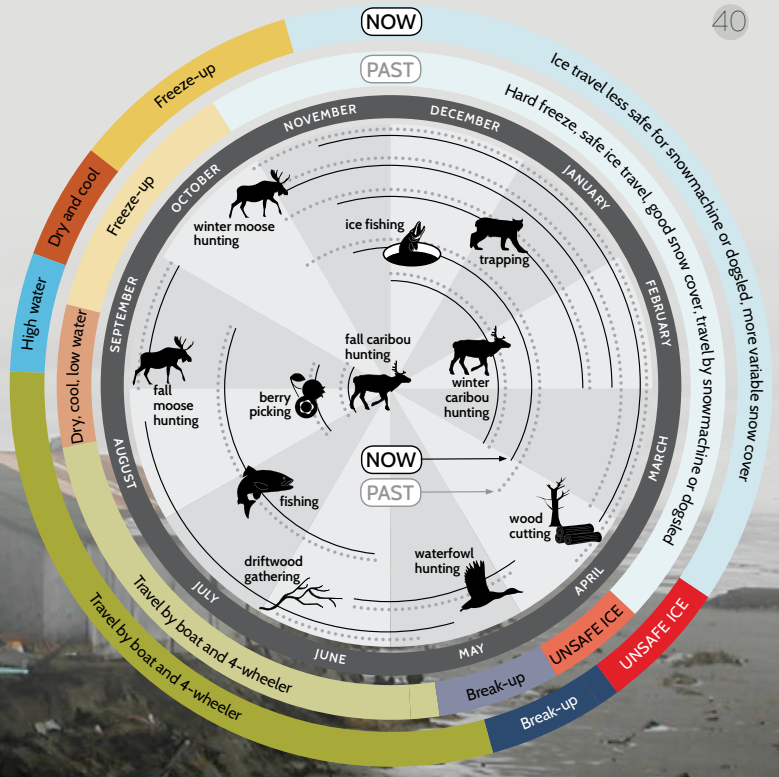


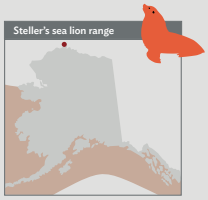
RURAL OBSERVATIONS

Jack Lane from Point Hope said, "The ice is not too safe this year. 8–24 inches [April 18, 2018]. Chasing lots of ducks, but the ice is thin... No [pressure] ridges. One whale, yet bad ice, lots of snow."

Willard Neakok from Point Lay said, "in 1998 people would leave for fishing cabins in late August or early September, now [2015] it is as late as the end of November."

Steven Patkotak from Wainwright wrote on July 10, 2018: "Ocean currents flow strong to NE and remaining ice from lagoon taken out. Someone tried boating out of inlet but rough water and waves higher than the normal..." He mentioned that only four days in the past month were calm enough for boating.

Billy Adams of Utqiaġvik reported on August 19, 2018 an unusual sighting of a Steller's Sea Lion more than 520 miles outside its range. "My friend Mark Ahsoak Jr. sent me photos on his hunting trip and came across a Steller's Sea Lion just about 12 miles south of Barrow [Utqiaġvik]! Looks like an old bull with a missing eye and some scarring which is natural."



Noah Naylor from Kotzebue reported that they had little sea ice in spring 2018 and Ugruk (seal) hunting was short. Not everyone could get out in time to hunt.

Robert Tokeinna Jr. from Wales wrote on May 4, 2018, "this week we lost our shorefast ice. Really super early."

Joe Turner of Nulato reported on June 22, 2017, "fire in Nulato during hot, dry summer. Very poor air quality."

Lee Kayotuk of Kaktovik reported in June 2019 that "spring came early. May 31, the Hulahula River came out to the coast. Open water ~1 mile offshore and Camden Bay didn't freeze all winter."

Cliff Adams of Beaver reported on June 18, 2016, "huge chunks of land eroding along the Yukon River, large sections of the shoreline falling in, even in areas that are not exposed to currents."

Ronnie Demientieff of Holy Cross reported on January 1, 2017 that there was "open water in January. Froze to the bottom then flooded over because of lack of snow."

Miki Collins of Lake Minchumina reported earlier snow melt than usual on April 7, 2017. "Dog team hauling gas during spring melt. Gravel exposed on Holek Spit grinds on sled runners, a problem especially when hauling heavy loads."

Misty Walsh of Tok reported later freeze-up on November 7, 2016, a change she started noticing in 2005. "Thin ice on river. Can't travel the river yet and there is not enough snow to go overland on snowmachines."

ACKNOWLEDGMENTS

This summary of Alaska environmental changes would not have been possible without the contributions of many individuals and organizations. Here we list photo credits and data sources. We also list the individual or entity who analyzed and produced each graphic. Each graphic and data source is associated with a number that can be found throughout the publication. We thank each of these contributors for their generosity and dedication to science and understanding Alaska's changing biological and physical systems.

PHOTO CREDITS

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Page 13, walrus from above – Brad Benter/US Fish & Wildlife Service
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Page 13, walrus bottom photo – C. Nayokpuk/Sea Ice for Walrus Outlook
Page 15, rural resident open water – Ravenna Koenig
Back cover – JR Ancheta/University of Alaska Fairbanks

GRAPHICS & DATA SOURCES

Number in publication – Individual, entity who produced graphic and/or analyzed data *(data source)*
1 – Rick Thoman, Alaska Center for Climate Assessment and Policy
2 – Rick Thoman, Alaska Center for Climate Assessment and Policy *(data source Alaska Interagency Coordination Center)*
3, 7, 9–11, 13–15, 17, 25 – Rick Thoman, Alaska Center for Climate Assessment and Policy *(data source NOAA/NCEI)*
4 – Xiangdong Zhang & Liran Peng, International Arctic Research Center *(data source ERA-Interim)*
5 – Rick Thoman, Alaska Center for Climate Assessment and Policy *(data source NOAA/NWS River Forecast Center)*
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12 – Rick Thoman, Alaska Center for Climate Assessment and Policy *(data source DOI/USGS)*
16 – Brian Brettschneider, International Arctic Research Center *(data source NSIDC)*
18 – Molly Tedesche, International Arctic Research Center *(data source NASA Landsat Missions 4, 5, 7, & 8; Hydrology, 2019)*
19 – Rick Thoman, Alaska Center for Climate Assessment and Policy *(data source NSIDC)*
20–22, 24 – Rick Thoman, Alaska Center for Climate Assessment and Policy *(data source NSIDC Sea Ice Index, V3)*
23 – Zachary Labe, University of California, Irvine *(data source Scenarios Network for Alaska + Arctic Planning)*
26 – *(data source AMAP Ocean Acidification Report, 2018; Nature Climate Change, 2017; Progress in Oceanography, 2015)*
27 – ORBIMAGE *(data sources SeaWiFS Project, NASA/Goddard Space Flight Center)*
28 – Heather McFarland, International Arctic Research Center *(data sources USGS Alaska Science Center, USGS National Wildlife Health Center, USFWS Alaska Region Migratory Bird Management, NOAA/Wildlife Algal-Toxins Research and Response Network WARRN-West)*
29 – Vladimir Romanovsky, Geophysical Institute *(data source GI Permafrost Lab Thermal State of Permafrost database, NSF)*
30 – Bert Wouters, Utrecht University/Delft University of Technology *(data source NASA/DLR GRACE mission; Frontiers in Earth Sciences, 2019)*
31 – *(data source Alaska Science Center USGS, L. Sass)*
32 – Uma Bhatt, Geophysical Institute *(NASA/GSFC)*
33 – Nancy Fresco, Scenarios Network for Alaska + Arctic Planning/Rick Thoman, ACCAP *(data source NOAA/NCEI, NDAWN, Canadian Journal of Plant Science, 2006)*
34 – John Walsh, International Arctic Research Center *(USDA Forest Service)*
35 – Donna Hauser, International Arctic Research Center *(Global Change Biology, 2017)*
36 – Olivia Lee, International Arctic Research Center
37 – Peter Westley, College of Fisheries and Ocean Sciences *(temperature graphic Rick Thoman, data source DOI/USGS)*
38 – Ken Tape, Geophysical Institute *(Global Change Biology, 2018)*
39 – Kelsey Aho, Center for Alaska Policy Studies *(data sources DEECD; Meeker and Kettle, 2017)*
40 – Krista Heeringa, Community Partnerships for Self-Reliance *(Environmental Impacts to Access in Interior Alaska)*
41 – Donna Hauser, Alaska Arctic Observatory & Knowledge Hub *(coastal observations)*
42 – Community Observers *(Interior observations; Environmental Impacts to Access in Interior Alaska)*

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CHAPTER 4: DEER MANAGEMENT REPORT

From: 1 July 2012
To: 30 June 2014

LOCATION

GAME MANAGEMENT UNIT: Unit 2 (3,600 mi^2)

GEOGRAPHIC DESCRIPTION: Prince of Wales (POW) Island and adjacent islands south of Sumner Strait and west of Kashevarof Passage and Clarence Strait

BACKGROUND

Sitka black-tailed deer are found throughout Unit 2, both on Prince of Wales Island (POW) and the smaller associated islands. Deer populations fluctuate, primarily in response to severe winter weather, unfavorable changes in habitat resulting from clearcut logging, and predation by wolves and black bears. Deer abundance appears to be stable or slowly increasing, likely in response to mild winters during this reporting period in conjunction with low wolf and bear numbers. Managers continue to monitor range conditions for signs of over-abundance, but for now deer populations in Unit 2 appear healthy compared to other adjacent areas such as Units 1A and 3 where deer numbers are low.

Sitka black-tailed deer are highly valued for both their meat and their trophy value on POW. POW has a reputation for producing large-bodied and large-antlered bucks with a number of bucks qualify for the Boone and Crockett and Pope and Young record books each year. Winter severity, weather conditions during hunting season, and deer population levels are the main regulators of deer harvests. The annual harvest in Unit 2 this reporting period averaged 3,696 compared to 2,926 for the previous 10-year period (RY02–RY11; Table 1).

Hunting does is currently allowed under federal regulations however the practice remains controversial. In 1995, despite state opposition, the Federal Subsistence Board implemented a 2.5-month-long antlerless deer season in Unit 2. The federal antlerless deer season remains in effect, running from October 15 through December 31, and allows hunters who qualify to participate in federal subsistence hunts to harvest 1 female deer as part of their 5-deer bag limit. A 3-week state antlerless season was initiated in Unit 2 during regulatory year (RY) 1987, but was discontinued a year later due to public opposition. The bag limit remains 4 bucks for individuals hunting under state regulations.

The current population of Unit 2 is about 3,600 people, down from nearly 6,000 at the turn of the century. The population peaked in the 1960s and 1970s and declined along with the decline of the old-growth logging industry. The City of Craig is the largest community in Unit 2, with

approximately 1,100 residents, followed by the communities of Klawock and Thorne Bay. Despite the recent decline in the human population, demand for deer hunting opportunity in Unit 2 remains strong. In addition to local residents, Unit 2 is also a popular deer hunting area for residents of other Southeast Alaska communities, particularly Ketchikan, and nonresident hunters.

Clearcut logging has been widespread in Unit 2 since the late 1950s. Counting National Forest, state, and private land, over 300,000 acres of old growth forest have been logged, and over 5,000 miles of roads have been built. Logging and road-building are ongoing, albeit at lower levels than in the past. Road building has greatly increased hunter access, and logging has focused on productive old-growth forest below 800 feet elevation, which is critical habitat for deer during winters with significant snow. Further, 25–35 years after being clearcut, regenerating stands of trees form dense even-aged canopies which block most light and shade-out forbs and shrubs that deer depend on as forage. To date thinning schemes have shown little potential to improve value of regenerating stands for deer. Consequently, it appears that much formerly productive deer habitat in Unit 2 will remain unproductive for many decades and the population will remain vulnerable to die-offs during winters with deep snow.

MANAGEMENT DIRECTION

MANAGEMENT GOALS

Action by the Board of Game in fall 2000 established a Unit 2 Intensive Management (IM) population objective of 71,000 deer and a harvest objective of 2,700 deer. This action was based on the board identifying the Unit 2 population as important for satisfying high levels of human consumptive use.

MANAGEMENT OBJECTIVES

- Maintain populations in excess of 45 deer per mi^2 of winter range, as determined by mean pellet-group densities of 1.4 pellet groups per plot (Kirchhoff 1990).

METHODS

We collected population information from anecdotal reports provided by hunters and from field observations. We were unable to conduct spring pellet-group surveys and spring mortality transects during the reporting period because regional priorities shifted to more focused data collection in Units 1A and 3 associated with intensive management activities. We intend to conduct spring pellet counts again beginning in 2015. A new technique for estimating deer abundance developed on POW by Todd Brinkman, PhD identifies individual deer using fecal DNA and uses a DNA-based mark-recapture technique to measure abundance within specific study sites, usually a watershed (Brinkman 2009). Although the technique appears promising, questions remain about applying the study area findings to a larger landscape.

From 1980 (except 1981) through 2010 we collected deer harvest information using a region-wide questionnaire mailed to a random sample of 33% of deer harvest ticket holders (ADF&G 2012). Information provided by respondents was expanded to estimate total harvest for the unit. To address questions surrounding allocation of deer harvest among residents of Unit 2, other Alaska residents, and nonresident hunters, from 2005 through 2010 Unit 2 deer hunters were required to obtain and complete a deer harvest report form specific to the unit. Those hunters

were removed from the region-wide mail-out survey. Beginning in fall 2011, we began collecting harvest information using a statewide deer harvest ticket report, similar to that used for species such as black bear, moose, caribou and sheep. Those data are also expanded to account for harvest ticket holders who did not respond. A preliminary analysis found that the deer hunter questionnaire and new harvest ticket reports produced comparable results.

Please note that there may be discrepancies between data in this report and management reports from previous reporting periods. DWC deleted many records and reloaded data from 1997-2010 in the WinfoNet database as a result of questionable records found in the database. In most cases, these data differences are minimal and the current data is the best available.

RESULTS AND DISCUSSION

MORTALITY

Harvest

Season and Bag Limit	Resident and Nonresident Hunters	
Unit 2	1 August–31 December	4 bucks
	Federally Qualified Subsistence Hunters	
	24 July–31 December	5 deer, however, no more than one may be an antlerless deer.

Board of Game Actions and Emergency Orders. The Board of Game took no actions affecting Unit 2 deer hunting, and no emergency orders were issued during the report period.

Hunter Harvest. Deer harvest in Unit 2 during the reporting period was estimated at 3,690 (RY12) and 3,702 (RY13) deer, both well above the IM harvest objective of 2,700 and the 10-year average annual harvest (RY02–RY11) of 2,926. The number of deer harvested per hunter was 1.5 in both RY12 and RY13, identical to the 10-year average (RY02–RY11 of 1.5 deer per hunter. The average of 3.5 and 3.4 hunter days per deer during RY12 and RY13, respectively, was similar to the 10-year average (RY02–RY11) of 3.5 days per deer. Overall hunter success rates in RY12 and RY13 were also very high at 73% each year, and slightly higher than the 10-year average (RY02–RY11) of 71% success (Table 1). Harvest during RY12 and RY13 on POW itself was 3,144 and 3,143 deer, respectively, above the 10-year average (RY02–RY11) of 2,655 (Table 2). This harvest data is consistent with anecdotal and field observations in Unit 2, which all suggest that deer in Unit 2 are stable to increasing and relatively abundant.

Hunter Residency and Success. Ketchikan hunters' share of the Unit 2 harvest during the report period was 30%, similar to the 10-year average (RY02–RY11) of 29% (Table 3). An estimated 48% of the hunters harvesting deer in Unit 2 during this report period were residents of POW. Residents of POW had a higher success rate than other hunters, with residents enjoying an average success rate of 82% during the report period (Table 4). Higher than average numbers of nonresidents hunted deer in Unit 2 during this report period. Nonresident hunters numbered 198 and 212 during RY12 and RY13, respectively. The 10-year average (RY02–RY11) is 142 per year. The nonresident success rate during the report period was 56%, slightly higher than the 10-year average (RY02–RY11) of 50%. This indicates a robust deer population and perhaps an increase in guided hunting activity (Table 4). As black bear hunting opportunities diminish on

POW many lodges, outfitters and guides may be shifting focus to deer hunting. Over the past 5 years the ADF&G office in Craig has noted an increase in nonresident inquiries about deer hunting in Unit 2, particularly from hunters interested in taking a Sitka black-tailed deer as part of their North American "deer slam." Recent harsh winters on Kodiak Island in Unit 8 caused significant declines in that deer population. Some increase in nonresident hunters on POW may be a result of nonresidents who normally hunt Kodiak shifting effort to POW. As Kodiak deer rebound, managers expect nonresident focus to shift back to that unit.

The average annual reported doe harvest over the past 10 seasons (RY02–RY11) has been 108, or approximately 3.7% of the overall reported harvest. During the RY12 season, 109 does were reported harvested under federal subsistence permits in Unit 2. During RY13, hunters reported the harvest of 91 does (Table 5). With populations nearing carrying capacity in potions of Unit 2, a limited doe harvest is warranted. However, anecdotal evidence and testimony from local residents suggests that the doe harvest by federal subsistence hunters is likely substantially under-reported.

Despite abundant deer, historically high harvests, and liberal seasons and bag limits, hunters from rural communities continue to complain about their inability to meet their subsistence needs. In some cases data from hunter reports substantiate those concerns. Among rural residents there is a perception of increased hunting pressure. The number of hunters for this reporting period (2,468 and 2,459 in RY12 and RY13, respectively), are the highest in the last 10 years (RY02–RY11), and 22% higher than the 10-year average (Table 1). The recently enacted Access Travel Management Plan (ATM) by the USFS will close 150 miles of existing logging roads to highway vehicles and convert an additional 222 miles from highway vehicle use to OHV use only (USDA 2009). Road closures may direct the same number of hunters into smaller areas, affirming the perception of increasingly crowded hunting conditions. In addition, as clear-cuts regenerate, deer become less visible, fueling speculation that fewer deer are available for harvest. State and federal managers will continue to struggle with balancing ADF&G's mission of wildlife conservation with the Federal Subsistence Board's mission to provide subsistence resources for rural residents under the Alaska National Interest Lands Conservation Act.

Harvest Chronology. Most Unit 2 deer are harvested during August, October and November. From 2004 through 2013, August and October harvests were roughly equal accounting for 16% and 17% of the harvest, respectively. August harvest levels were traditionally much higher but beginning in 2003 significant changes were implemented to federal deer hunting regulations that restricted non-federally qualifying hunters from participating during the first 2 weeks of August. Federally qualified hunters are also taking advantage of the late July opening day for the season. For hunters not qualified to hunt under federal regulations, November, which coincides with the rut, is now by far the most popular period to hunt deer and accounts for roughly 42% of the total harvest (Table 6).

Transport Methods. With the extensive road system in Unit 2, highway vehicles typically represent the primary method of access for deer hunters. During this reporting period 62% of hunters accessed opportunity using highway vehicles, whereas only about 27% of deer hunters used boats. Those proportions compare to 66% and 24% respectively for the 10-year average (RY02 – RY11) (Table 7).

Other Mortality

We believe that Unit 2 has one of the highest illegal and unreported harvest rates in the region, estimated to be equal to the legal harvest (Table 5). That estimate is based on anecdotal reports, interviews with law enforcement personnel, and fates of radio-collared deer. If that estimate is correct, over 4% of the estimated 75,000 deer in Unit 2 may be illegally harvested each year. This high illegal take is likely due in large part to the extensive and remote road system and few law enforcement personnel patrolling the unit.

Flynn and Suring (1989) reported that actual mortality from legal hunting could be 38% greater than the estimated harvest because of unknown or unreported crippling loss. Field observations and voluntary reports of wounding loss suggest that this estimate might be conservative.

Historically and prior to extensive road paving on the island, deer/vehicle collisions were rare (10–25 deer/year) and were not considered a significant source of mortality. However, the collision risk increased with completion in 2003 of extensive new POW highway paving projects, which now extend from Craig to Coffman Cove and east to Thorne Bay. Construction and paving of the main 30 road to Coffman Cove was completed in 2008. Construction is currently underway to extend the paved surface of Road 20 to Whale Pass. Higher vehicle speeds, as well as an attractive food source created by planting grass for erosion control near the roads will likely cause more deer/vehicle collisions, prompting managers to raise estimates to 30-50 deer per year beginning in 2004.

HABITAT

Assessment

Although timber harvest peaked in the 1980's and early 1990's, occasional large sales continue. The recent Logjam Timber sale, involving 73 million board feet of timber, resulted in clear-cut logging of approximately 3,400 acres of old-growth forest. Another highly controversial sale called the Big Thorne was scheduled to begin in April 2015. The record of decision (ROD) for this sale was signed in June 2013 but was delayed by the regional forester pending review of wolf habitat concerns and also delayed by lawsuits from several conservation organizations. A federal judge upheld the ROD in March 2015, although defendants in the case have appealed the decision and requested an injunction. This sale will authorize an additional 149 million board feet of timber and approximately 6,200 acres old growth forest to be clearcut, making it the largest timber sale on the Tongass National Forest in decades. Many of the old growth stands slated for harvest are among the last remaining stands of high quality deer winter habitat and travel corridors within their respective drainages within the central part of POW. In addition, the Sealaska Lands Bill passed Congress in December 2014. That bill transfers 70,000 acres or approximately 110 square miles of old-growth forest from the Tongass National Forest to the Sealaska Corporation. Most of that land is within Unit 2 and will be subject to clearcut logging. Sizeable units on State of Alaska and Alaska Mental Health Trust lands in the Control Junction and Coffman Cove areas are currently being logged, further contributing to the loss of high quality deer habitat.

Although early seral stages of clear-cuts provide abundant deer forage during snow free periods, within 20 to 30 years the regenerating second-growth forest reaches the stem exclusion stage where the canopy closes and shades out understory plants important for deer forage. Road

construction associated with logging activities continually increases access to deer and other wildlife habitat. As clearcut logging continues to remove old-growth forest habitat in Unit 2, deer populations are expected to decline. In a study of the relationship between habitat and predation of Columbian black-tailed deer on Vancouver Island, British Columbia, McNay and Voller (1995) found that logging and associated road construction fragments deer winter range and concentrates predation on resident deer. They concluded that large blocks of intact old-growth forest at low elevations are essential to sustaining healthy deer populations.

Old-growth forest retains important winter forage and intercepts snowfall making that forage more available to deer during periods of deep snow. Population models estimate declines in carrying capacity for deer of 50–60% by the end of the U. S. Forest Service planned logging rotation in 2054. By then we expect few areas within road accessible and logged portions of Unit 2 will meet projected hunter demand for deer (USFS 1989). The USFS is investigating thinning and other ways of creating openings in the canopy of second-growth forest, but any benefits to deer may be short-lived and will not provide winter habitat (Farmer et. al. 2006). Long-term consequences of habitat loss are likely to include reductions in deer hunting opportunity and an inability to provide for subsistence needs.

CONCLUSIONS AND RECOMMENDATIONS

According to estimates based on harvest ticket reports, the Unit 2 harvest objective of 2,700 deer per year was exceeded during both years of this reporting period. In fact, anecdotal accounts from hunters and public testimony during a multi-agency Unit 2 deer planning effort in 2005 (Unit 2 Deer Planning Subcommittee 2005) suggested that we probably continue to significantly underestimate the total number of deer harvested because illegal and unreported harvest appear to be substantial. If that is the case, actual harvest may be more than double the harvest objective.

The reported harvest along with average deer per hunter and the average hunter days per deer during the past 2 years indicate good recruitment and stable to increasing deer numbers in Unit 2. Both the total number of hunters and the number of successful hunters increased during the reporting period, and despite increased hunting pressure success rates remain high. However, managers are concerned that in some drainages the population may be near carrying capacity, and that a severe winter could result in a substantial die-off.

We should better inform the public regarding the effects of logging on deer populations, so that they are aware of tradeoffs between timber harvest and wildlife. We anticipate that logging related reductions in important winter habitat will reduce deer carrying capacity for decades to come. The long term consequences of habitat loss include loss of hunting opportunity and the inability to provide for subsistence needs of rural residents (Wood 1990, Larsen 1993).

Effects of climate change on deer and deer habitat remain unknown. Anticipated declines in deer carrying capacity coupled with steady or increasing demand for deer will require that we closely monitor Unit 2 deer populations and develop management strategies to adapt to changing conditions.

REFERENCES CITED

ADF&G (Alaska Department of Fish and Game). 2012. Region I deer harvest reports: Deer harvest database of hunter survey results, 1997–2010, Wildlife Information Network (WinfoNet). Division of Wildlife Conservation, Anchorage. [URL not publicly available as some information is confidential].

Brinkman, T. 2009. Resilience of a deer hunting system in southeast Alaska: integrating social, ecological, and genetic dimensions. Doctoral dissertation, University of Alaska-Fairbanks.

Farmer, C. J., D. K. Person, and R. T. Bowyer. 2006. Risk factors and mortality of black-tailed deer in a managed forest landscape. Journal of Wildlife Management 70:1403–1415.

Flynn, R. W. and L. Suring. 1989. Harvest rates of Sitka black-tailed deer populations in Southeast Alaska for land-use planning. Unpublished report.

Kirchhoff, M. D. 1990. Deer pellet-group surveys in Southeast Alaska. Alaska Department of Fish and Game, Douglas, Alaska.

Larsen, D. N. 1993. Deer management report of survey-inventory activities. Pages 1–20 [*In*] S. M. Abbott, editor. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project W-23-4 and W-23-5, Study 2.0, Juneau.

McNay, R. S. and J. M. Voller. 1995. Mortality causes and survival estimates for adult, female Columbian Black-Tailed Deer. Journal of Wildlife Management 59:138–146.

Unit 2 Deer Planning Subcommittee. 2005. Unit 2 Deer Management. Southeast Alaska Subsistence Regional Advisory Council, Anchorage.

U.S. Forest Service. 1989. 1989–94 operating period for the Ketchikan Pulp Company. Long-term Sale Area, Final Environmental Impact Statement, USDA Forest Service, R-10-MB-66h.

USDA (United States Department of Agriculture) Forest Service. 2009. Access travel management plan environmental assessment Prince of Wales and surrounding islands. Craig and Thorne Bay ranger districts. Tongass National Forest, Alaska.

Wood, R. E. 1990. Deer survey-inventory progress report. Pages 1–13 *in* S. O. Morgan, editor. Annual report of survey-inventory activities. Part VI. Deer. Vol. XX. Alaska Department of Fish and Game. Federal Aid Wildlife Restoration Progress Report, Project W-23-2, Study 2.0, Juneau.

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Please cite any information taken from this section, and reference as:

Bethune, S. 2015. Unit 2 deer. Chapter 4, pages 4–1 through 4–15 [*In*] P. Harper and L. A. McCarthy, editors. Deer management report of survey and inventory activities 1 July 2012–30 June 2014. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2015-3, Juneau.

While this unit report was actually published in 2016, it is part of the set of 2015 unit species management reports, so we suggest citing the report as a 2015 report to maintain its relationship to the other 2015 unit reports.

Product names used in this publication are included for completeness but do not constitute product endorsement.

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Table 1. Unit 2 deer harvest data, regulatory years 2002 through 2013.

Regulatory year	No. hunters	No. successful hunters	Percent successful	Total hunter days	Average hunter days	Total deer[a]	Average deer per hunter	Average hunter days per deer
2002[b]	1,850	1,122	61	10,426	5.6	1,805	1.2	4.8
2003[b]	1,390	887	64	8,014	5.8	2,176	1.3	4.4
2004[b]	1,410	1,038	74	6,819	4.8	2,184	1.5	3.1
2005[b]	1,824	1,322	72	9,194	5.0	2,744	1.5	3.4
2006[b]	2,072	1,548	75	10,102	4.9	3,326	1.6	3.0
2007[b]	2,005	1,385	69	10,521	5.2	2,854	1.4	3.7
2008[b]	2,114	1,511	71	11,122	5.3	3,319	1.6	3.4
2009[b]	2,108	1,567	74	11,681	5.5	3,340	1.6	3.5
2010[b]	2,250	1,682	75	11,823	5.3	3,626	1.6	3.3
2011[c]	2,229	1,680	75	13,271	6.0	3,882	1.7	3.4
2012[c]	2,468	1,795	73	12,972	5.3	3,690	1.5	3.5
2013[c]	2,459	1,800	73	12,663	5.2	3,702	1.5	3.4
Average	1,925	1,374	71	10,297	5.3	2,926	1.5	3.5

[a] Includes the reported harvest of does.

[b] Estimates calculated from hunter questionnaires sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 2. Expanded Unit 2 deer harvest from Prince of Wales Island only, regulatory years 2002 through 2013.

	Regulatory Year	Nr hunters expanded[a]	Nr successful hunters expanded[a]	Percent successful	Hunter days expanded[a]	Average days per hunter	Average deer per hunter	Deer killed
POW Island	2002[b]	1,761	1061	60	10,120	5.7	1.2	2,053
	2003[b]	1,311	828	63	7,608	5.8	1.3	1,650
	2004[b]	1,335	973	73	6,396	4.8	1.5	2,018
	2005[b]	1,726	1,234	71	8,676	5.0	1.5	2,540
	2006[b]	1,960	1,451	74	9,589	4.9	1.6	3,097
	2007[b]	1,910	1,312	69	10,044	5.3	1.4	2,645
	2008[b]	1,983	1,399	71	10,310	5.2	1.5	2,959
	2009[b]	1,958	1,441	74	10,706	5.5	1.5	2,987
	2010[b]	2,125	1,578	74	11,035	5.2	1.5	3,229
	2011[c]	2,056	1,559	76	11,983	5.9	1.6	3,373
	2012[c]	2,258	1,607	71	11,744	5.2	1.4	3,144
	2013[c]	2,217	1,605	72	11,287	5.1	1.4	3,143
	Average	1,813	1,284	71	9,647	5.3	1.5	2,655

[a] Expanded numbers are derived from a multiplier applied to survey results to yield totals for the area.

[b] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 3. Expanded Unit 1A (Ketchikan) hunters deer hunting effort and harvest in Unit 2, regulatory years 2002 through 2013[a].

Regulatory year	Residents of Unit 1A		Total 1A Resident Hunters	Total Hunters Unit 2	Deer Harvested by 1A Res.	Total Deer Harvested Unit 2
	Successful Hunters	Unsuccessful Hunters				
2002[b]	417	316	733	1,850	766	1,805
2003[b]	321	226	547	1,390	593	2,176
2004[b]	425	182	607	1,410	900	2,184
2005[b]	373	143	516	1,824	701	2,744
2006[b]	387	196	583	2,072	767	3,326
2007[b]	370	201	571	2,005	743	2,854
2008[b]	456	201	657	2,114	944	3,319
2009[b]	443	191	634	2,108	848	3,340
2010[b]	484	196	680	2,250	1,023	3,626
2011[c]	479	205	684	2,229	1,137	3,882
2012[c]	571	215	786	2,468	1,187	3,690
2013[c]	502	207	709	2,459	1,000	3,702
Average	416	206	621	1,925	842	2,926

[a] Expanded numbers are derived from a multiplier applied to survey results to yield totals for the area.

[b] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 4. Unit 2 hunter residency and success, regulatory years 2002 through 2013[a].

Regulatory year	Successful				Unsuccessful			
	Unit 2 resident[b]	Nonlocal resident	Nonresident	Total	Unit 2 resident[b]	Nonlocal resident	Nonresident	Total
2002[c]	548	574	0	1,122	301	427	0	728
2003[c]	475	412	0	887	172	331	0	503
2004[c]	475	563	0	1,038	126	246	0	372
2005[c]	742	491	89	1,322	176	217	107	500
2006[c]	756	723	65	1,544	147	277	83	507
2007[c]	721	590	75	1,386	165	303	151	619
2008[c]	719	693	100	1,512	189	302	111	602
2009[c]	745	657	139	1,541	149	291	88	528
2010[c]	789	724	136	1,649	161	308	88	557
2011[d]	799	770	102	1,671	122	339	86	547
2012[d]	812	858	111	1,781	186	392	87	665
2013[d]	804	849	119	1,772	195	363	93	651
Average	677	620	71	1,367	171	304	71	546

[a] Table does not include hunters with unknown residency.

[b] Local residents include Alaskan residents living within Unit 2 boundaries.

[c] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[d] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 5. Unit 2 reported and estimated deer harvest/mortality, regulatory years 2002 through 2013.

Regulatory year	Reported harvest			Unreported & illegal harvest[a]	Estimated total harvest	Estimated no. road kills
	Male	Female	Total			
2002[b]	1,736	69	1,805	1,805	3,610	30-50
2003[b]	2,085	91	2,176	2,176	4,352	30-50
2004[b]	2,090	94	2,184	2,184	4,368	30–50
2005[b]	2,630	114	2,744	2,744	5,488	30–50
2006[b]	3,215	111	3,326	3,326	6,652	30–50
2007[b]	2,756	98	2,854	2,854	5,708	30–50
2008[b]	3,193	126	3,319	3,319	6,638	30–50
2009[b]	3,187	153	3,340	3,340	6,680	30–50
2010[b]	3,525	101	3,626	3,626	7,252	30–50
2011[c]	3,762	120	3,882	3,882	7,764	30–50
2012[c]	3,581	109	3,690	3,690	7,380	30–50
2013[c]	3,611	91	3,702	3,702	7,404	30–50
Average	2,818	108	2,926	2,926	5,851	30–50

[a] Unreported and illegal harvest estimated at 100% of reported harvest.

[b] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Table 6. Unit 2 deer harvest chronology, regulatory years 2002 through 2013.

	Month of kill						
Regulatory year	July[a]	Aug	Sep	Oct	Nov	Dec	Unk/ other
2002 [b]	0	605	276	401	672	79	149
2003 [b]	78	284	287	357	567	49	182
2004[b]	68	310	240	481	811	61	213
2005[b]	210	504	399	503	897	76	154
2006[b]	189	501	460	538	1,329	153	158
2007[b]	128	428	300	450	1,218	121	210
2008[b]	116	494	362	522	1,525	167	132
2009[b]	122	488	263	510	1,658	183	117
2010[b]	156	471	281	594	1,669	178	278
2011[c]	220	619	290	598	1,918	197	41
2012[c]	142	460	306	557	1,879	315	32
2013[c]	167	485	282	461	2,100	174	34
Average	143[d]	470	316	495	1226	126	163

[a] Federal subsistence deer hunting season opens July 24.

[b] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[c] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

[d] Average does not include RY02 when there was no July season.

Table 7. Unit 2 hunter transport method, regulatory years 2002 through 2013.

Regulatory year	Method of transportation[a]					
	Airplane	Boat	Foot	Highway vehicle[b]	Other	Unk
2002[c]	34	345	38	1,077	0	69
2003[c]	75	426	41	1,469	0	28
2004[c]	32	330	33	1,113	0	31
2005[c]	80	391	41	1,432	0	56
2006[c]	81	526	56	1,569	0	35
2007[c]	93	480	43	1,502	0	32
2008[c]	84	794	73	1,306	1	87
2009[c]	69	623	57	1,479	0	76
2010[c]	54	562	71	1,668	0	145
2011[d]	76	637	215	1,478	12	112
2012[d]	101	716	195	1,605	9	80
2013[d]	90	720	60	1,737	7	88
Average	68	511	67	1409	3	67

[a] Numbers of successful and unsuccessful hunter trips.

[b] Includes cars, trucks, and off-road vehicles (3- and 4-wheelers).

[c] Estimates calculated from hunter questionnaire sent to about 30% of deer harvest ticket holders.

[d] Estimates calculated from mandatory hunt reports distributed with deer harvest tickets.

Larry T. Edwards
Sitka, Ak, 99835

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Alaska Roadless Rule
USDA Forest Service, Alaska Region
Ecosystem Planning and Budget Staff
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Via: https://cara.ecosystem-management.org/Public//CommentInput?Project=54511

Subj: Comments on the "Rulemaking for Alaska Roadless Areas" DEIS, and proposed Rule

Dear Mr. Tu;

I am a forty-three year resident of Sitka, and these are my personal comments. To be clear, I request that the No Action alternative be selected, or – better yet – that this rulemaking process be summarily terminated without a decision being made. I request this for reasons that follow, as well as for more detailed reasons given in two other comment submissions, by Alaska Rainforest Defenders and Earthjustice.

Concerning Analysis and Disclosure of Impacts

Forest Service officials at recent public meetings around Southeast and the DEIS both suggest that the action alternatives will merely shift where logging will occur, but will not change the impact of the Tongass timber program. That is false; the action alternatives will shift logging to areas of old-growth instead of second-growth. The roadless forests are primarily old-growth. The additional loss of old-growth forest will diminish forest ecosystem integrity and populations of oldgrowth-dependent mammals, and will harm subsistence hunters. None of this was adequately covered in the DEIS.

Focusing logging in whole or in part on roadless areas will result in more miles of road being built than otherwise, per amount of timber volume. Additional road mileage is detrimental to aquatic systems' water quality and habitat, and all that depends on the productivity of those systems – the fish, as well as subsistence-, commercial- and sport-fishing activities. None of this was adequately covered in the DEIS.

Logging in roadless areas, beyond what is already allowed by the Roadless Rule, will also impact the region's tourism industry. Tourism and commercial fishing are the region's economic engines, yet the action alternatives' economic impacts on them were not adequately covered in the DEIS.

The region's timber industry, which collectively operates on both federal and non-federal lands, is now almost entirely focused on the southern end of the region, below Frederick Sound. The cumulative impacts from nearly seven decades of logging in this part of the region and of the Tongass National Forest are immense. The DEIS did not adequately disclose those impacts or the additions to them that the action alternatives would cause.

Concerning the Rulemaking Process

Beyond the harm any of the action alternatives will cause to ecosystem integrity, to resources, and to recreational and non-timber resource uses, this entire rulemaking process – from its very beginning with the State's petition – is fundamentally baseless and corrupt. For details on corruption, see sections I thru III of Alaska Rainforest Defenders (23 Oct 2019) scoping comments.

But briefly, false pretenses underlaid Governor Walker's petition for rulemaking, which initiated this rulemaking process. The petition was every bit about logging, not the other reasons given instead. If those other (non-timber) reasons were true, the Chugach National Forest (which has no timber industry) would also have been fully included. Radical industrialists from the region's timber industry have been openly agitating at every opportunity for excluding the Tongass from the Roadless Rule, ever since the rule was adopted. Other reasons given by Roadless Rule opponents (access for mines, hydropower, community inter-connections, etc.) are fabrications – all 58 requests for building access across roadless areas have been timely granted.

Because Walker listened only to proponents (including timber- and other development-interests, including the Alaska congressional delegation) of eliminating the Roadless Rule, the State of Alaska did not conduct public scoping before submitting its petition for rulemaking. Public opinion and the spirit of democracy were irrelevant to Gov. Walker. Public scoping was done (jointly with the Forest Service) only *after* the petition was submitted and the rulemaking process had commenced.

The blowback from the State's ill-founded move that was immense – *even in the timber industry's strongholds, Ketchikan and on Prince of Wales Island* – during the region-wide public scoping meetings last year. And the blowback was just as immense at the DEIS openhouses and subsistence hearings conducted by the Forest Service this fall.

Conclusion and Requests

My above personal comments are general and concise. Speaking for me on the details and specifics are the comments being submitted by Alaska Rainforest Defenders and by Earthjustice.

Please stop wasting your time and the public's funds on this senseless and destructive move toward any of the action alternatives. Please — end this rulemaking travesty, right now! Just end it, with no decision issued. The Forest Service's work-time and the funds that would be used to complete this rulemaking are most needed to plan, manage and accomplish the repair of red pipes on our streams in logged-off areas throughout the Tongass, and for fighting wildfires in the Lower 48. But if you do proceed, I ask the Decisionmaker to select the No-Action alternative.

Sincerely,

Larry Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Laura
Last name: Edwards
Organization:
Title:
Comments:
My name is Laura Edwards and I live in Glen Arm, Maryland.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Laura Edwards

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Lesley
Last name: Edwards
Organization:
Title:
Comments:
My name is Lesley Edwards and I live in Cranbrook, [@advState].

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Lesley Edwards

Date submitted (Alaskan Standard Time): 11/26/2019 12:00:00 AM
First name: Loren
Last name: Edwards
Organization:
Title:
Comments:
HC9

To Whom it May Concern,

I, a resident of Idaho, former resident of Utah and future resident of Alaska demand *a no-action*[Text underlined for emphasis] alternative on the AK-specific Roadless Rule. We, as a nation *must*[Text underlined for emphasis] protect our waterways! They are too invaluable [Image of a heart]

-Loren E.

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Marc
Last name: Edwards
Organization:
Title:
Comments:
My name is Marc Edwards and I live in Houston, Texas.

Clearcutting is not a sustainable or responsible way to care for this precious resource.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Marc Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Mary
Last name: Edwards
Organization:
Title:
Comments:
My name is Mary Edwards and I live in Valley Center, Kansas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Mary Edwards

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Mary
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Mary Edwards

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Mary
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Mary Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Melody
Last name: Edwards
Organization:
Title:
Comments:
My name is Melody Edwards and I live in Lake Wales, Florida.

This needs to stop we must protect these lands. This one person Trump is deliberately destroying our planet. He has no regards for the planet, air, the animals. He needs to be put in prison .

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Melody Edwards

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Michael
Last name: Edwards
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Monique
Last name: Edwards
Organization:
Title:
Comments:
My name is Monique Edwards and I live in Oro Valley, Arizona.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Monique Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Nicole
Last name: Edwards
Organization:
Title:
Comments:
My name is Nicole Edwards and I live in Dallas, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Nicole Edwards

Date submitted (Alaskan Standard Time): 12/16/2019 9:16:42 AM
First name: Olivia
Last name: Edwards
Organization:
Title:
Comments:
My name is Olivia Edwards and I live in Fairbanks, AK. I live in Fairbanks, but visit Southeast Alaska frequently to visit friends and family. As an Alaskan resident I value all wild spaces and am a strong advocate for keeping them that way. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my subsistence harvesting, foraging for wild foods, the peace and solitude I find in nature, fishing, recreating, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on roadless areas in the Tongass National Forest for healthy fish habitat, foraging and gathering wild foods, recreating and enjoying nature, carbon sequestration and local climate change mitigation, keeping public lands wild for future generations. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Baranof Island, the northern mainland above Port Snettisham (around Juneau), the central mainland from Hobart Bay to Stikine River, Wrangell and Etolin Islands, Prince of Wales Island, Yakutat forelands, all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because It discounts the voices of Alaskans who spoke out in support of the no action alternative. Additionally, it will harm irreplaceable ecosystems.. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should devote resources to support our fishing and visitor industries invest in creating and maintaining recreation infrastructure improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Pamela
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Pamela Edwards

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Pamela
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Pamela Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Richard
Last name: Edwards
Organization:
Title:
Comments:
My name is Richard Edwards and I live in East Wenatchee, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Richard Edwards

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Rita
Last name: Edwards
Organization:
Title:
Comments:
My name is Rita Edwards and I live in Teton Village, Wyoming.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Rita Edwards

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Robert
Last name: Edwards
Organization:
Title:
Comments:
My name is Robert Edwards and I live in Covington, Louisiana.

The old growth trees are not replaceable. Preserve the ecosystems that rely on those beautiful tees! If we need more wood, grow super trees (fast growing trees) on farms.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Robert Edwards

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Sally
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Sally Edwards

Date submitted (Alaskan Standard Time): 12/13/2019 12:00:00 AM
First name: Sam
Last name: Edwards
Organization:
Title:
Comments:
HC501

Dear Roadless Rule Planning Team,

The health of the Tongass National Forest is important to me. I depend on the Tongass which is a unique and global treasure.

The freshwater streams where salmon and old growth forest of the Tongass provide spawning habitat for these fish, which in turn feed a matrix of bears, birds, insects, and other wildlife that Alaska is so famous for. The health of our economy, which is heavily dependent on the fishing and tourism industries, also depends on the salmon, wildlife and presence of old growth forests. A sustainable future for Southeast Alaska requires protecting expansive areas of intact habitat - in short, it requires keeping our Roadless areas roadless! I urge the Forest Service and the Secretary to protect important salmon spawning habitat, maintain old growth forests for winter deer habitat, and keep the places I like to recreate free of clearcuts and roadbuilding.

WHO I AM: [text bolded for emphasis] Include your name, where you live, and any relevant biographical information. Do you live or work on the Tongass National Forest? What is your relationship to the Tongass?

I work and live directly adjacent to the Tongass (Sullivan, Brabazon, JNU Icefield, and Yakutat Foreland sections).

PREFERRED ALTERNATIVE: [text bolded for emphasis] The Forest Service will choose how to proceed from a number of different alternatives. If you want the Roadless Rule to remain on the Tongass, write "No Action."

No Action Maintain the Roadless Rule

WHY I PREFER THIS ALTERNATIVE: [text bolded for emphasis] How would this alternative affect you and Southeast Alaskans?

This preserves the remaining areas of wilderness and habitat not degraded in the early givaways to the timber industry.

AREAS: [text bolded for emphasis] Are there specific islands, watersheds, or mountains that you depend on? Name the most important areas that the Roadless Rule to protect. Examples include the Tenakee Inlet, Nakwasina Sound, Fish Bay, Ushk Bay, Northern Prince of Wales, T77 salmon watershed areas, Audobon TNC ecological priority areas, etc.

Sullivan, W Lynn Canal, Brabazon and Yakutat Foreland are the areas I most frequently interact with.

USE: [text bolded for emphasis] What activities do you use the Tongass National Forest for? Hunting, fishing, recreation, subsistence, business, tourism, etc.

Fishing, recreation, guiding (rafting), subsistence gathering.

SUGGESTION: [text bolded for emphasis] How should the Forest Service manage the Tongass National Forest, rather than old-growth clearcut logging? More sustainable alternatives to timber harvest include salmon watershed restoration, visitor industry infrastructure, deer habitat enhancement, young growth thinning, and maintenance of recreation infrastructure such as trails and cabins.

I don't oppose timber harvest in parts of the Tongass but the Roadless Areas should remain wilderness for protection of critcal fish habitat and primitive and semi primitive private and commercial recreation.

Additional comments for the Forest Service:

Sincerely,

Sam Edwards

I want to receive a copy of the Draft Environmental Statement

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Shelby
Last name: Edwards
Organization:
Title:
Comments:
My name is Shelby Edwards, I live outside Bend, Oregon and grew up here in the Northwest.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

The Tongass National Forest merits continued protection. It serves as both unmatched and critical wildlife habit, watershed protection, a buffer against climate change, and is the last intact forest of it's kind. Cut roads through it and this unique resource will be lost forever.

Any choice but the No Action alternative is unacceptable. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Listen to the people.

Thank you.

Shelby EdwardsOregon

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: William
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, William Edwards

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: William
Last name: Edwards
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, William Edwards

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Dora
Last name: Eells
Organization:
Title:
Comments:

Dear Secretary Perdue,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Dora
Last name: Eells
Organization:
Title:
Comments:

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First name: Dora
Last name: Eells
Organization:
Title:
Comments:

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Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Dora
Last name: Eells
Organization:
Title:
Comments:

Dear Secretary Perdue,

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Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Dora
Last name: Eells
Organization:
Title:
Comments:
HC1185

Dear Secretary Perdue,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Maria
Last name: Eells
Organization:
Title:
Comments:
HC698

Dear Alaska Roadless Rule Planning Committee,

I live and work on the lands and waters of the Tongass National Forest. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, Southeast Alaskans rely on the intact habitat that the roadless areas of the Tongass National Forest contain. *That is why I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule.* [text bolded for emphasis]

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I strongly oppose any efforts to weaken protections for Roadless areas in the Tongass National Forest and the Chugach National Forest.

The Forest Service needs to continue phasing out old-growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. The Forest Service should focus on restoring degraded watershed and fish streams and carbon sequestration.

[Position]

Date submitted (Alaskan Standard Time): 11/4/2019 12:00:00 AM
First name: Maria
Last name: Eells
Organization:
Title:
Comments:
My name is Maria Eells and I live in Sitka, Alaska. I was born raised in Southeast. 33 years. I depend on the forest as a means of a subsistence lifestyle. I am directly effected by the changes to the wildlife and their environment. I am a commercial fisherman who depends on the estuaries and rivers surrounded by the forest to supply a pristine environment for the creatures who live there. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, subsistence harvesting, foraging for wild foods, the peace and solitude I find in nature, recreating, practicing my culture, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on roadless areas in the Tongass National Forest for economic livelihood, healthy fish habitat, deer habitat and subsistence hunting, foraging and gathering wild foods, practicing my culture, recreating and enjoying nature, carbon sequestration and local climate change mitigation, viewing wildlife, keeping public lands wild for future generations, fiscal responsibility and saving taxpayer dollars . A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Baranof Island, Admiralty Island, Chichagof Island, the central mainland from Hobart Bay to Stikine River, Kuiu Island, Wrangell and Etolin Islands, Prince of Wales Island, Yakutat forelands, the northern mainland above Port Snettisham (around Juneau), the southern mainland from Bradfield Canal to Dixon Entrance Kupreanof Island, Revillagigedo Island (near Ketchikan), all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because It will harm our existing economic drivers. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should transition to second growth logging improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Carol
Last name: EellsGuzik
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Carol EellsGuzik

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Carol
Last name: EellsGuzik
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Carol EellsGuzik

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Carol
Last name: EellsGuzik
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Carol EellsGuzik

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Joann
Last name: Een
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Joann Een

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Lee
Last name: Effinger
Organization:
Title:
Comments:
My name is Lee Effinger and I live in Salem, Oregon.

It is your duty to represent the interests of all user of the Bears Ears National Monument- particularly the wildlife and cultural resources and ecology of this unique area.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Lee Effinger

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Valeriya
Last name: Efimova
Organization:
Title:
Comments:
My name is Valeriya Efimova and I live in Jersey City, New Jersey.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Valeriya Efimova

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Monnie
Last name: Efross
Organization:
Title:
Comments:
My name is Monnie Efross and I live in Pinole, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Monnie Efross

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Daniel
Last name: Efroymson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Daniel Efroymson

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Daniel
Last name: Efroymson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Daniel Efroymson

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Daniel
Last name: Efroymson
Organization:
Title:
Comments:
My name is Daniel Efroymson and I live in Philadelphia, Pennsylvania.

As a patriotic American, nothing is more important to me than protcting and restoring our unique American landscape and wildlife. This is part of our nation's identity which must be protected.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Daniel Efroymson

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Andres
Last name: Eftim
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Andres Eftim

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Andres
Last name: Eftim
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Andres Eftim

Date submitted (Alaskan Standard Time): 11/23/2019 3:00:00 PM
First name: Cheryl
Last name: Egan
Organization:
Title:
Comments:
My name is Cheryl Egan and I live in Valley Cottage, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Cheryl Egan

Date submitted (Alaskan Standard Time): 11/24/2019 3:00:00 PM
First name: Cheryl
Last name: Egan
Organization:
Title:
Comments:
My name is Cheryl Egan and I live in Valley Cottage, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Cheryl Egan

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Elizabeth
Last name: Egan
Organization:
Title:
Comments:
I do not want there to be any exemption of the 2001 Roadless Rule for Alaska. I know that opening up the areas outlined in the proposed rule will not be good for any of us. I am a descendant of the people who have lived in and near these lands for thousands of years. It is too late in the game to be building new roads in now-roadless areas and logging old growth. It makes me so disappointed that in 2019, this is being considered. I say NO ACTION. I don't trust the Forest Service to make the best decisions for all beings in the Tongass and other forests concerning timber harvest and road construction. Please don't make any exemptions to the Roadless Rule in AK. This is horrible destruction of rainforest that we're talking about. Why? We know what is happening to this world--why is this even being considered? Just money. It's wrong. Look at where we are. We know this would not be right. Don't be the devil earth-destroyers. We have so little left. Come on. Grow up. UPHOLD THE ROADLESS RULE. NO EXEMPTIONS. NO ACTION.

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: james
Last name: egan
Organization:
Title:
Comments:
My name is james egan and I live in Dracut, Massachusetts.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, james egan

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: John
Last name: Egan
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Kevin
Last name: Egan
Organization:
Title:
Comments:
My name is Kevin Egan and I live in Sicklerville, New Jersey.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Kevin Egan

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Peter
Last name: Egan
Organization:
Title:
Comments:
My name is Peter Egan and I live in Yorktown, Virginia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Peter Egan

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Rhonda
Last name: Egan
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Rhonda Egan

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Tara
Last name: Egan
Organization:
Title:
Comments:
My name is Tara Egan and I live in Chicago, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Tara Egan

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Veronica
Last name: Egan
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Veronica Egan

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Veronica
Last name: Egan
Organization:
Title:
Comments:
Please do not log in the roadless Tongass National Forest! This area is important habitat for myriad wildlife species, including anadromous fish.There has to be a limit o human exploitation of remote, intact ecosystems!Humans exist within nature, not apart from it, and like all animal species, our survival depends upon the health of the habitat in which we live. We must learn to respect our fellow species in these last remaining wild places.

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Felicia
Last name: Egelman
Organization:
Title:
Comments:
My name is Felicia Egelman and I live in Seattle, Washington.

Please do not destroy America's beautiful wild lands for the short term profit and greed of the few.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Felicia Egelman

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Charles
Last name: Egger
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Charles Egger

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Katchie
Last name: Egger
Organization:
Title:
Comments:
My name is Katchie Egger and I live in Los Angeles, California.

We want a future!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Katchie Egger

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Katchie
Last name: Egger
Organization:
Title:
Comments:
My name is Katchie Egger and I live in Los Angeles, California.

We want a future!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Katchie Egger

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Katchie
Last name: Egger
Organization:
Title:
Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Katchie Egger

Date submitted (Alaskan Standard Time): 11/13/2019 3:00:00 PM
First name: Rebecca
Last name: Egger
Organization:
Title:
Comments:
My name is Rebecca Egger and I live in Berkeley, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Rebecca Egger

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Tricia
Last name: Egger
Organization:
Title:
Comments:
My name is Tricia Egger and I live in Sedona, Arizona.

Please make the roadless rule permanent and not subject to modification year after year by special interest groups!Thank you

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Tricia Egger

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lynne
Last name: Eggers
Organization:
Title:
Comments:
My name is Lynne Eggers and I live in San Francisco, California.

Take care of the country and our very lives - corporate greed will lead to our demise.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Lynne Eggers

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Norma
Last name: Eggers
Organization:
Title:
Comments:
My name is Norma Eggers and I live in Peoria, Arizona.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Norma Eggers

Date submitted (Alaskan Standard Time): 12/7/2019 12:00:00 AM
First name: Sebastian
Last name: Eggert
Organization:
Title:
Comments:
My name is Sebastian Eggert and I live in Port Townsend, WA. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

The Tongass is foundational to the ecology of the maritime pacific northwest. The biodiversity is intense and diverse; so little of this type of forest is left anywhere on the planet. As the planet warms we must preserve these areas for their own sake without the demand for resources influencing policy. We've taken enough already.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, the lifestyles of the indigenous communities that the forest supports its status as a national and global treasure, to keep public lands wild for future generations. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and

focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/11/2019 12:00:00 AM
First name: Rick
Last name: Eggerth
Organization: Mt. Baker Group, Sierra Club
Title: Vice-Chair
Comments:
What's not to like about our National Forests? They are a treasure, with countless riches we can enjoy and preserve. The jewel in the crown of the National Forest system is the 17 million acre Tongass National Forest, with 9.2 million roadless acres, America's largest national forest, and more importantly one of the largest intact temperate rainforests in the world.

The Roadless Area Conservation Policy, established in January 2001 by President Clinton, ended logging, road-building, and hydrocarbon/mineral leasing in 58 million acres of the wildest remaining undeveloped national forest land. The State of Alaska now seeks total exemption from this act, ostensibly to support the logging industry. But there is no logic to support this.

Decades ago the Tongass supported thousands of logging related jobs. But as of 2019 the Tongass supports fewer than 100 timber jobs, which account for less than one percent of regional employment. Today it is tourism and commercial salmon fishing that drive the economy, representing 26% of jobs in the region. The Forest Service reports in 2017 that the Tongass received 2.9 million visitors, generated $382 million, and supported 3,937 tourism and salmon fishing jobs. But salmon populations have been struggling. Additional roads and mining would only degrade their habitat, as these industries increase erosion, sediment build-up, and warming in streams. The roadless areas of the Tongass provide pristine cold water habitat for these threatened fish, which in turn supports a $382 million industry. Exemption from the roadless requirement would thus hurt Alaska's economy, not help it.

This is not empty hyperbole or false news. As noted by Dale Bosworth, chief of the U.S. Forest Service under President George W. Bush (https://www.washingtontimes.com/news/dec/9the-cents-and-sense-of-maintaining the-roadless-pr/):

Now, timber harvesting on national forests is absolutely a viable and important multiple use. It provides jobs and wood products while reducing the fire hazard and improving forest health. But due to expensive road building and transportation costs, lack of sawmill capacity and low timber values, the Tongass has the least economically-efficient timber sale program in the National Forest System. A recent report from Taxpayers for Common Sense found that timber sales in the Tongass have actually cost the American taxpayers roughly $600 million since 1999, or $30 million per year on average in 2018 dollars. It is difficult to justify opening up roadless areas in the Tongass for timber sales, which are heavily subsidized by American taxpayers, while simultaneously jeopardizing the industries that are adding to the regional tax base.

I therefore urgently request that the Governor's request be denied and that the Roadless Rule remain in effect in the Tongass National Forest. I support Alternative #1, that no action be taken, keeping the hard-fought protections for roadless areas in the Tongass National Forest.

Thank you.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 10/27/2019 12:00:00 AM
First name: Robert
Last name: Eggiman
Organization:
Title:
Comments:
Allowing roads to be constructed in this old growth forest will destroy parts of nature that are incredibly rare today. This needs to NOT happen. The health of our planet and the future of life on it depends on the health of forests. Destroying these examples of undisturbed nature pushes us closer to extinction and ruins the land for future generations of not only humans, but animal species.

Please do not allow logging efforts in this area of undisturbed forest. There is plenty of useable second growth on land that is already destroyed by logging.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Jeanine
Last name: Eggler
Organization:
Title:
Comments:
My name is Jeanine Eggler and I'm from Belen, New Mexico.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Jeanine Eggler

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Beth
Last name: Eggleston
Organization:
Title:
Comments:
My name is Beth Eggleston and I live in Thornville, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Beth Eggleston

Date submitted (Alaskan Standard Time): 11/12/2019 3:00:00 PM
First name: Elizabeth
Last name: Eggleston
Organization:
Title:
Comments:
My name is Elizabeth Eggleston and I live in Hanover, Maryland.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Elizabeth Eggleston

Date submitted (Alaskan Standard Time): 12/14/2019 9:03:09 PM
First name: Keri
Last name: Eggleston
Organization:
Title:
Comments:
My name is Keri Eggleston and I live in Haines, AK. My husband and I have lived in Southeast Alaska our whole lives. We live here for so many reasons - commercial fishing is our main source of income. The rural, wild, natural beauty of the Tongass National Forest feeds our souls. We hunt and gather and hike in the forest. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, subsistence harvesting, foraging for wild foods, the peace and solitude I find in nature, recreating, practicing my culture, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on roadless areas in the Tongass National Forest for healthy fish habitat, deer habitat and subsistence hunting, foraging and gathering wild foods, recreating and enjoying nature, carbon sequestration and local climate change mitigation, viewing wildlife, keeping public lands wild for future generations. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Chichagof Island, Baranof Island, Admiralty Island, the northern mainland above Port Snettisham (around Juneau). I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because It ignores all of the reasons that many of us live here and fails to consider our future generations right to this pristine wilderness. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should devote resources to support our fishing and visitor industries transition to second growth logging invest in creating and maintaining recreation infrastructure improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Patrick
Last name: Eggleston
Organization:
Title:
Comments:
My name is Patrick Eggleston and I live in Amherst, New Hampshire.

We need the forests for habitat for many species. We need the forests to slow climate change, and for erosion control.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Patrick Eggleston

[Position]

[Position]

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Richard
Last name: Eggleston
Organization:
Title:
Comments:
We didn't go through conserving these natural places just so they could be developed later. Furthermore, information shows that that the federal subsidies required to develop the roads through this area make the actual economic outcome a net loss. If anyone profits from logging this area, it is through huge external economies covered by the locals and federal largess. We would be better off just giving the money to the loggers and leaving the forest alone. The best thing to do is just leave it alone.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Michele
Last name: Egloff-Grossman
Organization:
Title:
Comments:
My name is Michele Egloff-Grossman and I live in Wall Township, New Jersey.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Michele Egloff-Grossman

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Heather Emily
Last name: Ego
Organization:
Title:
Comments:
My father and I believe the Tsongass National Forest is a resource that needs no improvement. No human touch can better what nature has created in this forest. Let us simply leave the forest whole.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Summer
Last name: Eh
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building. You greedy fucks will kill us all!

Regards, Summer Eh

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Noah
Last name: Ehler
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Noah Ehler

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Noah
Last name: Ehler
Organization:
Title:
Comments:
My name is Noah Ehler and I live in Monroe, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Noah Ehler

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jen
Last name: Ehlinger-Saj
Organization:
Title:
Comments:
My name is Jen Ehlinger-Saj and I live in Buffalo, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jen Ehlinger-Saj

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Richard
Last name: Ehmann
Organization:
Title:
Comments:
HC3150

U.S. Forest Service Alaska Roadless Rule

Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Richard Ehmann

Pittsburgh, PA 15208

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Richard
Last name: Ehmann
Organization:
Title:
Comments:
HC3892

U.S. Forest Service Alaska Roadless Rule

Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.

Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,

Richard Ehmann

Pittsburgh, PA 15208

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Richard
Last name: Ehmann
Organization:
Title:
Comments:
3150

U.S. Forest Service Alaska Roadless Rule
Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,
Richard Ehmann
Pittsburgh, PA 15208

Date submitted (Alaskan Standard Time): 10/18/2019 12:00:00 AM
First name: Tiffany
Last name: Ehnes
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Marge
Last name: Ehr
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Marge Ehr

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Marge
Last name: Ehr
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Marge Ehr

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Marge
Last name: Ehr
Organization:
Title:
Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Marge Ehr

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Robert
Last name: Ehr
Organization:
Title:
Comments:
My name is Robert Ehr and I live in Milwaukee, Wisconsin.

Aren't we in enough trouble with climate change without "adding another straw to the camel's back".

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Robert Ehr

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Sherryl
Last name: Ehren
Organization:
Title:
Comments:
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
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Thank you for considering my comments.
Regards, Sherryl Ehren

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Vivian
Last name: Ehresman
Organization:
Title:
Comments:
My name is Vivian Ehresman and I live in Los Angeles, California.

Reversing any clean air and/or clean water act makes no sense. We need to move forward with cleaner air and water and healthier environments for all of our citizens.EPA, you need to withdraw your repeal of the EPA policy of Once In, Always In. The EPA is supposed to protect citizens and the environment, not polluters.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Vivian Ehresman

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: donna
Last name: ehret
Organization:
Title:
Comments:
My name is donna ehret and I live in Rome, Indiana.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, donna ehret

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Carole
Last name: Ehrhardt
Organization:
Title:
Comments:
My name is Carole Ehrhardt and I live in Pebble Beach, California.

It is important to our nation to keep our forests alive and well, and not add to more climate change, which is destroying our globe. Greed is immoral! Stop it.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Carole Ehrhardt

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Carole
Last name: Ehrhardt
Organization:
Title:
Comments:
My name is Carole Ehrhardt and I live in Pebble Beach, California.

We need all our forests to prevent more climate change

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Carole Ehrhardt

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Timothy
Last name: Ehrhardt
Organization:
Title:
Comments:
My name is Timothy Ehrhardt and I live in Bridgeview, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Timothy Ehrhardt

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Isaac
Last name: Ehrlich
Organization:
Title:
Comments:
My name is Isaac Ehrlich and I live in Rhododendron, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Isaac Ehrlich

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Jeremy
Last name: Ehrlich
Organization:
Title:
Comments:
My name is Jeremy Ehrlich and I live in Seattle, Washington.

Climate change is the most important issue of our time, and we as citizens count on EPA to do everything it can to protect our future as well as our current environment. Methane is a dangerous greenhouse gas that deserves stricter limits, not more lenient ones.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Jeremy Ehrlich

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Lily
Last name: Ehrlich
Organization:
Title:
Comments:
HC845

Dear Secretary Perdue,

I am a visitor to the lands and waters of Southeast Alaska. The Tongass National Forest is a large part of why I am here. Visitors like me come to witness the vast, beautiful stands of old-growth trees that can't be found on such a scale anywhere else in the United States. We come to crew on commercial fishing boats. We come to hunt, fish and hike in America's largest National Forest. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Alaskans and Americans.

I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. Tourism and commercial fishing are at the heart of Southeast's economy, not the antiquated timber industry.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Gordon
Last name: Ehrman
Organization:
Title:
Comments:
My name is Gordon Ehrman and I live in Larkspur, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Gordon Ehrman

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Gordon
Last name: Ehrman
Organization:
Title:
Comments:
HC3294

U.S. Forest Service Alaska Roadless Rule

Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Gordon Ehrman

Greenbrae, CA 94904

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Gordon
Last name: Ehrman
Organization:
Title:
Comments:
3294

U.S. Forest Service Alaska Roadless Rule
Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,
Gordon Ehrman
Greenbrae, CA 94904

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Cameo
Last name: Eiben
Organization:
Title:
Comments:
My name is Cameo Eiben and I live in Hopkinton, Iowa.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Cameo Eiben

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Elizabeth
Last name: Eich
Organization:
Title:
Comments:
My name is Elizabeth Eich and I live in Queens, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Elizabeth Eich

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Cheryl
Last name: Eichen
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Cheryl Eichen

Date submitted (Alaskan Standard Time): 12/14/2019 3:00:00 PM
First name: j
Last name: eichen
Organization:
Title:
Comments:
My name is j eichen and I live in Lake Worth, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, j eichen

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Ingrid
Last name: Eichenbaum
Organization:
Title:
Comments:
My name is Ingrid Eichenbaum and I live in New York, New York.

Once its gone, it will begone forever! Please consider before doing this!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Ingrid Eichenbaum

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Annie
Last name: Eicher
Organization:
Title:
Comments:
My name is Annie Eicher and I live in Mckinleyville, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Annie Eicher

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Gerald
Last name: Eicher
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Gerald Eicher

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Patricia
Last name: Eichman
Organization:
Title:
Comments:
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Regards, Patricia Eichman

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Janet
Last name: Eichmeier
Organization:
Title:
Comments:
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Regards, Janet Eichmeier

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jeffrey
Last name: Eichner
Organization:
Title:
Comments:
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Regards, Jeffrey Eichner

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Dennis
Last name: Eicholtz
Organization:
Title:
Comments:
My name is Dennis Eicholtz and I live in Chico, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Dennis Eicholtz

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Christoph
Last name: Eicken
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Christoph Eicken

Date submitted (Alaskan Standard Time): 11/5/2019 3:00:00 PM
First name: Andrew
Last name: Eickholt
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Elizabeth
Last name: Eide
Organization:
Title:
Comments:
My name is Elizabeth Eide and I live in Minneapolis, Minnesota.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Elizabeth Eide

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Alex
Last name: Eidson
Organization:
Title:
Comments:
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Regards, Alex Eidson

Date submitted (Alaskan Standard Time): 12/6/2019 12:00:00 AM
First name: Rebecca
Last name: Eidson
Organization:
Title:
Comments:
I am against exempting the Tongass National Forest from Roadless Rule Protection. We have overdeveloped in so many areas of Texas and other areas of our country that some places need to remain unmarred - like the Tongass.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Jen
Last name: Eiffert
Organization:
Title:
Comments:
My name is Jen Eiffert and I live in Medford, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jen Eiffert

Date submitted (Alaskan Standard Time): 11/17/2019 3:00:00 PM
First name: Thomas
Last name: Eifler
Organization:
Title:
Comments:
My name is Thomas Eifler and I live in Cary, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Thomas Eifler

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Kelly
Last name: Eigler
Organization:
Title:
Comments:
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Regards, Kelly Eigler

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Susan
Last name: Eikenbary
Organization:
Title:
Comments:
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Regards, Susan Eikenbary

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Elizabeth
Last name: Eilers
Organization:
Title:
Comments:
HC5629

Dear U.S. Forest Service,

CC: Alaska Congressional Delegation and Federal Administration

I support the no-action alternative to leave the 2001 Roadless Rule in place on the Tongass National Forest. We must continue to phase out old-growth clear-cut logging and instead prioritize restoring degraded watersheds and fish streams that contribute to the growing fisheries and tourism-based economies of Southeast. To that end, please conserve the Tongass 77 and TNC priority areas in the final Roadless Rule.

Sincerely,

Comments: *(Eg: list locations you recreate, or why you value Tongass fish & wildlife)* [Text italicized for emphasis]

[Box unchecked] I would like to get more involved in the campaign!

*By taking this action, you are consenting to receive future communications via phone, text message, email, or mail from Sitka Conservation Society and its partners working to protect the Tongass. * [Text italicized for emphasis]

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Jessica
Last name: Eilers
Organization:
Title:
Comments:
I've visited the Tongass National Forest three times in the past 10 years and the idea of development in this area is abhorrent to me. We must protect these areas and I'm writing to ask that option #1 be administered - no development, no logging trucks. Let's protect this space. It's one of the last truly untouched areas we have. Let's not put profit above all else.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Lauren
Last name: EILERS
Organization:
Title:
Comments:
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Regards, Lauren EILERS

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Last name: EILERS
Organization:
Title:
Comments:
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Last name: EILERS
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Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Lauren EILERS

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Nancy
Last name: Eimers
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Nancy Eimers

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Nancy
Last name: Eimers
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Nancy Eimers

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Kate
Last name: Einerson
Organization:
Title:
Comments:
HC4987

Dear U.S. Forest Service,

CC: Alaska Congressional Delegation and Federal Administration

I support the no-action alternative to leave the 2001 Roadless Rule in place on the Tongass National Forest. We must continue to phase out old-growth clear-cut logging and instead prioritize restoring degraded watersheds and fish streams that contribute to the growing fisheries and tourism-based economies of Southeast. To that end, please conserve the Tongass 77 and TNC priority areas in the final Roadless Rule.

Sincerely,

Comments: *(Eg: list locations you recreate, or why you value Tongass fish & wildlife)* [Text italicized for emphasis]

[Box unchecked] I would like to get more involved in the campaign!

*By taking this action, you are consenting to receive future communications via phone, text message, email, or mail from Sitka Conservation Society and its partners working to protect the Tongass. * [Text italicized for emphasis]

RR Y TP 1 RRS 1

Date submitted (Alaskan Standard Time): 11/18/2019 3:00:00 PM
First name: Janet
Last name: Einfalt
Organization:
Title:
Comments:
My name is Janet Einfalt and I live in Hubbard, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Janet Einfalt

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Andrew
Last name: Einhorn
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Andrew Einhorn

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Pamela
Last name: Eiriksson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Pamela Eiriksson

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Hedy
Last name: Eischeid
Organization:
Title:
Comments:
HC6183

Dear U.S. Forest Service:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for more than 20 years. *Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77.* [Text bolded for emphasis] Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. *Please do not roll back roadless are protection for habitat that our irreplaceable fish and wildlife populations need to survive.* [Text bolded for emphasis]

Customize your comment by listing reasons the Tongass is important to you or why you value Alaska Roadless areas: (ex: specific locations you recreate, activities you do, or why you value fish & wildlife) [Text italicized]

The current roadless rule protects our resources + our way of life. I want the Tongass preserved for future generations. Keep the current rule - No exceptions.

Sincerely,

Would you like to volunteer with TU Alaska to Help America's Salmon Forest?

Yes No

Date submitted (Alaskan Standard Time): 10/19/2019 12:00:00 AM
First name: Nicholas
Last name: Eischeid
Organization:
Title:
Comments:
To whom it may concern,

The proposed rule would not directly authorize any ground-disturbing activities, but would surely result in the ground being disturbed. The continued removal of protections for our natural resources will also ensure that our natural resources and environment will be used without regard to their preservation.

As a Pennsylvanian, Ive witnessed the encroachment of the natural gas industry into our Wilds. While being a boost to our economy, it has left gashes across the landscape in the name of profit. Please do not allow the Tongass to fall prey to greed.

Sincerely,

Nick Eischeid

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Ted
Last name: Eischeid
Organization:
Title:
Comments:
HC6189

Dear U.S. Forest Service:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for more than 20 years. *Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77.* [Text bolded for emphasis] Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. *Please do not roll back roadless are protection for habitat that our irreplaceable fish and wildlife populations need to survive.* [Text bolded for emphasis]

Customize your comment by listing reasons the Tongass is important to you or why you value Alaska Roadless areas: (ex: specific locations you recreate, activities you do, or why you value fish & wildlife) [Text italicized]

The current roadless rule protects our resources & our lifestyle. Let's manage The Tongass for young age forestry - leave the roadless areas be - keep the current roadless rule - No AK exemption. Thank you. [Signature]

Sincerely,

Would you like to volunteer with TU Alaska to Help America's Salmon Forest?

Yes No

[Position]

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Kim
Last name: Eisele
Organization:
Title:
Comments:
Keep 'Roadless Rule' Protections for the Tongass National Forest

Dear U.S. Forest Service,

Please, think of your children and grandchildren. I urge yku to oppose the Forest Service's plan to eliminate "Roadless Rule" protections for the Tongass National Forest. Please select the "no action" alternative instead.

I spent several months living near the forest on an artist residency. The forest was my refuge, as it is for so much wildlife. The trees are significant "lungs" and serve collectively to store carbon, a reserve we need now more than ever as we tip past the brink of climate crisis survival. Opening roads to allow clear cutting is placing economic interests over our present and future on this planet.

I beg of you to choose "no action" and maintain the Roadless Rule in the Tongass and Chuhach National Forests.

Sincerely,

Kim Eisele

Tucson, AZ 85719

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 8:57:28 AM
First name: Kim
Last name: Eisele
Organization: Kimi Eisele
Title:
Comments:
I lived in Sitka, AK for 2 months on an artist residency and spent much of my time in the forest, walking and making portraits, amidst cedar and spruce stands. I didn't realize I was in a state of mourning and the forest helped me tend to myself. I have since presented work about the forest and my relationship with it through performance and writing.

I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my the peace and solitude I find in nature, recreating, practicing my culture, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It shows the Forest Service is responding to the needs and voices of Southeast Alaskan communities. I depend on roadless areas in the Tongass National Forest for viewing wildlife, carbon sequestration and local climate change mitigation, recreating and enjoying nature, practicing my culture, keeping public lands wild for future generations. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Service's preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because It ignored the countless statements made already at public meetings about leaving things as they are, about the value of intact old-growth forests, about sustaining important ecological relationships, about keeping wildlife corridors open. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts devote resources to support our fishing and visitor industries transition to second growth logging invest in creating and maintaining recreation infrastructure.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Thank you,
Kimi Eisele

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Shawn
Last name: Eisele
Organization:
Title:
Comments:
I am a resident of Southeast Alaska. I enjoy and value the Tongass as wilderness, and I support keeping the Roadless Rule.

My employment, and that of many others, is tied to a wild Tongass that is protected. Tourism, for example, is driven by visitors' desire to experience a wild place like the Tongass. Repealing any protections the Tongass would hurt local economies that rely on these kinds of wilderness values. Fishing too relies on healthy streams and forests for salmon spawning and rearing.

Independently, the economics of road building don't pencil out. Vast sums of our tax dollars are spent to plan, build, and maintain developments like roads. These sums dwarf the small, one time, value attributed to the roads, such as timber sales.

In short, the development that might occur were the Roadless Rule repealed would be bad for the local economy, in order to achieve projects that themselves are likely financial drains, while harming a wilderness that locals and Americans more broadly value.

[Position]

Date submitted (Alaskan Standard Time): 10/20/2019 12:00:00 AM
First name: John
Last name: Eiseman
Organization:
Title:
Comments:
Please dont build any new roads or open this area to loggers. Im not an extremist, but some ideas are simply bad. This is one of them.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/23/2019 3:00:00 PM
First name: Harvey
Last name: Eisen
Organization:
Title:
Comments:
My name is Harvey Eisen and I live in Bethesda, Maryland.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Harvey Eisen

Date submitted (Alaskan Standard Time): 11/5/2019 3:00:00 PM
First name: Kurt
Last name: Eisenach
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Liz
Last name: Eisenbeis
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Liz Eisenbeis

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Liz
Last name: Eisenbeis
Organization:
Title:
Comments:
My name is Liz Eisenbeis and I live in Lodi, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Liz Eisenbeis

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Andrea
Last name: Eisenberg
Organization:
Title:
Comments:
My name is Andrea Eisenberg and I live in Mount Kisco, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Andrea Eisenberg

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Christi
Last name: Eisenberg
Organization:
Title:
Comments:
My name is Christi Eisenberg and I live in The Villages, Florida.

So many forests are disappearing... just when we need the Oxygen they provide us the most. Please protect our forests!!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Christi Eisenberg

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Dr.
Last name: Eisenberg
Organization:
Title:
Comments:
My name is Dr. Eisenberg and I live in Tucson, Arizona.

We are given life that we may enhance life. IMPEACH THE CORRUPT WARMONGER WHO DISRESPECTS MOTHER EARTH AND HER BELOVED CREATURES

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Dr. Eisenberg

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Eric
Last name: Eisenberg
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Eric Eisenberg

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Howard
Last name: Eisenberg
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Howard Eisenberg

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Howard
Last name: Eisenberg
Organization:
Title:
Comments:
My name is Howard Eisenberg and I live in San Mateo, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Howard Eisenberg

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Joel
Last name: Eisenberg
Organization:
Title:
Comments:
My name is Joel Eisenberg and I live in Richmond, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Joel Eisenberg

Date submitted (Alaskan Standard Time): 12/12/2019 12:00:00 AM
First name: Lana R.
Last name: Eisenberg
Organization:
Title:
Comments:
I am deeply concerned by the current proposal to open the Tongass National Forest to logging. The Tongass's old-growth trees store vast amounts of carbon, which must not be released to accelerate climate change. The Tongass is the only temperate rainforest left on the planet; to authorize building roads in it for logging is to hasten its destruction for all time, as well as to hasten the warming of the planet beyond livable levels.

Wilderness places are our inheritance from previous generations, whose members worked to conserve the natural world in danger of destruction. They are "the family jewels," held in trust for future generations; to sell them for present profit betrays our children and grandchildren.

The UN Environment Program's report released recently warns that we must take strong action to reduce carbon emissions now in order to prevent catastrophic warming. I feel a strong sense of responsibility, both to my forebears, who had respect for the natural world, and to my children and grandchildren - and everybody's children and grandchildren - to protect them and to conserve the natural world that was created for us.

Public lands belong to all of us, both present and future Americans; they should be managed for our benefit, not for the short-term profit of corporations.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Michael
Last name: Eisenberg
Organization:
Title:
Comments:
My name is Michael Eisenberg and I live in Raleigh, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Michael Eisenberg

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Paul
Last name: Eisenberg
Organization:
Title:
Comments:
My name is Paul Eisenberg and I live in Bloomington, Indiana.

I do very much oppose all attempts to roll back the Roadless Rule.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Paul Eisenberg

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Paul
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Organization:
Title:
Comments:
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Thank you for considering my comments.
Regards, Paul Eisenberg

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Mary
Last name: Eisenfeld
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Mary Eisenfeld

Date submitted (Alaskan Standard Time): 11/17/2019 3:00:00 PM
First name: Janet
Last name: Eisenhauer
Organization:
Title:
Comments:
My name is Janet Eisenhauer and I live in Ocean View, New Jersey.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Janet Eisenhauer

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Diane
Last name: Eisenhower
Organization:
Title:
Comments:
My name is Diane Eisenhower and I live in Vero Beach, Florida.

I live in Vero Beach, Florida. I have FP & L and my bills are way too high. These increases need to be curtailed and discounts and rebates should be given. People in our state should be able to go off the grid without being penalized!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Diane Eisenhower

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Daniel
Last name: Eisenmenger
Organization:
Title:
Comments:
HC5260

U.S. Forest Service Alaska Roadless Rule Committee:

The Tongass National Forest is the primary source of North America's salmon. Opening the forest up to logging will harm the fisheries and damage the entire ecosystem (natural and economic) built around the salmon.

The Roadless Rule has been instrumental in conserving the Chugach and Tongass National Forest and in supporting their associated fish and wildlife-based industries for more than 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77, by selecting the 'no action' alternative. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Daniel Eisenmenger

Thornton, CO 80602

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: karen
Last name: eisenstadt
Organization:
Title:
Comments:
My name is karen eisenstadt and I live in Berkeley, California.

think of all you can save in respiratory illnesses with cleaner air!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, karen eisenstadt

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Evan
Last name: Eisentrager
Organization:
Title:
Comments:
My name is Evan Eisentrager and I live in Easthampton, Massachusetts.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Evan Eisentrager

Date submitted (Alaskan Standard Time): 11/19/2019 12:00:00 AM
First name: Andrew
Last name: Eisenzimmer
Organization:
Title:
Comments:
I would urge denial of the request to exempt Tongass National Forest from the so-called "roadless rule." I have personally seen the adverse effects that clear cutting and other practices have on our forests where such activities are allowed. We only have one chance to continue to preserve some of our lands which are protected by the roadless rule. Please do not squander the opportunity to continue that protection. If you permit the exemption for Tongass, we can never recover what we now enjoy. And, I especially want that preserved for my children and my grandchildren.

Thank you.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 10/22/2019 12:00:00 AM
First name: J
Last name: Eiser
Organization:
Title:
Comments:
CEASE. DESIST. SAVE WHATEVER IS LEFT OF THE PLANET AND NATURE

Dear U.S. Forest Service,

I strongly oppose the Forest Service's plan to eliminate "Roadless Rule" protections for the Tongass National Forest and urge you to select the "no action" alternative instead.

As you know the Tongass is America's wildest remaining national forest, with more than 9 million acres of roadless areas. And it's home to a wide range of wildlife, including Alexander Archipelago wolves, grizzly bears and salmon. It also stores a vast amount of carbon, with its centuries-old trees serving as a carbon-reserve life raft in this time of climate change. Logging releases most of that carbon into the atmosphere.

Your proposal to open the door to clearcutting and bulldozing is irresponsible and fundamentally threatens these values. The Tongass belongs to all Americans and shouldn't be sacrificed to the timber industry, which provides a small fraction of the jobs and income in Southeast Alaska compared to tourism and fishing - both of which rely on intact forests to thrive. It's even more important to save these last remaining roadless forests because your agency has fragmented and logged so much of our national forests, harming wildlife and waters along the way.

Further, I oppose your plan to allow the agency to open any of the 5 million acres of roadless areas on the Chugach National Forest to bulldozing and clearcutting for logging. This is simply a backdoor repeal of the 2001 Roadless Rule, which protects all roadless lands because of the critical role they play in protecting pure water, secure wildlife habitat and remote Please - think of future generations by selecting the "no action" alternative to maintain "Roadless Rule" protections for the Tongass and Chugach.

CEASE. DESIST. RESIST. SAVE WHAT IS LEFT OF THE PLANET

Sincerely,

J Eiser

Long Beach, CA

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Styra
Last name: Eisinger
Organization:
Title:
Comments:
The idea of logging the Tongass National Forest is greatly disturbing. The forest is an incomparable resource for carbon-monoxide sequestration in the nation. I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.
The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.
In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Styra Eisinger

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Laurie
Last name: Eisler
Organization:
Title:
Comments:
My name is Laurie Eisler and I live in Cotati, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Laurie Eisler

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: William
Last name: Eisler
Organization:
Title:
Comments:
HC3642

U.S. Forest Service Alaska Roadless Rule

Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.

Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,

William Eisler

Carmel, IN 46032

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Sara
Last name: Eisner
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Sara Eisner

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Marcie
Last name: Eisterhold
Organization:
Title:
Comments:
My name is Marcie Eisterhold and I live in Kansas City, Missouri.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Marcie Eisterhold

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Mary
Last name: Eiswerth
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Mary Eiswerth

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Philipp
Last name: Eixeres
Organization:
Title:
Comments:
My name is Philipp Eixeres and I live in Portage, Indiana.

Thanks for reading my message.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Philipp Eixeres

Date submitted (Alaskan Standard Time): 11/16/2019 8:05:54 PM
First name: Hannah
Last name: Ekada
Organization:
Title:
Comments:
My name is Hannah Ekada and I live in Tok, Alaska. My name is Hannah, and I really like make impacts on nature, I am from Tok AK and I am currently schooling at MEHS I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, foraging for wild foods, the peace and solitude I find in nature, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on roadless areas in the Tongass National Forest for healthy fish habitat, foraging and gathering wild foods, recreating and enjoying nature. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Baranof Island, all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because It helps by all people speaking up to support and help with this action. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should invest in creating and maintaining recreation infrastructure improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 11/5/2019 3:00:00 PM
First name: Matthew
Last name: Ekel
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/5/2019 3:00:00 PM
First name: Glen
Last name: Ekeren
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Jesse
Last name: Ekeren
Organization:
Title:
Comments:
HC3055

November 11, 2019

Dear Secretary:

As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.

At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.

Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.

I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Sincerely,

[Signature]

Jesse Ekeren

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Alice
Last name: Ekins
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Alice Ekins

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Glenn
Last name: Eklund
Organization:
Title:
Comments:
My name is Glenn Eklund and I live in Oak Harbor, Washington.

Stop this insanity.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Glenn Eklund

Date submitted (Alaskan Standard Time): 12/6/2019 12:00:00 AM
First name: Erica
Last name: Ekrem
Organization:
Title:
Comments:
My name is Erica Ekrem and I live in Eastsound, WA. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

It is one of the last remaining old growth forests and the heart of salmon nation. The salmon are a keystones species that must be protected. It is also home to First Nation Peoples who continue to tend and exist in relationship to the land. The Tongass is a rare and preciously wild global treasure that must not be disturbed.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for passiveactive watershed restoration (stream and habitat) to improvemaintain roadless characteristics (culvert removalreplacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact

analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Mary
Last name: Ekstrand
Organization:
Title:
Comments:
My name is Mary Ekstrand and I live in Poulsbo, Washington.

Water is so basic to our health and well-being. Please act to protect us and our children and grandchildren!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Mary Ekstrand

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: W
Last name: El-Ahdab
Organization:
Title:
Comments:
My name is W El-Ahdab and I live in Piedmont, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, W El-Ahdab

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: W
Last name: El-Ahdab
Organization:
Title:
Comments:
My name is W El-Ahdab and I live in Piedmont, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, W El-Ahdab

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Fayten
Last name: El-Dehaibi
Organization:
Title:
Comments:
My name is Fayten El-Dehaibi and I live in Pittsburgh, Pennsylvania.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Fayten El-Dehaibi

Date submitted (Alaskan Standard Time): 11/4/2019 3:00:00 PM
First name: Elie
Last name: El Habr
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Forrest
Last name: Elam
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Forrest Elam

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Richard
Last name: Elam
Organization:
Title:
Comments:
I am a BioResearch scientist which is good because I understand how small to very large Bio-systems function. The bad is exactly the same I understand how small to very large Bio-systems function. Climate Change is coming whether you believe in it or not, the worlds ecosystems do not care what people think or want to happen. Climate Change is accelerating faster than anyone predicted and the only way to buffer the change in critical environments is to protect as much of our still untouched by people forests and environments we have left. First these forests and environments hold a large amounts of C02 in their biomass and continue to take up and sequester C02 from our environment slowing Climate Change. They also hold large numbers of diverse plants and animals which we will need to buffer and adapted to Climate Change, because the environments people have altered to fit their needs have very little diversity and ability to adapt to Climate Change. Alaska's wild untouched environments are one of the things which may give civilization as we know it a chance to adapt and survive. It would be a sin to our children and grandchildren to not give them a chance.

In addition extracting all the resources from these areas to put 80% of the profits into Big Corporate pockets at the same time damaging the public's safety and survival should be considered a Crime against American Citizens everywhere.

Thank You for letting me express my opinion on the Alaska Roadless Rule and Draft Environmental Impact Statement.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Christy
Last name: Elamma
Organization:
Title:
Comments:
My name is Christy Elamma and I live in Bement, Illinois.

Stop the destruction of our forests! We NEED the trees to help protect against climate change, plus the destruction of the forest will imperil hundreds of species and ruin the environment.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Christy Elamma

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/6/2019 12:00:00 AM
First name: Anon
Last name:
Organization:
Title:
Comments:
Please maintain protections for the Tongass and Chugach National Forests

Dear Secretary Perdue,

The one thing the United States does not need is to cut down the Public's Forests so Big Corporate can personally profit off Public Resources.

The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.

Sincerely,

Rich Elam

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Alexander
Last name: Elantri
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
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I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Niddu
Last name: Elaouar
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Niddu Elaouar

Date submitted (Alaskan Standard Time): 12/12/2019 3:00:00 PM
First name: Brian
Last name: Elbert
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
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I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 10/27/2019 12:00:00 AM
First name: Kevin
Last name: Elberts
Organization:
Title:
Comments:
Please maintain the roadless rule. Our wild places must be protected, and the old growth of the tongass is a crucially important remaining old growth forest. These areas represent our best chance at keeping a stronghold of biodiversity as the planet changes.

The timber in these woods is worth far, far less than the value of an intact forest ecosystem, when a long term view is taken.

Protect our wild lands, maintain the roadless rule, and do not allow further logging of the tongass.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Linda
Last name: Elbow
Organization:
Title:
Comments:
My name is Linda Elbow and I live in Glover, Vermont.

This is serious. We all deserve to know who using this stuff and where.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Linda Elbow

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Mary
Last name: Elbrecht
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Mary Elbrecht

Date submitted (Alaskan Standard Time): 12/11/2019 3:00:00 PM
First name: Adam
Last name: Elbroody
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Roger
Last name: Elconin
Organization:
Title:
Comments:
HC6065

Dear U.S. Forest Service:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for more than 20 years. *Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77.* [Text bolded for emphasis] Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. *Please do not roll back roadless are protection for habitat that our irreplaceable fish and wildlife populations need to survive.* [Text bolded for emphasis]

Customize your comment by listing reasons the Tongass is important to you or why you value Alaska Roadless areas: (ex: specific locations you recreate, activities you do, or why you value fish & wildlife) [Text italicized]

Sincerely,

Would you like to volunteer with TU Alaska to Help America's Salmon Forest?

Yes No *Wish* [Text circled]

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Amy
Last name: Elder
Organization:
Title:
Comments:
My name is Amy Elder and I live in Cincinnati, Ohio.

When our forests are cut down, they can no longer protect our air quality. Don't you need air more than more oil money?

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Amy Elder

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Debra
Last name: Elder
Organization:
Title:
Comments:
My name is Debra Elder and I live in Bloomingburg, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Debra Elder

Date submitted (Alaskan Standard Time): 12/10/2019 3:00:00 PM
First name: James
Last name: Elder
Organization:
Title:
Comments:
There are currently 31 timber sales under contract in the Tongass National forest totaling 62 million board feet of timber yet to be harvested. Using 20-year averages, taxpayers stand to lose $37 million on the remaining timber from these projects.By exempting the Tongass National Forest from the Roadless Rule the US Forest Service would be paving the way to additional money-losing timber sales, which have already cost federal taxpayers $600 million over the last 20 years.Opening the Tongass National Forest to additional road building would only add to the US Forest Service's $3.2 billion maintenance backlog for roads across the National Forest System. In addition to creating more timber sales in the Tongass National Forest an exemption from the Roadless Rule would harm local industries such as hunting, recreation, and commercial fishing - all essential to individuals living in the region. I strongly urge you not to exempt the Tongass National Forest from the Roadless Rule.

Date submitted (Alaskan Standard Time): 10/18/2019 4:50:19 PM
First name: Melissa
Last name: Elder
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,
Melissa Elder
Marysville, PA 17053

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Paul
Last name: Elder
Organization:
Title:
Comments:
My name is Paul Elder and I live in Bellevue, Washington.

I am sending the below email because I find it appalling that the Roadless Rule is under threat. For all the reasons included below it that rule must be kept intact. Thank you

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Paul Elder

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Sandra
Last name: Elder
Organization:
Title:
Comments:
My name is Sandra Elder and I live in San Antonio, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Sandra Elder

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Pam
Last name: Elders
Organization:
Title:
Comments:
My name is Pam Elders and I live in Laupahoehoe, Hawaii.

Now is the time to take decisive action to preserve wild places instead of pillaging them. Act now to keep the Roadless Area Conservation Rule in place and even strengthen it!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Pam Elders

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Bethany
Last name: Eldred
Organization:
Title:
Comments:
My name is Bethany Eldred and I live in Tacoma, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Bethany Eldred

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: JERRY
Last name: ELDREDGE
Organization:
Title:
Comments:
My name is JERRY ELDREDGE and I live in Wilmington, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, JERRY ELDREDGE

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Mary
Last name: Eldredge
Organization:
Title:
Comments:
My name is Mary Eldredge and I live in Springfield, Vermont.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generates an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Mary Eldredge

Date submitted (Alaskan Standard Time): 10/20/2019 12:00:00 AM
First name: Brian
Last name: Eldridge
Organization:
Title:
Comments:
Please don't do this. The wild places left on our planet are already dwindling. We need preserve what we can, while we can. New industries (such as hemp) should be explored to replace the wasteful process of logging.

[Positon]

[Positon]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Chantal
Last name: Eldridge
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Chantal Eldridge

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Chantal
Last name: Eldridge
Organization:
Title:
Comments:
My name is Chantal Eldridge and I live in Austin, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Chantal Eldridge

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Denice
Last name: Eldridge
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Denice Eldridge

Date submitted (Alaskan Standard Time): 12/14/2019 3:00:00 PM
First name: Lily
Last name: Eldridge
Organization:
Title:
Comments:
My name is Lily Eldridge.
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Lily Eldridge

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Rebecca
Last name: Eldridge
Organization:
Title:
Comments:
My name is Rebecca Eldridge and I live in Newburgh, Indiana.

National Monuments should remain National Monuments!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Rebecca Eldridge

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Sara
Last name: Eldridge
Organization:
Title:
Comments:
My name is Sara Eldridge and I live in Seattle, Washington.

Please preserve this treasure , our real treasure, for the future.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Sara Eldridge

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Denice
Last name: eldridhe
Organization:
Title:
Comments:
My name is Denice eldridhe and I live in Vacaville, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Denice eldridhe

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Denice
Last name: eldridhe
Organization:
Title:
Comments:
My name is Denice eldridhe and I live in Vacaville, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Denice eldridhe

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Tiffany
Last name: Elefante
Organization:
Title:
Comments:
HC902

Dear Secretary Perdue,

I am a visitor to the lands and waters of Southeast Alaska. The Tongass National Forest is a large part of why I am here. Visitors like me come to witness the vast, beautiful stands of old-growth trees that can't be found on such a scale anywhere else in the United States. We come to crew on commercial fishing boats. We come to hunt, fish and hike in America's largest National Forest. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Alaskans and Americans.

I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. Tourism and commercial fishing are at the heart of Southeast's economy, not the antiquated timber industry.

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Greg
Last name: Elems
Organization:
Title:
Comments:
My name is Greg Elems and I live in Reno, Nevada.

With the Amazon burning, can we really afford to cut down the Tongass National Forest? Don't allow the destruction of the Tongass!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Greg Elems

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jennifer
Last name: Eleveld
Organization:
Title:
Comments:
My name is Jennifer Eleveld and I live in Corvallis, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jennifer Eleveld

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: James
Last name: Eley
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, James Eley

Date submitted (Alaskan Standard Time): 12/12/2019 12:00:00 AM
First name: Brad
Last name: Elfers
Organization:
Title:
Comments:
I support keeping the Roadless Rule in tact.

I have owned a fly fishing shop in Juneau Alaska for over 21 years. I recreate and gather food for my family from the Tongass Forest and my customers do as well. I value in tact fish producing areas of the forest such as the Tongass 77.

Are you going to listen to comments from Alaskans this time? I hope so.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 5:27:00 PM
First name: Liv
Last name: Elfstrom
Organization:
Title:
Comments:
My name is Liv Elfstrom and I live in Corvallis, OR. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

As a former FS employee and current forestry graduate student. I believe in the forest products industry but think it shouldnt have access to the few places it doesnt already have access to.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its huge swaths of intact ecosystems and all the biodiversity it contains, its wild salmon populations and the world-class fishing opportunities, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), medium-impact recreation (FS cabins, trails, mooring buoys, 3-sided shelters), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, develop more recreational opportunities, like trails and cabins. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: George
Last name: Elgee
Organization:
Title:
Comments:
The roadless rule is not needed on the Tongas. I worked in the logging industry in the 70's as a young man and at that time I could see that the logging industry was a dead end as the enviromentalst were shutting down all access to logging or making it so costly to log that it was not economically feasible any longer. And I was correct, we (Southeast) now has one operating mill and it gets timber from private native land. The amount of timber that might be available if the roadless rule is removed is not going to provide more jobs, nor is the amouint of timber that could be taken have any possible impact on the forest, and this goes for fishing, hunting or any other activity. What it might do is remove ONE layer of bureaucray related to any kind of development. The other layers will still be in place and all enviromental protections will still have to be satisfied. If we ever expect to have any kind fo econcomy, we will need some roads, to reach mine sites or between communities. We will still have to justify the need and comply with enviromental issues, as we should, but just locking up the Tongass for any development is not fair to the people of Alaska. I am sure that there are folks that do not live here that think the best use of the Tongass is for tourists, but without transportation only the wealthy tourist will be able to set foot on the forest outside of few trails near the larger cities.

Anyway I could gone but you get the point.

Thanks,

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Sarah
Last name: Elgin
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Sarah Elgin

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Sarah
Last name: Elgin
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Sarah Elgin

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Malcolm
Last name: Elgut
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Malcolm Elgut

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Kelly
Last name: Eliason
Organization:
Title:
Comments:
My name is Kelly Eliason and I live in Kalispell, Montana.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Kelly Eliason

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Richard
Last name: Eliason
Organization:
Title:
Comments:
HC4003

U.S. Forest Service Alaska Roadless Rule

Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.

Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,

Richard Eliason

Omaha, NE 68114

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Rebecca
Last name: Eliceiri
Organization:
Title:
Comments:
My name is Rebecca Eliceiri and I live in St. Louis, Missouri.

Our public lands are priceless treasures and should not be for sale.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Rebecca Eliceiri

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: anaundda
Last name: elijah
Organization:
Title:
Comments:
My name is anaundda elijah and I live in San Mateo, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, anaundda elijah

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Grace
Last name: Elinsway
Organization:
Title:
Comments:
My name is Grace Elinsway and I live in Austin, TX. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I camp, hike and love visiting national parks and forests. The Tongass National Forest is a national treasure that must be cared for so it will be here for future generations to enjoy.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless

Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Jacqueline
Last name: Eliopoulos
Organization:
Title:
Comments:
My name is Jacqueline Eliopoulos and I live in Boulder, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jacqueline Eliopoulos

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jacqueline
Last name: Eliopoulos
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Jacqueline Eliopoulos

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Karen
Last name: Eliot
Organization:
Title:
Comments:
My name is Karen Eliot and I live in Columbus, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Karen Eliot

Date submitted (Alaskan Standard Time): 10/17/2019 12:00:00 AM
First name: Anon
Last name: elisabeth.bechmann@kstp.at
Organization:
Title:
Comments:
No changes to the Roadless Rule in Alaska!

David E. Schmid, Regional Forester

USDA Forest Service, Alaska Region

Attn: Alaska Roadless Rule

P.O. Box 21628

Juneau, Alaska, 99802

Cc:

Sonny Perdue, Secretary US Department of Agriculture

1400 Independence Avenue, SW

Washington, DC 20250

Mr. Schmid,

Secretary Perdue:

With this message I want to let you know that I'm strongly opposing any modification to the Roadless Rule in Alaska! These changes will undermine safeguards, and facilitate increased old-growth logging in the Tongass and the Chugach National Forests. Logging prohibitions contained within the Roadless Rule are a key component of the long-awaited transition away from old-growth clearcutting on the Tongass. The Roadless Rule protects over 2.5 million acres of productive old-growth (which constitutes half of the old-growth forests remaining on the Tongass) and prevents the fragmentation of large unbroken landscape. Rolling back the Roadless Rule in Alaska would ignore overwhelming public support, put wildlife and critical habitat at risk, and threaten access to safe drinking water. The rule change would be a step away from sustainable development and would run counter to the interests of all Americans, as well as Alaskans, and is not in the best interest of taxpayers.

Scientists overwhelmingly agree that clear cutting of old growth trees for timber puts whole systems at risk and destroys wildlife habitats, yet the Forest Service's amendment to the Tongass plan allows clearcutting to continue for well over another ten years!

This rule change will promote further, as well as rapid, destruction. Both the Tongass and the Chugach play a vital role in capturing excess carbon from the atmosphere and mitigating some of the impact of global warming, as well as providing ecosystems services that reach beyond Alaska. In Alaska, which experienced unprecedented heat waves this summer, the Tongass serves as a buffer against climate change. Much like the Amazon rainforest, the Tongass' stands of ancient trees are champions at absorbing greenhouse gas emissions, storing approximately 8 percent of the total carbon in all national forests of the lower 48 states.

The Tongass National Forest is home to more than 9 million acres of roadless area. The Roadless Rule protects ecosystems, which, in turn, helps make the Tongass the country's single most important national forest for carbon sequestration and climate change

mitigation.

Again, I strongly urge you against granting any exemptions or exceptions to the Roadless Rule in Alaska, as is offered in alternative 1, and advise the Forest Service to refrain from pursuing an Alaska version of the Roadless Rule. Rather, continue to uphold the 2001 Roadless Area Conservation Rule, maintaining protections against logging and roadbuilding in Tongass roadless areas.

The agency's mission is "Caring for the Land and Serving the People." The Forest Service should strive to protect the Tongass National Forest and ensure our public lands serve the people and wildlife of today and future generations.

Thank you,

Sincerely:

[Position]

Date submitted (Alaskan Standard Time): 10/25/2019 12:00:00 AM
First name: Elizabeth
Last name: Elizabeth
Organization:
Title:
Comments:
My name is Elizabeth Jurgeleit and I live in Juneau, Alaska. I grew up in Haines, and have lived in Southeast Alaska for 28 years. I depend on the forest to provide a habitat for the animals that I share Southeast Alaska with. The forest sustains the foods that I like to eat. I subsistence harvest salmon, moose, and edible plants from the forest every year. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, subsistence harvesting, foraging for wild foods, the peace and solitude I find in nature, recreating, practicing my culture, the status of the Tongass as a national and global treasure, the conservation of resources for future generations the forest's ability to sequester carbon and mitigate climate change impacts.

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on roadless areas in the Tongass National Forest for healthy fish habitat, deer habitat and subsistence hunting, foraging and gathering wild foods, recreating and enjoying nature, carbon sequestration and local climate change mitigation, viewing wildlife, keeping public lands wild for future generations, fiscal responsibility and saving taxpayer dollars . A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around all of the inventoried roadless areas on the Tongass the northern mainland above Port Snettisham (around Juneau), Admiralty Island, Chichagof Island, Baranof Island, Prince of Wales Island. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for low-impact recreation such as camping, hiking, hunting, and fishing medium-impact recreation development,such as Forest Service cabins, trails, mooring buoys, and 3-sided shelters, connections from communities. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because A full exemption discounts the voices of many Southeast Alaskans that spoke out in support of a no action alternative. We should at least have some compromises and more discussion.. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should devote resources to support our fishing and visitor industries transition to second growth logging invest in creating and maintaining recreation infrastructure improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/11/2019 3:00:00 PM
First name: Markus
Last name: Elken
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.
Don't rape the forest please.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Susan
Last name: Elkin
Organization:
Title:
Comments:
My name is Susan Elkin and I live in Mundelein, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Susan Elkin

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Carol
Last name: Elkins
Organization:
Title:
Comments:
My name is Carol Elkins and I live in Aumsville, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Carol Elkins

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Judy
Last name: Elkins
Organization:
Title:
Comments:
My name is Judy Elkins and I live in Puryear, Tennessee.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Judy Elkins

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Michael
Last name: Elkins
Organization:
Title:
Comments:
My name is Michael Elkins and I live in Oceanside, California.

Diesel particulate matter is a huge contributor to lung disease and early death. California should be on the cutting edge of decreasing these emissions by implementing stronger clean truck standards, and setting an example for the nation to follow.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Michael Elkins

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/20/2019 12:00:00 AM
First name: Paul
Last name: Elkins
Organization:
Title:
Comments:
I had the pleasure of visiting Alaska last May, including being in the Tsongas National Forest. In NH, I live very close to the White Mountain National Forest, and spend lots of time in it. Though national forests are not meant to be protected like National Parks, as we encroach more and more on nature all over this planet, it seems to me that whenever possible, we should make every effort to protect the land (and waterways) to minimize human impact that adversely affects places from being left as nature created them. Alaska is called the "Last Frontier"- if we are not careful, it will no longer deserve that distinction, as it will have become the "Lost Natural Frontier". The plants and animals that live in the Tsongas National Forest should be protected, and loosening protections will only earn regret later on. Please leave things as they are: no more roads, no more timber harvests, no more seeing these places of beauty through the lens of $$$ signs. Thank you.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Phil
Last name: Elkins
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Phil Elkins

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Erica
Last name: Ell
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Erica Ell

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Heather
Last name: Elledge
Organization:
Title:
Comments:
My name is Heather Elledge and I live in Tucson, Arizona.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Heather Elledge

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Amy
Last name: Ellen
Organization:
Title:
Comments:
My name is Amy Ellen and I live in Flagstaff, Arizona.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Amy Ellen

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Barbara
Last name: Ellen
Organization:
Title:
Comments:
I am writing to express my strong opposition to any and all efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere.
The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Know that instead of seeking to monetize irreplaceable natural resources, instead it is a honor and a privilege to care for and nurture them. And, as above, tourism.
Regards, Barbara Ellen

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Cas
Last name: Ellena
Organization:
Title:
Comments:
My name is Cas Ellena and I live in Nevada City, California.

No money in the world is worth the destruction of our planet and wildlife. It is up to you to protect our world.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Cas Ellena

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Marvin
Last name: Ellenbecker
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Marvin Ellenbecker

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Marvin
Last name: Ellenbecker
Organization:
Title:
Comments:
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Organization:
Title:
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Regards, Marvin Ellenbecker

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Randall
Last name: Ellenbecker
Organization:
Title:
Comments:
HC3846

U.S. Forest Service Alaska Roadless Rule

Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.

Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,

Randall Ellenbecker

Roanoke, TX 76262

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Randall
Last name: Ellenbecker
Organization:
Title:
Comments:
3846

U.S. Forest Service Alaska Roadless Rule
Comment Period:

Comment Period Alaska Roadless Rule:

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Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,
Randall Ellenbecker
Roanoke, TX 76262

Date submitted (Alaskan Standard Time): 12/14/2019 3:00:00 PM
First name: Carol
Last name: Ellenberger
Organization:
Title:
Comments:
My name is Carol Ellenberger and I live in Morgan Hill, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Carol Ellenberger

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Charles
Last name: Ellenberger
Organization:
Title:
Comments:
My name is Charles Ellenberger and I live in Kent, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Charles Ellenberger

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Rudolph
Last name: Ellenbogen
Organization:
Title:
Comments:
My name is Rudolph Ellenbogen and I live in White Plains, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Rudolph Ellenbogen

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Amelia
Last name: Eller
Organization:
Title:
Comments:
Support for Alternative 1

I am a US citizen asking you to please take no action and leave all of Alaska under the 2001 Roadless Rule, including the Tongass National Forest.

Best regards,

Amelia Brandt Eller

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: carol
Last name: ellertson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, carol ellertson

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: kris
Last name: elleton
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, kris elleton

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Ann
Last name: Elling
Organization:
Title:
Comments:
My name is Ann Elling and I live in Sacramento, California.

We need the Tongass National Forest to fight climate change.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Ann Elling

Date submitted (Alaskan Standard Time): 11/12/2019 3:00:00 PM
First name: Ann
Last name: Elling
Organization:
Title:
Comments:
My name is Ann Elling and I live in Sacramento, California.

We need the Tongass National Forest to fight climate change.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Ann Elling

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Marcia
Last name: Ellinger
Organization:
Title:
Comments:
My name is Marcia Ellinger and I live in Pasadena, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Marcia Ellinger

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Daniel
Last name: Ellingson
Organization:
Title:
Comments:
HC1078

Dear Secretary Perdue,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Jordan
Last name: Ellingson
Organization:
Title:
Comments:
HC1429

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 10/23/2019 12:00:00 AM
First name: Elizabeth
Last name: Ellington
Organization:
Title:
Comments:
Please keep all the lands currently protected from logging and road building in their existing designations and approve no extraction activity of any kind. There is no reason to destroy our public lands with logging or any "development". Hold these lands and their resources as a trust for the future. The Forest Service would better serve the economy by working to help re-forest already logged lands. Thank you.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Cynthia
Last name: Elliot
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Cynthia Elliot

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Ed
Last name: Elliot
Organization:
Title:
Comments:
My name is Ed Elliot and I live in Ben Lomond, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Ed Elliot

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Kate
Last name: Elliot
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Kate Elliot

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Robert
Last name: Elliot
Organization:
Title:
Comments:
Roadless Rule

I urge the adoption of alternative 6 to exempt Alaska from the subject rule.

Thank you.

Bob Elliot

Ward Cove, AK 99928

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Allen
Last name: Elliott
Organization:
Title:
Comments:
My name is Allen Elliott and I live in La Conner, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Allen Elliott

Date submitted (Alaskan Standard Time): 12/5/2019 12:00:00 AM
First name: Andria
Last name: Elliott
Organization: 1963
Title:
Comments:
I am opposed to lifting the roadless rule in the Tongass national forest

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Benton
Last name: Elliott
Organization:
Title:
Comments:
My name is Benton Elliott and I live in Eugene, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Benton Elliott

Date submitted (Alaskan Standard Time): 11/8/2019 7:22:55 AM
First name: Brandon
Last name: Elliott
Organization:
Title:
Comments:
My name is Brandon Elliott and I live in Modesto, IL. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

Nature is sacred and any act in the opposite of protecting this forest is just wrong. We need nature, nature doesnt need us.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc), low-impact recreation (camping, hiking, hunting, foraging, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Dauen
Last name: Elliott
Organization:
Title:
Comments:
HC6113

Dear U.S. Forest Service:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for more than 20 years. *Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77.* [Text bolded for emphasis] Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. *Please do not roll back roadless are protection for habitat that our irreplaceable fish and wildlife populations need to survive.* [Text bolded for emphasis]

Customize your comment by listing reasons the Tongass is important to you or why you value Alaska Roadless areas: (ex: specific locations you recreate, activities you do, or why you value fish & wildlife) [Text italicized]

Sincerely,

Would you like to volunteer with TU Alaska to Help America's Salmon Forest?

Yes No

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Douglas
Last name: Elliott
Organization:
Title:
Comments:
My name is Douglas Elliott and I live in Vista, California.

Do not ruin my son's future!!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Douglas Elliott

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Dr
Last name: Elliott
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Dr Elliott

Date submitted (Alaskan Standard Time): 11/4/2019 10:47:23 AM
First name: John
Last name: Elliott
Organization:
Title:
Comments:
My name is John Elliott and I live in Sitka, Alaska. I was born and raised in Juneau and now live in Sitka. In my time growing up, some of my most magical and formative experiences took place exploring the Tongass, including at its most remote. These woods fostered my love of exploration and have made me the person I am today because of my ability to appreciate them as remote and full of natural wildlife. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my the peace and solitude I find in nature, recreating, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, and the conservation of resources for future generations.

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. The rule is working fine as it is, by balancing the conservation of our fish and wildlife habitat with important development projects. I depend on roadless areas in the Tongass National Forest for recreating and enjoying nature, carbon sequestration and local climate change mitigation, viewing wildlife, keeping public lands wild for future generations, fiscal responsibility, and saving taxpayer dollars. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Baranof Island, and areas near Juneau, but really all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because it is unfair to the Tlingit people who originally inhabited this land and knew how to sustainably live in it for thousands of year. Further, it jeopardizes the relationship that so much Southeast Alaskan feel with the outdoors recreationally, economically, and spiritually.. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should invest in creating and maintaining recreation infrastructure transition to second growth logging.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 11/13/2019 3:00:00 PM
First name: John
Last name: Elliott
Organization:
Title:
Comments:
My name is John Elliott and I live in Bremerton, Washington.

Renewables such as hemp makes more sense than cutting the last virgin forests

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, John Elliott

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Jordan
Last name: Elliott
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/16/2019 3:34:06 PM
First name: Jordan
Last name: Elliott
Organization:
Title:
Comments:
My name is Jordan Elliott and I live in Bend, OR. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

For 10 years of my tax paying life I depended on the Tongass for my lively hood, guiding tourists through its waters and forests and fjords. Public lands belong in public hands and the opportunities for future generations to experience this largely untouched wild place is important for our posterity. The wildlife also deserves to have their home remain intact.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, establish the economic value of the carbon stored in the Tongass, develop more recreational opportunities, like trails and cabins. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Katelyn
Last name: Elliott
Organization:
Title:
Comments:
Please do not exempt the Tongass National Forest from the 2001 Roadless Area Conservation Rule. It should continue to be conserved and preserved. Our national forests are treasure troves of history as well as vital habitats. Roads would damage that.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/7/2019 12:00:00 AM
First name: Kevin
Last name: Elliott
Organization:
Title:
Comments:
Please Choose Alternative 1 - Keep the Roadless Rule in Place for the Tongass

I'm writing to urge you to reconsider Alternative 6 which would "exempt the Tongass National Forest from the 2001 Roadless Rule and is fully responsive to the State of Alaska's petition".

It is my understanding that Governor Dunleavy as the current executive of the State of Alaska expressed strong views that Alaskans want to see the Tongass National Forest exempted from the 2001 Roadless Rule. I feel the Governor believes he is acting in the best interest of Alaskans however I want to express my view that many Alaskans, especially those in Southeast Alaska disagree with his position.

The economics of bulk logging operations in the Tongass have long been called into doubt, especially when compared to long-term renewable benefits the Tongass provides Alaskan residents and visitors. Intact watersheds are absolutely critical to thousands of Southeast Alaskans that make their living in the commercial fishing industry. Alaska's visitor industry continues to thrive and grow largely because of the uniqueness of the world's last great temperate old growth rain forest.

In light of this, I want to make my views known regarding the Roadless Rule and strongly urge the USFS to adopt Alternative 1 and leave the Roadless Rule in place.

Thank you.

Kevin Elliott

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Leonard
Last name: Elliott
Organization:
Title:
Comments:
My name is Leonard Elliott and I live in Auburn, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Leonard Elliott

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Lynn
Last name: Elliott
Organization:
Title:
Comments:
My name is Lynn Elliott and I live in Durham, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Lynn Elliott

Date submitted (Alaskan Standard Time): 11/14/2019 3:00:00 PM
First name: Meredith
Last name: Elliott
Organization:
Title:
Comments:
My name is Meredith Elliott and I live in Oakland, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Meredith Elliott

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Naomi
Last name: Elliott
Organization:
Title:
Comments:
My name is Naomi Elliott and I live in Las Vegas, Nevada.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Naomi Elliott

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Nicki
Last name: Elliott
Organization:
Title:
Comments:
My name is Nicki Elliott and I live in Martinez, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Nicki Elliott

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Shawn
Last name: Elliott
Organization:
Title:
Comments:
My name is Shawn Elliott and I live in Aurora, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Shawn Elliott

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Valerie
Last name: Elliott
Organization:
Title:
Comments:
Tongrass National Forest

Dear Representative,

I would chose option 1 and keep the law in place. Thanks for your time.

Valerie Elliott

Thornton CO. 80602

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Vincent
Last name: Elliott
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Vincent Elliott

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Willard
Last name: Elliott
Organization:
Title:
Comments:
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Regards, Willard Elliott

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: June
Last name: Elliott-Cattell
Organization:
Title:
Comments:
My name is June Elliott-Cattell and I live in West Columbia, South Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, June Elliott-Cattell

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Aimee
Last name: Ellis
Organization:
Title:
Comments:
My name is Aimee Ellis and I live in Burdett, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Aimee Ellis

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Anne
Last name: Ellis
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Anne Ellis

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Anne
Last name: Ellis
Organization:
Title:
Comments:
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Regards, Anne Ellis

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: anne
Last name: ellis
Organization:
Title:
Comments:
My name is anne ellis and I live in Port Charlotte, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, anne ellis

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: C.K.
Last name: Ellis
Organization:
Title:
Comments:
My name is C.K. Ellis and I live in Hillsboro, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, C.K. Ellis

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Carlisle
Last name: Ellis
Organization:
Title:
Comments:
My name is Carlisle Ellis and I live in Tucson, Arizona.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Carlisle Ellis

Date submitted (Alaskan Standard Time): 10/24/2019 12:00:00 AM
First name: Carol
Last name: Ellis
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

Good grief, says Charlie Brown, why would you ever put in roads & log the Tongass? It's the best forest we've got. Many others are sick. We need healthy forests functioning. Clearcut? A bad joke.

Sincerely,

Carol Ellis

Spokane, WA 99203

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Christopher
Last name: Ellis
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Christopher Ellis

Date submitted (Alaskan Standard Time): 11/12/2019 3:00:00 PM
First name: Clarence
Last name: Ellis
Organization:
Title:
Comments:
My name is Clarence Ellis and I live in Patterson, Missouri.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Clarence Ellis

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Debbie
Last name: Ellis
Organization:
Title:
Comments:
My name is Debbie Ellis and I live in Cotopaxi, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Debbie Ellis

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Grace
Last name: Ellis
Organization:
Title:
Comments:
My name is Grace Ellis and I live in Stockbridge, Georgia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Grace Ellis

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Graham
Last name: Ellis
Organization:
Title:
Comments:
My name is Graham Ellis and I live in Wyckoff, New Jersey.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Graham Ellis

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Harold
Last name: Ellis
Organization:
Title:
Comments:
My name is Harold Ellis and I live in St. Louis, Missouri.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Harold Ellis

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Heather
Last name: Ellis
Organization:
Title:
Comments:
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Regards, Heather Ellis

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Irene
Last name: Ellis
Organization:
Title:
Comments:
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Regards, Irene Ellis

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Irene
Last name: Ellis
Organization:
Title:
Comments:
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Regards, Irene Ellis

Date submitted (Alaskan Standard Time): 10/18/2019 3:00:31 PM
First name: Janet
Last name: Ellis
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest. Your Supposed to work for us not a bunch of corporate criminals!! We pay you wages and your job is protecr our public lands!! You should all be FIRED!!!!

Sincerely,
Janet Ellis
Port Orchard, WA 98366

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Johnie
Last name: Ellis
Organization:
Title:
Comments:
My name is Johnie Ellis and I live in Battle Creek, Michigan.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Johnie Ellis

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Kathryn
Last name: Ellis
Organization:
Title:
Comments:
My name is Kathryn Ellis and I live in [@advCity], Washington.

Protect the Tongass National Forest! We must save the storage of carbon in these old-growth trees.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Kathryn Ellis

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Kathryn
Last name: Ellis
Organization:
Title:
Comments:
My name is Kathryn Ellis and I live in [@advCity], Washington.

To save the world we Must save Tongass!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Kathryn Ellis

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Koll
Last name: Ellis
Organization:
Title:
Comments:
My name is Koll Ellis and I live in Kensington, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Koll Ellis

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Laurie
Last name: Ellis
Organization:
Title:
Comments:
My name is Laurie Ellis and I live in Port Charlotte, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Laurie Ellis

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Marvene
Last name: Ellis
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Marvene Ellis

Date submitted (Alaskan Standard Time): 12/11/2019 3:00:00 PM
First name: Matthew
Last name: Ellis
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Maureen
Last name: Ellis
Organization:
Title:
Comments:
My name is Maureen Ellis and I live in Chicago, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Maureen Ellis

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: mel
Last name: ellis
Organization:
Title:
Comments:
My name is mel ellis and I live in East Hampton, Connecticut.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, mel ellis

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Miles
Last name: Ellis
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
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I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Mindy
Last name: Ellis
Organization:
Title:
Comments:
Please do not remove ANY protections in place.

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Norm
Last name: Ellis
Organization:
Title:
Comments:
My name is Norm Ellis and I live in Corona Dl Mar, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Norm Ellis

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Norma
Last name: Ellis
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Norma Ellis

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Rachel
Last name: Ellis
Organization:
Title:
Comments:
My name is Rachel Ellis and I live in Bartow, Florida.
(Prayers)
I am writing to express strong opposition to efforts to- roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would -ignore overwhelming public support and /hurt/ Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at- risk, /threaten/ access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces- severe challenges related to rising temperatures. I urge you not to- abandonthe Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments. (Prayers)
Regards, Rachel Ellis

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Robert
Last name: Ellis
Organization:
Title:
Comments:
My name is Robert Ellis and I live in Richmond, Virginia.

Coal ash is a problem in Virginia that must be addressed.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Robert Ellis

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: sheila
Last name: ellis
Organization:
Title:
Comments:
My name is sheila ellis and I live in Panama City, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, sheila ellis

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: sheila
Last name: ellis
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, sheila ellis

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Susan
Last name: Ellis
Organization:
Title:
Comments:
My name is Susan Ellis and I live in Calabasas, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Susan Ellis

Date submitted (Alaskan Standard Time): 11/12/2019 3:00:00 PM
First name: Suzanne
Last name: Ellis
Organization:
Title:
Comments:
My name is Suzanne Ellis and I live in Shelton, WA.
[Your personal comment will be added here.]
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Suzanne Ellis

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Ann
Last name: Ellison
Organization:
Title:
Comments:
HC5515

Dear U.S. Forest Service,

CC: Alaska Congressional Delegation and Federal Administration

I support the no-action alternative to leave the 2001 Roadless Rule in place on the Tongass National Forest. We must continue to phase out old-growth clear-cut logging and instead prioritize restoring degraded watersheds and fish streams that contribute to the growing fisheries and tourism-based economies of Southeast. To that end, please conserve the Tongass 77 and TNC priority areas in the final Roadless Rule.

Sincerely,

Ann Marie Ellison

Juneau, AK 99801

Comments: *(Eg: list locations you recreate, or why you value Tongass fish & wildlife)* [Text italicized for emphasis]

[Box unchecked] I would like to get more involved in the campaign!

*By taking this action, you are consenting to receive future communications via phone, text message, email, or mail from Sitka Conservation Society and its partners working to protect the Tongass. * [Text italicized for emphasis]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: arthur
Last name: ellison
Organization:
Title:
Comments:
Im submitting my vote for the "no action" alternative in regards to leaving the Roadless Rule intact for the Tongass National Forest. The timber industry's 1% contribution to the local economy pales in comparison other local revenue sources such as fisheries, tourism and hunting which would be greatly impacted if the exemption on the roadless rule were to be lifted for the Tongass. National forests should be managed as a mix use resource for all, however long term sustainability should take precedence over short term extraction/development in roadless areas.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Bill
Last name: Ellison
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Bill Ellison

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Bill
Last name: Ellison
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Bill Ellison

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Jamie
Last name: Ellison
Organization:
Title:
Comments:
Keep our forests protected. That should always be the goal. Do not distrust this forest or take anything away from it. Clean air and water are more important than any other resource on this planet.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Jane
Last name: Ellison
Organization:
Title:
Comments:
My name is Jane Ellison and I live in Shaker Heights, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jane Ellison

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Linda
Last name: Ellison
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Linda Ellison

Date submitted (Alaskan Standard Time): 10/23/2019 12:00:00 AM
First name: MaryAnn
Last name: Ellison
Organization:
Title:
Comments:
Alaska Roadless Rulemaking #54511

Roadless Rulemaking,

RE: Alaska Roadless DEIS Comment

Dear Secretary Perdue:

I am a homeowner and taxpayer. My degree is in Biology and I am extremely concerned about the idea of opening a pristine wilderness to logging.

The Tongass is a carbon sink containing some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska.

I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.

Thank you for hearing my thoughts.

MaryAnn Ellison

Meriden, Connecticut 06451

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: MaryAnn
Last name: Ellison
Organization:
Title:
Comments:
My name is MaryAnn Ellison and I live in Meriden, Connecticut.

This travesty can never be reversed!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, MaryAnn Ellison

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Sharon
Last name: Ellison
Organization:
Title:
Comments:
WTF

Dear U.S. Forest Service,

I am so afraid of the damage Trump is doing to everything concerning wildlife and nature. I know he does not care about anything but money but looks like someone else would have a little conscience about right and wrong.

I strongly oppose the Forest Service's plan to eliminate "Roadless IRule" protections for the Tongass National Forest and urge you to select the "no action" alternative instead.

As you know the Tongass is America's wildest remaining national forest, with more than 9 million acres of roadless areas. And it's home to a wide range of wildlife, including Alexander Archipelago wolves, grizzly bears and salmon. It also stores a vast amount of carbon, with its centuries-old trees serving as a carbon-reserve life raft in this time of climate change. Logging releases most of that carbon into the atmosphere.

Your proposal to open the door to clearcutting and bulldozing is irresponsible and fundamentally threatens these values. The Tongass belongs to all Americans and shouldn't be sacrificed to the timber industry, which provides a small fraction of the jobs and income in Southeast Alaska compared to tourism and fishing - both of which rely on intact forests to thrive. It's even more important to save these last remaining roadless forests because your agency has fragmented and logged so much of our national forests, harming wildlife and waters along the way.

Further, I oppose your plan to allow the agency to open any of the 5 million acres of roadless areas on the Chugach National Forest to bulldozing and clearcutting for logging. This is simply a backdoor repeal of the 2001 Roadless Rule, which protects all roadless lands because of the critical role they play in protecting pure water, secure wildlife habitat and remote recreation.

Please - think of future generations by selecting the "no action" alternative to maintain "Roadless Rule" protections for the Tongass and Chugach.

Sincerely,

Sharon Ellison

Morristown, TN 37814

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: John
Last name: Elliss
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, John Elliss

Date submitted (Alaskan Standard Time): 11/19/2019 3:00:00 PM
First name: Sara
Last name: Ellisson
Organization:
Title:
Comments:
My name is Sara Ellisson and I live in New York, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Sara Ellisson

Date submitted (Alaskan Standard Time): 11/19/2019 3:00:00 PM
First name: Sara
Last name: Ellisson
Organization:
Title:
Comments:
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Thank you for considering my comments.
Regards, Sara Ellisson

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Carl
Last name: Ellman
Organization:
Title:
Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Carl Ellman

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Carl
Last name: Ellman
Organization:
Title:
Comments:
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Regards, Carl Ellman

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Deborah
Last name: Ellman
Organization:
Title:
Comments:
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Regards, Deborah Ellman

Date submitted (Alaskan Standard Time): 12/7/2019 12:00:00 AM
First name: Adam
Last name: Ellner
Organization:
Title:
Comments:
My name is Adam Ellner and I live in Seattle, WA. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

Forests are more than just "natural resources." They are important habitats and complex ecosystems that serve a variety of important functions to help sustain life (including humans) both locally and globally. They mitigate climate change, enable healthy nutrient flows, move and clean water, and provide physical structure for so many other plants, animals, and other organisms. While timber can be more economically and sustainably sourced from elsewhere, the unique richness of local biodiversity and global ecosystem services supplied by the Tongass National Forest are critical to maintain -- for the good of the local environment (of which its communities are a part) and the global environment (of which humanity is a part). As a Masters student at Stanford University studying environmental science, urban studies, and human environmental systems, this seems like a no brainer from my perspective. Any cost-benefit analysis much consider the full range of ecosystem services that would be lost with the removal of these protections for the Tongass. Please make decisions that will benefit our citizens for thousands of years, not just the next decade or two. Some of these trees have certainly lived for a thousand years. Maybe we can learn something from them.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc), low-impact recreation (camping, hiking, hunting, foraging, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take

action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Joan
Last name: Ello
Organization:
Title:
Comments:
My name is Joan Ello and I live in Los Angeles, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Joan Ello

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Austin
Last name: Ellois
Organization:
Title:
Comments:
My name is Austin Ellois and I live in Baton Rouge, Louisiana.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Austin Ellois

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Christina
Last name: Ells
Organization:
Title:
Comments:
My name is Christina Ells I used to live in Juneu AK now in Gold Bar WA where they are clear cutting our Forrest's it's UGLY big patches of growth missing.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
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Thank you for considering my comments.
Regards, Christina Ells

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Kenneth
Last name: Ellsperman
Organization:
Title:
Comments:
My name is Kenneth Ellsperman and I live in New Bloomfield, Pennsylvania.

This rollback is the WRONG thing to doPlease prioritize our health and environment above the big polluters.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Kenneth Ellsperman

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Debra
Last name: Ellsworth
Organization:
Title:
Comments:
My name is Debra Ellsworth and I live in Spokane, Washington.

oil and gas? forgetabout'em! old news.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Debra Ellsworth

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Gregory
Last name: Ellsworth
Organization:
Title:
Comments:
My name is Gregory Ellsworth and I live in Portland, Oregon.

Explain your actions to your children and grandchildren.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Gregory Ellsworth

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Linda
Last name: Ellsworth
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Linda Ellsworth

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Matthew
Last name: Ellsworth
Organization:
Title:
Comments:
My name is Matthew Ellsworth and I live in Cottonwood Heights, Utah.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Matthew Ellsworth

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Ronald
Last name: Ellsworth
Organization:
Title:
Comments:
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Regards, Ronald Ellsworth

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: sarah
Last name: ellsworth
Organization:
Title:
Comments:
My name is sarah ellsworth and I live in Keene, New Hampshire.

There will be no way to repair the harm to this old growth forest. Old growth forests are part of the lungs of this planet. Please do NOT start cutting trees there!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, sarah ellsworth

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Joyce
Last name: Ellwanger
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.
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Stop this! Stop this! Stop this insanity!
Regards, Joyce Ellwanger

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Joyce
Last name: Ellwanger
Organization:
Title:
Comments:
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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Stop this! Stop this! Stop this insanity!
Regards, Joyce Ellwanger

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Janet
Last name: Elmo
Organization:
Title:
Comments:
Please save our Earth!
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.
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Regards, Janet Elmo

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Daniel
Last name: Elmore
Organization:
Title:
Comments:
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Regards, Daniel Elmore

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Paulla
Last name: Elmore
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Paulla Elmore

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Walter
Last name: Elmore
Organization:
Title:
Comments:
My name is Walter Elmore and I live in Traverse City, Michigan.

The thought of clearcutting here makes me sick!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Walter Elmore

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Elfie
Last name: Elms
Organization:
Title:
Comments:
My name is Elfie Elms and I live in Charles Town, West Virginia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Elfie Elms

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: pamela
Last name: elness
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, pamela elness

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Shemayim
Last name: Elohim
Organization:
Title:
Comments:
My name is Shemayim Elohim and I live in Seattle, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Shemayim Elohim

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Mellisa
Last name: Elrick
Organization:
Title:
Comments:
My name is Mellisa Elrick and I live in Naples, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Mellisa Elrick

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Dorothy
Last name: Elrod
Organization:
Title:
Comments:
My name is Dorothy Elrod and I live in North East, Maryland.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Dorothy Elrod

Date submitted (Alaskan Standard Time): 10/20/2019 12:00:00 AM
First name: Tammy
Last name: Elrod
Organization:
Title:
Comments:
Please stop!!! We need to come up with solutions, other than destroying our climate, nature, and/or ourselves. Use hemp instead of trees. Which will at least allow for at least some time for repopulation of trees to be replaced.At the pace these companies are progressing, and demand for more, and more supplies you are condemning all!!! Take the trees out of your own backyards!!! Not everyone elses, or natures!!! To many being destroyed not only for industrial purposes, but wildfires alone have placed us all in danger already!!! Wake up people you are destroying the only home we have. Without it nothing matters!!! God help us all!!!

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/2/2019 12:00:00 AM
First name: Mary
Last name: Elscner
Organization:
Title:
Comments:
Don't exempt the Tongass from the Roadless Rule

U.S. Forest Service

RE: Don't exempt the Tongass from the Roadless Rule

null

Docket Number: FS-2019-0023

Secretary Perdue:

We citizens demand that the Roadless Area Conservation Rule stay intact for the Tongass National Forest.

The Tongass is the habitat of hundreds of species of wildlife, including spawning salmon and trout and more than 300 species of birds -- all dependent on its trees, streams and waterways for survival.

To open this pristine wild space up to development and destruction by removing its Roadless Rule protections would be an obscenity. Our family says, KEEP THE ROADLESS RULE & KEEP THE TONGASS NATIONAL FOREST INTACT!

Sincerely,

Mary Elscner

Lake Oswego, OR 97035

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: CAROL
Last name: ELSE
Organization:
Title:
Comments:
My name is CAROL ELSE and I live in Lakewood, Washington.

I demand that we have clean air! Hold the polluters responsible!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, CAROL ELSE

Date submitted (Alaskan Standard Time): 12/11/2019 3:00:00 PM
First name: Catherine
Last name: Elser
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. The land and the wild things in it can't continue to be taken for granted. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest. This includes the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Kathy
Last name: Elsibay
Organization:
Title:
Comments:
My name is Kathy Elsibay and I live in Staten Island, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Kathy Elsibay

Date submitted (Alaskan Standard Time): 12/2/2019 3:00:00 PM
First name: Bonnie
Last name: Elsten
Organization:
Title:
Comments:
My name is Bonnie Elsten and I live inLong Beach, California.I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
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Thank you for considering my comments.
Regards, Bonnie Elsten

Date submitted (Alaskan Standard Time): 12/2/2019 3:00:00 PM
First name: Bonnie
Last name: Elsten
Organization:
Title:
Comments:
My name is Bonnie Elsten and I live inLong Beach, California.I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Bonnie Elsten

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Denise
Last name: Elston
Organization:
Title:
Comments:
To Whom This May Concern:

Let me take a moment of your time to potentially perpetuate a snowball effect of support for saving the Tongass National Forest and keep one part of the world in tack for future generations, keep our old growth trees instead of cheap trinkets, and keep ecosystem services productive.

I am from Southeast Alaska (Juneau) where the Tongass National Forest is being threatened to become ' Open for Business'. Our federal and state administrations want to take away the current Roadless Rule and essentially begin logging, thus destroying waterways, fish and wildlife habitats, wetlands, etc., but most importantly, the largest North American temperate rain forest. Currently, the Tongass has the ability to sequester carbon and help mitigate the effects of climate change. The value in that alone should be driving the conversation as we are facing extreme weather in the face of a changing climatic era.

Part of the beauty behind the Tongass is there are hundreds of thousands of people who want to see the Tongass remain in tact. It is possible to have a thriving economic industry that is not logging- in fact logging is costing the federal government millions of dollars in subsidies, yet they want to continue to dump money into the industry to harvest old growth trees.The math behind this warrants its own conversation and you should be asking, as we are faced with an extreme federal deficit, why dump more money into an industry that will continue to take federal dollars and be lost instead of gaining?

Why allow more roads when there are over 5,000 miles of logging roads which come with a backlog of maintenance and service costs - that can be utilized? Why not use what infrastructure is in place and harvest trees instead of clear-cuts leaving a path of destruction? Why not exercise good policy decisions?

I am asking you to support the Tongass Roadless Rule, not only because it is public lands but because it is what people hope and dream will be there for future generations but because it is good public policy.

Thank you for your consideration,

Denise Elston

[Position]

[Position]

Date submitted (Alaskan Standard Time): 10/27/2019 12:00:00 AM
First name: Wallace
Last name: Elton
Organization:
Title:
Comments:
Alaska Roadless Rulemaking #54511

Roadless Rulemaking,

RE: Alaska Roadless DEIS Comment

Dear Secretary Perdue:

If there is one national forest that deserves full application of the Roadless Rule, it is the Tongass National Forest. I have been there and seen its magnificence and understand its value to the local economy in its natural condition.

Therefore, I write to express my support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and fully intact for the Tongass National Forest.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. The forest itself and the wildlife it supports right now also underlie an expanding tourism economy.

I urge you to keep the federal Roadless Rule intact and to maintain current protections for national forests in Alaska.

Furthermore, I vigorously object to your proposal to reduce and remove protections from our national forest roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the federal government has ever adopted. Not only does it protect some of America's best fish and wildlife habitat, but it also saves millions of taxpayer dollars by preventing subsidies for money-losing timber sales.

The value of the Roadless Rule in preventing environmentally destructive and economically wasteful road-building and logging is particularly relevant on the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.

Please adopt the No Action Alternative.

Wallace Elton

[Position]

Date submitted (Alaskan Standard Time): 11/13/2019 12:00:00 AM
First name: Wallace
Last name: Elton
Organization:
Title:
Comments:
My name is Wallace Elton and I live in Saratoga Springs, New York.

The Forest Service must stand up to efforts to destroy our most magnificent National Forest. If there is one place that deserves maximum protection under the Roadless Rule, this is it. I am speaking up. You should, too, in your decision.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Wallace Elton

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Katie
Last name: Eluskie
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Katie Eluskie

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Melinda
Last name: Elvander
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Melinda Elvander

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Organization:
Title:
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Regards, Melinda Elvander

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Robert
Last name: Elvander
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Robert Elvander

Date submitted (Alaskan Standard Time): 10/20/2019 12:00:00 AM
First name: Sally
Last name: Elvart
Organization:
Title:
Comments:
Cut down some trees that can grow back in a few years and stop destroying what cant be replaced for a few centuries. The time for these trees may never come again. Although they are big, its a fragile ecosystem we really dont fully understand. Our rates of extinction are high enough. Let old growth remain to keep doing its job.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Concepcion
Last name: Elvira
Organization:
Title:
Comments:
My name is Concepcion Elvira and I live in Tucson, Arizona.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Concepcion Elvira

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Cheryl
Last name: Elwood
Organization:
Title:
Comments:
I live only a few feet from a National Forest and am opposed to opening any national forest to putting in roads for logging and/or mining - especially using debunked and fake science to back the Trump administrations transactional attempts to roll back protections and open our natural resources to private enterprise and environmental destruction.

Unless deemed a serious hazard to life or limb, all first growth trees on pubic lands should be off limits to logging - and any logging on public lands should respect and protect the environment and follow the recommendations of respected scientific and environmental organizations rather than those set to financially benefit In any way from the cutting down of trees.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Michael
Last name: Elwood
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Michael Elwood

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Thomas
Last name: Ely

Organization:
Title:
Comments:
HC6292

DO YOU WANT TO MAKE A PUBLIC COMMENT?

If you would life to testify at this hearing, please fill out the information below and give it to the facilitator. You do not need to complete this sheet to submit written comments. Thank you.

Which Proposal/Project/Issue? Roadless Rule

Check one: [X] I am here to offer my own views

[ ] I am here to represent

Date submitted (Alaskan Standard Time): 12/13/2019 12:00:00 AM
First name: Craig
Last name: Ely
Organization:
Title:
Comments:
I support 'No Action' alternative: Conserve the Roadless Rule in Alaska

Dear Comment Period Alaska Roadless Rule,

It is foolish to be spending so much taxpayer money to destroy fish habitat. Do what is right for the majority rather than lining the pockets of a few!

The Tongass especially has a history of wanton waste - historically giving away timber to Japan while decimating our irreplaceable virgin forest. To think that the government now wants to continue such folly at the cost of our salmon fishery (hard evidence for this), is inexcusable. Roadless? YES!!

Sincerely,

Craig Ely

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Dennis
Last name: Ely
Organization:
Title:
Comments:
Were writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.
The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.
In addition, We strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Dennis Ely

Date submitted (Alaskan Standard Time): 11/13/2019 12:00:00 AM
First name: Thomas
Last name: Ely
Organization:
Title:
Comments:
My name is Thomas Ely and I live in Haines, Alaska.

Climate change is real, we need all the living and breathing trees alive and standing to offset greenhouse gas emissions from the burning of fossil fuels. The Tongass Rainforest is a top contributor to curbing global warming.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Thomas Ely

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Edna
Last name: Elze
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Edna Elze

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lisa
Last name: Em
Organization:
Title:
Comments:
My name is Lisa Em and I live in Waukesha, Wisconsin.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Lisa Em

Date submitted (Alaskan Standard Time): 12/9/2019 12:00:00 AM
First name: Richard
Last name: Emanuel
Organization:
Title:
Comments:
Dear Sec. Perdue and Forest Service Chief Christiansen: As an Alaskan, I am concerned about proposed changes to Roadless Rules as they apply to Tongass National Forest, in the Southeastern part of my state. When I first came to Alaska more than 40 years ago, it was aboard the state ferry Columbia, plying the spectacular Inside Passage from Seattle to Haines, Alaska. The magnificence of the sea, the glaciers and snowy mountains, and the spectacular emerald rainforest of the Pacific Northwest is truly awe-inspiring. At the time, I was astonished to see extensive areas of clear-cut logging both in British Columbia and Alaska. This practice not only mars the landscape, it risks erosion and impacts wildlife, including black and brown bears, black-tailed Sitka deer, wolves, eagles, owls and raptors of all kinds as well as all five species of salmon. Logging in Southeast Alaska was more prevalent decades ago than it is today, but economic studies have shown that logging jobs cost more in government subsidies than the jobs provided in return. Logging these forests at a loss makes little sense to this Alaskan. Of most concern to me is the destruction of old-growth forest. The largest trees in the Tongass are up to 800 years old. In human terms, logging old-growth forest is non-renewable extraction. Does this comport with the US Forest Service mission? Another consideration is that my state is now striving to diversify our economy. Fishing has always been economically vital here, but tourism is increasingly important in Alaska as well. Both fishing and tourism stand to be adversely impacted by reducing or removing Roadless restrictions in the Tongass Forest. As an Alaskan who cares deeply about his state, I urge you to adopt Alternative 1 and take No Action, leaving all of Alaska, including the Tongass National Forest, under the 2001 Roadless Rule. Thank you for the opportunity to comment and share my heartfelt concerns. - Richard P. Emanuel

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/12/2019 1:05:07 PM
First name: tracey
Last name: emanuel
Organization:
Title:
Comments:
My name is Tracey Emanuel and I live in Sitka, AK. lived in Sitka for about fourteen years,twenty five years in SE Alaska total. Make my living salmon trolling I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, subsistence harvesting, foraging for wild foods, the peace and solitude I find in nature, recreating, practicing my culture, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on roadless areas in the Tongass National Forest for economic livelihood, healthy fish habitat, deer habitat and subsistence hunting, foraging and gathering wild foods, recreating and enjoying nature, carbon sequestration and local climate change mitigation, viewing wildlife, keeping public lands wild for future generations, fiscal responsibility and saving taxpayer dollars . A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Baranof Island, Chichagof Island, Admiralty Island, the northern mainland above Port Snettisham (around Juneau), the central mainland from Hobart Bay to Stikine River, the southern mainland from Bradfield Canal to Dixon Entrance Kupreanof Island, Kuiu Island, Wrangell and Etolin Islands, Prince of Wales Island, Revillagigedo Island (near Ketchikan), Yakutat forelands, all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because It totally discounts the voices the many of the locals that live here year around. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should devote resources to support our fishing and visitor industries.

Keep the Tongass wild

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Nancy
Last name: Embach
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Nancy Embach

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Randy
Last name: Embenhate
Organization:
Title:
Comments:
[Attached postcard received 12/31/2019. Redacted to protect personally identifiable information. Original is in the project record.]

Text:

Dear Secretary Perdue,

I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed changes to the Alaska Roadless Rule. I strongly object to your plans to reduce and remove protections from roadless areas in the Tongass National Forest. The Tongass contains the largest remaining intact temperate rainforest on Earth, and its value in providing clean water and habitat for fish and wildlife is essential to the economic and ecological health of Southeast Alaska, Furthermore, it's a critical carbon sink to combat climate change.

I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska and across the country.

Sincerely,

Name:

Address:

City: Zip:

Email:

Phone:

[Position]

Dear Secretary Perdue,

I am writing to support the **No-Action Alternative** for the Draft Environmental Impact Statement on the proposed changes to the Alaska Roadless Rule. I strongly object to your plans to reduce and remove protections from roadless areas in the Tongass National Forest. The Tongass contains the largest remaining intact temperate rainforest on Earth, and its value in providing clean water and habitat for fish and wildlife is essential to the economic and ecological health of Southeast Alaska. Furthermore, it's a critical carbon sink to combat climate change.

I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska and across the country.

Sincerely,

Name: RANDY EMBERMATE

Address: [redacted]

City: [redacted]

Email: [redacted]

Phone [redacted]

FOREVER / USA

Dec. 31, 2019

Ken Tu
ID Team Leader
Alaska Roadless Rule
USDA Forest Service
P.O. Box 2168
Juneau, Alaska 99802-1628

Wenda Berry

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Dr
Last name: Emberg
Organization:
Title:
Comments:
My name is Dr Emberg and I live in Proctor, Minnesota.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Dr Emberg

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Hilary
Last name: Emberton
Organization:
Title:
Comments:
My name is Hilary Emberton and I live in Grass Valley, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Hilary Emberton

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Eileen
Last name: Embid
Organization:
Title:
Comments:
My name is Eileen Embid and I live in Albuquerque, New Mexico.

The public lands that the American people have set aside to preserve for future generations are our shared treasure. They are a sampling of the special and unique landscapes that make up our country. The BLM is an agency of our representative government and it needs to be taking into account the will of the citizens when managing our lands, not robbing us for the benefit of a few special interests.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Eileen Embid

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Kyle
Last name: Embler
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Kyle Embler

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Lorayne
Last name: Embretson
Organization:
Title:
Comments:
HC6083

Dear U.S. Forest Service:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for more than 20 years. *Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77.* [Text bolded for emphasis] Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. *Please do not roll back roadless are protection for habitat that our irreplaceable fish and wildlife populations need to survive.* [Text bolded for emphasis]

Customize your comment by listing reasons the Tongass is important to you or why you value Alaska Roadless areas: (ex: specific locations you recreate, activities you do, or why you value fish & wildlife) [Text italicized]

Sincerely,

Would you like to volunteer with TU Alaska to Help America's Salmon Forest?

Yes No

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Elaine
Last name: Embrey
Organization:
Title:
Comments:
My name is Elaine Embrey and I live in Bellvue, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Elaine Embrey

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Glenn
Last name: Embrey
Organization:
Title:
Comments:
My name is Glenn Embrey and I live in Redondo Beach, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Glenn Embrey

Date submitted (Alaskan Standard Time): 10/18/2019 5:20:37 PM
First name: Judith
Last name: Embry
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. Can't this administration leave any environmental protections in place? I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,
Judith Embry
Florida, MA 01247

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Lorna
Last name: Emdy
Organization:
Title:
Comments:
My name is Lorna Emdy and I live in Hailey, Idaho.

Bears Ears National Monument should be restored to its original proposed boundaries, and the BLM should stop acting like a stooge for extractive industry and destruction of our irreplaceable public lands.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Lorna Emdy

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/14/2019 12:00:00 AM
First name: Tom
Last name: Emdy
Organization:
Title:
Comments:
No, do not allow greed driven oil or mining corporations to exploit ANY of our pristine forests in Alaska. It's an outrage to even consider such an environmental carnage.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: John
Last name: Emenheiser
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, John Emenheiser

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Craig
Last name: Emerick
Organization:
Title:
Comments:
My name is Craig Emerick and I live in Corvallis, Oregon.

BLM's proposed management plan will destroy cultural sites and critical habitat in what remains of Bears Ears. Once lost, never to be regained. Surely the public's interests over the long term outweigh any short term benefit for a chosen few. Please restore the original boundaries of Bears Ears National Monument and protect our cultural heritage for future generations.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Craig Emerick

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Nancy
Last name: Emerick
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Nancy Emerick

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Nancy
Last name: Emerick
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Nancy Emerick

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Tricia
Last name: Emerick
Organization:
Title:
Comments:
My name is Tricia Emerick and I live in Pembroke, Massachusetts.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Tricia Emerick

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Jennifer
Last name: Emerle-Sifuentes
Organization:
Title:
Comments:
My name is Jennifer Emerle-Sifuentes and I live in Newark, Delaware.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Jennifer Emerle-Sifuentes

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Anne
Last name: Emerson
Organization:
Title:
Comments:
My name is Anne Emerson and I live in Guilford, Vermont.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Anne Emerson

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: c
Last name: emerson
Organization:
Title:
Comments:
My name is c emerson and I live in Sacramento, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, c emerson

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jan
Last name: Emerson
Organization:
Title:
Comments:
My name is Jan Emerson and I live in New York, New York.

Please let us breathe clean air!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jan Emerson

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Jon
Last name: Emerson
Organization:
Title:
Comments:
My name is Jon Emerson and I live in North Haven, ME. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I am a longtime commercial fisherman who has always fished sustainably. In that same vein, I am a strong advocate for public lands being kept in pubic in public hands, including purchasing additional lands to be added to that trust.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), medium-impact recreation (FS cabins, trails, mooring buoys, 3-sided shelters). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, establish the economic value of the carbon stored in the Tongass, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless

Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: KIM
Last name: EMERSON
Organization:
Title:
Comments:
My name is KIM EMERSON and I live in Pleasant Prairie, Wisconsin.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, KIM EMERSON

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lawrence
Last name: Emerson
Organization:
Title:
Comments:
My name is Lawrence Emerson and I live in Lincoln Acres, California.

Accelerate the move to clean renewable energy! Save our valuable natural resources

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Lawrence Emerson

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: LYNN
Last name: EMERSON
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Martha
Last name: Emerson
Organization:
Title:
Comments:
My name is Martha Emerson and I live in Concord, New Hampshire.

Please be part of the solution to climate change and refuse to allow clear cutting in the Alaska Tongass National Forest. Support Roadless Rule in Alaska! Thank you!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Martha Emerson

[Position]

[Position]

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Mary
Last name: Emerson
Organization:
Title:
Comments:
USDA Forest Service Alaska Roadless Rule

Dear USDA Forest Service:

The Tongass National Forest, also known as America's Salmon Forest, is the largest national forest in North America, covering most of Southeast Alaska. The network of rivers, lakes and streams support nearly 80% of all salmon commercially fished in Southeast Alaska. Given the critical role the Tongass plays is preserving salmon fisheries, it is imperative that the Roadless Rule remain in order to protect salmon whose numbers have drastically diminished over the last decades. In addition, by protecting this large-scale ecosystem you provide habitat for other wildlife that depend on this pristine forest; and an intact ecosystem acts as a carbon sink, helping to reduce global warming. Uphold the Roadless Rule which the USFS established in 2001 in order to limit the destructive incursions of road building and logging.

Sincerely,

Mary Lou Emerson

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/27/2019 12:39:43 PM
First name: Megan
Last name: Emerson
Organization:
Title:
Comments:
My name is Megan Emerson and I live in Portland, OR. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest.

I was born and raised in the Tongass National Forest, on land traditionally stewarded by the Tlingit. The importance of roadless land to my family's subsistence lifestyle in particular, and the importance of roadless land to global biodiversity in general, cannot be overstated. Any decisions made about this area should be considered as important as those made about the Amazon rainforest, and should serve the interests of future generations and indigenous peoples before anyone's monetary profit. Please maintain the roadless status of the Tongass, for all of us. Thank you.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for the lifestyles of the indigenous communities that the forest supports its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), medium-impact recreation (FS cabins, trails, mooring buoys, 3-sided shelters). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to support small-scale, sustainable logging, restore salmon habitat that was hurt by past logging practices. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Ralph
Last name: Emerson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Ralph Emerson

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Susan
Last name: Emerson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Susan Emerson

Date submitted (Alaskan Standard Time): 12/17/2019 4:25:11 PM
First name: Thomas
Last name: Emerson
Organization:
Title:
Comments:
My name is Thomas Emerson and I live in Juneau, AK. I am a lifelong resident of Southeast Alaska and depend on the salmon habitat of the Tongass. I am a third generation commercial salmon fisher and these fish are a large part of my livelihood and identity. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, and recreation.

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on these roadless areas in the Tongass National Forest for my economic livelihood via the healthy fish habitat and other subsistence opportunities it provides. A full exemption does not protect these things, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because it will impede the interests of the largest economic drivers in this area, namely fishing and tourism.. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should devote resources to support our fishing and visitor industries transition to second growth logging invest in creating and maintaining recreation infrastructure improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: [Illegible]
Last name: Emert
Organization:
Title:
Comments:
HC3078

Dear Secretary Perdue,

I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections intact for the Tongass National Forest. Old-growth forests like the Tongass are powerful tools for fighting climate change - they store carbon, protect wildlife, and support local communities that rely on tourism and recreation. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of America's best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.

Sincerely,

This is vital.

[Signature]

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Justin
Last name: Emert
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Douglas
Last name: Emery
Organization:
Title:
Comments:
My name is Douglas Emery and I live in Sebastopol, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Douglas Emery

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Edie
Last name: Emery
Organization:
Title:
Comments:
My name is Edie Emery and I live in Pasadena, California.

Stop polluting people w/pfas chemicals

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Edie Emery

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Pamela
Last name: Emery
Organization:
Title:
Comments:
My name is Pamela Emery and I live in Seminole, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Pamela Emery

Date submitted (Alaskan Standard Time): 11/12/2019 3:00:00 PM
First name: Stephanie
Last name: Emery
Organization:
Title:
Comments:
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
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Thank you for considering my comments.
Regards, Stephanie Emery

Date submitted (Alaskan Standard Time): 12/12/2019 3:00:00 PM
First name: Russell
Last name: Emeterio
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Alana
Last name: Emhardt
Organization:
Title:
Comments:
My name is Alana Emhardt and I live in Santa Monica, California.

Stop destroying our forests. Have you no respect for beauty and nature.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Alana Emhardt

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Ronni
Last name: emilio
Organization:
Title:
Comments:
My name is Ronni emilio and I live in Shelton, Connecticut.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Ronni emilio

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Ashley
Last name: Emley
Organization:
Title:
Comments:
HC1053

Dear Secretary Perdue,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Larry
Last name: Emley
Organization:
Title:
Comments:
My name is Larry Emley and I live in Bellingham, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Larry Emley

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Rob
Last name: Emley
Organization:
Title:
Comments:
HC862

Dear Secretary Perdue,

I am a visitor to the lands and waters of Southeast Alaska. The Tongass National Forest is a large part of why I am here. Visitors like me come to witness the vast, beautiful stands of old-growth trees that can't be found on such a scale anywhere else in the United States. We come to crew on commercial fishing boats. We come to hunt, fish and hike in America's largest National Forest. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Alaskans and Americans.

I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. Tourism and commercial fishing are at the heart of Southeast's economy, not the antiquated timber industry.

Date submitted (Alaskan Standard Time): 12/11/2019 12:00:00 AM
First name: Robert
Last name: Emley
Organization:
Title:
Comments:
My name is Robert Emley and I live in Sitka, AK. My family and I moved to Sitka during the 2018 Summer. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, the peace and solitude I find in nature, recreating, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on roadless areas in the Tongass National Forest for healthy fish habitat, deer habitat and subsistence hunting, recreating and enjoying nature, carbon sequestration and local climate change mitigation, viewing wildlife, keeping public lands wild for future generations, economic livelihood, foraging and gathering wild foods, practicing my culture. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Baranof Island, Chichagof Island, Admiralty Island, all of the inventoried roadless areas on the Tongass Yakutat forelands. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because Our protected lands are already a fraction of what they should be in the U.S. I have lived in Oregon and Washington and have seen the Logging Industry's "Sustainable Practices." I believe that allowing any type of Road building or Logging in the Tongass is the equivalent to allowing Bottom Trawling in our Oceans and waterways.. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should devote resources to support our fishing and visitor industries improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts invest in creating and maintaining recreation infrastructure.

I do not know a single person that lives here and supports this exemption. That is why I choose to stand with this community in protecting our environmental resources. Allowing development to happen in the Tongass on a large scale would be a slap in the face to the communities of Southeast Alaska.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/12/2019 3:00:00 PM
First name: Timothy
Last name: Emmerick
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 10/26/2019 12:00:00 AM
First name: Jason
Last name: Emond
Organization:
Title:
Comments:
Alternative 1! A multi-thousand year forest?! This is a rarity and must be protected! The free market will figure out how to grow what we need elsewhere.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Merlin
Last name: Emrys
Organization:
Title:
Comments:
My name is Merlin Emrys and I live in Santa Fe, New Mexico.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Merlin Emrys

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Scott
Last name: Emsley
Organization:
Title:
Comments:
My name is Scott Emsley and I live in Carmel-by-the-sea, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Scott Emsley

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Elizha
Last name: Emswiler
Organization:
Title:
Comments:
My name is Elizha Emswiler and I live in Richmond, Virginia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Elizha Emswiler

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Nol
Last name: Emswiler
Organization:
Title:
Comments:
My name is Nol Emswiler and I live in Memphis, Tennessee.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Nol Emswiler

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Bryon
Last name: Encinias
Organization:
Title:
Comments:
My name is Bryon Encinias and I live in Foley, Alabama.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Bryon Encinias

Date submitted (Alaskan Standard Time): 12/17/2019 11:27:52 PM
First name: Holly
Last name: Enderle
Organization:
Title:
Comments:
NO ACTION ON THE ROADLESS RULE

My name is Holly Enderle and I live in Juneau, AK. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I am a second generation Power troller who grew up in the small fishing community of Elfin Cove, Alaska which is nestled into the heart of the Tongass Forest. From a young age I became fascinated with learning as much as I could about this beautful ecosystem. This forest is my home, and it supports the longevity of my career as a commercial fisherman. Everything is so interconnected, and while this forest may seem vast and strong it is an incredibly fragile ecosystem. Please take no action on the roadless rule!! Let's continue to protect this incredible temperate rainforest that supports our heathy fish and wildlife habitat so we can share its beauty and health with future generations to come.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the high density of incredible wildlife it contains, the recreational opportunities it provides, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), medium-impact recreation (FS cabins, trails, mooring buoys, 3-sided shelters), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers' money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, support small-scale, sustainable logging, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is America's homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless

areas in Alaska - it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Holly
Last name: Enderle
Organization:
Title:
Comments:
My name is Holly Enderle and I live in Juneau, AK. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I am a second generation Power troller who grew up in the small fishing community of Elfin Cove, Alaska which is nestled into the heart of the Tongass Forest. From a young age I became fascinated with learning as much as I could about this beautful ecosystem. This forest is my home, and it supports the longevity of my career as a commercial fisherman. Everything is so interconnected, and while this forest may seem vast and strong it is an incredibly fragile ecosystem. Please take no action on the roadless rule!! Let's continue to protect this incredible temperate rainforest that supports our heathy fish and wildlife habitat so we can share its beauty and health with future generations to come.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the high density of incredible wildlife it contains, the recreational opportunities it provides, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), medium-impact recreation (FS cabins, trails, mooring buoys, 3-sided shelters), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, support small-scale, sustainable logging, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/5/2019 3:00:00 PM
First name: Alex
Last name: Enderson
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/10/2019 2:33:32 PM
First name: Jesse
Last name: Endert
Organization:
Title:
Comments:
My name is Jesse Endert and I live in Sitka, AK. I have lived in Southeast Alaska for 3 months. In this short period of time, I quickly observed the importance of the Tongass to Southeast Alaskan residents. The forest is a sanctuary filled with irreplaceable wildlife and vegetation. It is a recreational wonderland that is utilized daily by locals and tourists. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact subsistence harvesting, foraging for wild foods, the peace and solitude I find in nature, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, and the conservation of resources for future generations.

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. The rule is working fine as it is by balancing the conservation of our fish and wildlife habitat with important development projects. I depend on roadless areas in the Tongass National Forest for recreating and enjoying nature, carbon sequestration and local climate change mitigation, viewing wildlife, and keeping public lands wild for future generations. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts. The Forest Service should devote resources to support our fishing and visitor industries and invest in creating and maintaining recreation infrastructure.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 11/17/2019 3:00:00 PM
First name: Brent
Last name: Endicott
Organization:
Title:
Comments:
My name is Brent Endicott and I live in San Diego, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Brent Endicott

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Linda
Last name: Endicott
Organization:
Title:
Comments:
My name is Linda Endicott and I live in Santa Rosa, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Linda Endicott

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Maria
Last name: Endler
Organization:
Title:
Comments:
My name is Maria Endler and I live in Kaneohe, Hawaii.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Maria Endler

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Pauline
Last name: Endo
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Pauline Endo

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Pauline
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Organization:
Title:
Comments:
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Regards, Pauline Endo

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Christina
Last name: Endres
Organization:
Title:
Comments:
My name is Christina Endres and I live in Alpine, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Christina Endres

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Christina
Last name: Endres
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Christina Endres

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Daphne
Last name: Endress
Organization:
Title:
Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Daphne Endress

Date submitted (Alaskan Standard Time): 11/18/2019 3:00:00 PM
First name: Daphne
Last name: Endress
Organization:
Title:
Comments:
My name is Daphne Endress and I live in Katy, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Daphne Endress

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Last name: Endress
Organization:
Title:
Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Daphne Endress

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Richard
Last name: Endris
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Richard Endris

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Lou
Last name: Eney
Organization:
Title:
Comments:
Keep the Roadless Rule on the Tongass

Dear Secretary Perdue and Chief Christensen,

Please select the "no-action" alternative on the Alaska-specific Roadless Rule and protect all inventoried roadless areas on the Tongass National Forest under the 2001 National Roadless Rule.

The Tongass contains some of the last remaining intact old-growth temperate rainforests in the world, and that alone should be reason to keep it intact. Clean water and fish and wildlife habitat are essential to the cultural and ecological health of Southeast Alaska. Please keep the 2001 National Roadless Rule intact and current protections in place on the Tongass National Forest.

Timber sales in the remote Tongass cost money, they don't make money. Save millions of dollars that might be spent to subsidize timber sales. As a trail builder here in Southeast Alaska, I know first-hand that building and maintaining roads in a rainforest is absurdly costly and not worth the low-value timber of the region. The Roadless Rule already allows for approval of some projects, and future mine access, if it becomes a high enough priority, will likely be pushed through.

Development at any scale in the Tongass ends up in environmental devastation in the immediate vicinity and degradation downstream and can drastically affect subsistence resources for native and rural inhabitants. This land was stolen by the Forest Service from natives, and now the government is essentially threatening to desecrate it further and rob natives of their cultural resources and ways of life.

Proponents of this proposed Roadless Rule rollback argue that opening this door is unlikely to result in much new logging or mining, but that shouldn't matter - why even open the door? The original Roadless Rule was a recognition of both a need to preserve the wild state of existing undeveloped areas and the lack of reasonable economic support of further development and/or extractive activities. These two factors have not changed on the Tongass since then.

The original Roadless Rule was chosen from among its alternatives partly due to a need for national, agency-wide scope of intent. Local and regional control over decisions on the development of Roadless areas within those localities was given a back seat to taking a big-picture perspective on the nation's resources on the whole. This was a sound decision - there is no need to change it now. I view this proposal as a political play set in motion by a sloppily de-regulatory administration. A decision to exempt the Tongass from the Roadless Rule could begin a landslide into increased local and regional control over development of roadless areas, resulting in the piecemeal destruction of these important resources.

For these reasons, again, I strongly urge you to select the "no-action" alternative on the Alaska-specific Roadless Rule and keep the 2001 National Roadless Rule on the Tongass.

Thank you

Richard Eney

Juneau, AK

[Attachment is a PDF version of the same comment above.]

[Position]

Dear Secretary Perdue and Chief Christensen,

Please select the "no-action" alternative on the Alaska-specific Roadless Rule and protect all inventoried roadless areas on the Tongass National Forest under the 2001 National Roadless Rule.

The Tongass contains some of the last remaining intact old-growth temperate rainforests in the world, and that alone should be reason to keep it intact. Clean water and fish and wildlife habitat are essential to the cultural and ecological health of Southeast Alaska. Please keep the 2001 National Roadless Rule intact and current protections in place on the Tongass National Forest.

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Development at any scale in the Tongass ends up in environmental devastation in the immediate vicinity and degradation downstream and can drastically affect subsistence resources for native and rural inhabitants. This land was stolen by the Forest Service from natives, and now the government is essentially threatening to desecrate it further and rob natives of their cultural resources and ways of life.

Proponents of this proposed Roadless Rule rollback argue that opening this door is unlikely to result in much new logging or mining, but that shouldn't matter – why even open the door? The original Roadless Rule was a recognition of both a need to preserve the wild state of existing undeveloped areas and the lack of reasonable economic support of further development and/or extractive activities. These two factors have not changed on the Tongass since then.

The original Roadless Rule was chosen from among its alternatives partly due to a need for national, agency-wide scope of intent. Local and regional control over decisions on the development of Roadless areas within those localities was given a back seat to taking a big-picture perspective on the nation's resources on the whole. This was a sound decision – there is no need to change it now. I view this proposal as a political play set in motion by a sloppily de-regulatory administration. A decision to exempt the Tongass from the Roadless Rule could begin a landslide into increased local and regional control over development of roadless areas, resulting in the piecemeal destruction of these important resources.

For these reasons, again, I strongly urge you to select the "no-action" alternative on the Alaska-specific Roadless Rule and keep the 2001 National Roadless Rule on the Tongass.

Thank you
Richard Eney
Juneau, AK

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Martie
Last name: Enfield
Organization:
Title:
Comments:
My name is Martie Enfield and I live in Winter Park, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Martie Enfield

Date submitted (Alaskan Standard Time): 10/18/2019 5:58:03 PM
First name: Bibi
Last name: Eng
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,
Bibi Eng
East Hampton, NY 11937

Date submitted (Alaskan Standard Time): 12/7/2019 12:00:00 AM
First name: Laurie
Last name: Eng
Organization:
Title:
Comments:
Please maintain protections for the Tongass and Chugach National Forests

Dear Secretary Sonny Perdue,

The Roadless Area Conservation Rule (Roadless Rule) safeguards roughly 15 million acres of roadless forest lands across both the Tongass and Chugach Nation.

The people do not support the repeal. The people do not support more logging.

Sincerely,

Laurie Eng

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Richard
Last name: Eng
Organization:
Title:
Comments:
My name is Richard Eng and I live in Hancock, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Richard Eng

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Richard
Last name: Eng
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Richard Eng

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Georgette
Last name: Engard
Organization:
Title:
Comments:
My name is Georgette Engard and I live in Grand Blanc, Michigan.

Biodiversity and our ecosystems need to be protected instead of big polluters. The wellbeing of earth should be protected over the profit of a few. We must be good stewards of our use of our lands.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Georgette Engard

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/13/2019 12:00:00 AM
First name: John
Last name: Engard
Organization:
Title:
Comments:
My name is John Engard and I live in Nashville, Tennessee.

Why open up such a rare rainforest that serves as a carbon sink for the planet in the north in the same way the Amazon forest functions further south. This is so important now the effects of climate change are becoming increasingly more obvious and we need to change course from the old ways of doing things. If you must harvest more trees there's plenty of regular trees that can be mowed down sparing the old priceless ones that are giving us all so much benefit without most of us knowing about it. Consider the future and the upcoming generations and make a wise decision.....Thanks!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, John Engard

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Gerald
Last name: Engel
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Leigh
Last name: Engel
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Leigh
Last name: Engel
Organization:
Title:
Comments:

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Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Leigh
Last name: Engel
Organization:
Title:
Comments:

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Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Leigh
Last name: Engel
Organization:
Title:
Comments:

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Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Leigh
Last name: Engel
Organization:
Title:
Comments:
HC1306

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

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Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Patricia
Last name: Engel
Organization:
Title:
Comments:
My name is Patricia Engel and I live in Berkeley, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Patricia Engel

Date submitted (Alaskan Standard Time): 11/17/2019 3:00:00 PM
First name: Linda
Last name: Engelbrecht
Organization:
Title:
Comments:
My name is Linda Engelbrecht and I live in Sequim, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Linda Engelbrecht

Date submitted (Alaskan Standard Time): 11/11/2019 12:00:00 AM
First name: Nick
Last name: Engelfried
Organization:
Title:
Comments:
My name is Nick Engelfried and I live in Bellingham, Washington.

The Tongass is a national treasure and an essential bulwark against climate change. Don't let it be destroyed by corporate greed.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Nick Engelfried

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Herbert
Last name: Engelhardt
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Herbert Engelhardt

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Nan
Last name: Engelhardt
Organization:
Title:
Comments:
My name is Nan Engelhardt and I live in Saint Paul, Minnesota.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Nan Engelhardt

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Nancy
Last name: Engelhardt
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Nancy Engelhardt

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Tim
Last name: Engelhardt
Organization:
Title:
Comments:
HC3788

U.S. Forest Service Alaska Roadless Rule

Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Chugach and Tongass National Forest and in supporting their associated fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77, by selecting the 'no action' alternative. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Tim Engelhardt

Grayling, MI 49738

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Tim
Last name: Engelhardt
Organization:
Title:
Comments:
3788

U.S. Forest Service Alaska Roadless Rule
Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Chugach and Tongass National Forest and in supporting their associated fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77, by selecting the 'no action' alternative. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,
Tim Engelhardt
Grayling, MI 49738

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: John
Last name: Engell
Organization:
Title:
Comments:
My name is John Engell and I live in San Francisco, California.

Please protect Tongass National Forest, one of the most important places on the planet.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, John Engell

Date submitted (Alaskan Standard Time): 10/18/2019 3:56:30 PM
First name: Lavonne
Last name: Engelman
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,
Lavonne Engelman
Mars Hill, NC 28754

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Laila
Last name: Engelmann
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Laila Engelmann

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Herb
Last name: Engelsberg
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Herb Engelsberg

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jennafer
Last name: Engelstein
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Jennafer Engelstein

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Erin
Last name: Enger
Organization:
Title:
Comments:
My name is Erin Enger and I live in Minneapolis, Minnesota.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Erin Enger

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Wayne
Last name: Engeron
Organization:
Title:
Comments:
As a member and supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Philip
Last name: Enggren
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
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Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Billy
Last name: England
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
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I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Bruce
Last name: England
Organization:
Title:
Comments:
My name is Bruce England and I live in Mountain View, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Bruce England

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Chris
Last name: England
Organization:
Title:
Comments:
The Tongass is Important for the NATION!

The Tongass National Forest is not just a resource for South East Alaska[hellip]there is a reason it's called a national forest[hellip]it's to be available and used by all Americans. To be exempt from the Roadless Rule and allow Corporate clear Cutting on such a valuable natural resource is short sighted at best. This is the largest intact temperate rainforest in the world[hellip]Please do not allow this great forest to be be exempt from the Roadless Rule. We need this forest intact for all Americans to experience and future generation to know!

Chris England

[Position]

Date submitted (Alaskan Standard Time): 12/11/2019 12:00:00 AM
First name: Chris
Last name: England
Organization:
Title:
Comments:
My name is Chris England and I live in Carson City, NV. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I grew up visiting and enjoying our National forests first in Minnesota / then trips to South Dakotas Black Hills National Forest and then living in western Montana for for 17 years near the Gallatin National forest. Our National forests are extremely important to our health as a nation. To eliminate the roadless rule on the Tongass National Forest and making way for corporate clear cutting, road building and mining is short sighted and giving no regard to future generations to enjoy this magnificent temperate rain forest!! Please do not eliminate the roadless rule and preserve this great wilderness!!

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, to keep public lands wild for future generations, the high density of incredible wildlife it contains, the lifestyles of the indigenous communities that the forest supports its status as a national and global treasure, its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Christopher
Last name: England
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Christopher England

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Laura
Last name: England
Organization:
Title:
Comments:
My name is Laura England and I live in Sugar Grove, NC. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

As a mom, ecologist and educator, I care deeply about ensuring that we pass on a functional natural world to next generations. We need more roadless areas, not less. The Tongass is a rare example of the kind of ambitious conservation that's needed in this age of climate emergency.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, support small-scale, sustainable logging, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes.

Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Mark
Last name: England
Organization:
Title:
Comments:
My name is Mark England and I live in Damascus, Maryland.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Mark England

Date submitted (Alaskan Standard Time): 10/18/2019 12:00:00 AM
First name: Peggy
Last name: England
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,

Date submitted (Alaskan Standard Time): 11/12/2019 3:00:00 PM
First name: PEGGY
Last name: ENGLAND
Organization:
Title:
Comments:
My name is PEGGY ENGLAND and I live in Ashville, Alabama.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, PEGGY ENGLAND

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Roland
Last name: England
Organization:
Title:
Comments:
This area is extremely important for combating climate change; for maintaining biodiversity, for protecting an unique ecosystem; for preserving a heritage unchanged for future generations; for its sacred value to native peoples, that it should remain roadless and unspoiled!

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Carl
Last name: Englander
Organization:
Title:
Comments:
My name is Carl Englander and I live in Tucson, Arizona.

Please conserve and preserve!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Carl Englander

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Diane
Last name: Englander
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Diane Englander

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Stephen
Last name: Englander
Organization:
Title:
Comments:
My name is Stephen Englander and I live in Austin, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Stephen Englander

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Tiffany
Last name: Englander
Organization:
Title:
Comments:
My name is Tiffany Englander and I live in Greenbelt, Maryland.

This is critically important

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Tiffany Englander

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Elliott
Last name: Engle
Organization:
Title:
Comments:
Protect our National Forests. Stop being greedy politicians.

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: I.
Last name: Engle
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, I. Engle

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: I.
Last name: Engle
Organization:
Title:
Comments:
My name is I. Engle and I live in Tularosa, New Mexico.

PROTECT OUR WILD FORESTS IN ALASKA

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, I. Engle

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: I.
Last name: Engle
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, I. Engle

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Maureen
Last name: Engle
Organization:
Title:
Comments:
My name is Maureen Engle and I live in Minneapolis, Minnesota.

Please leave our National Forests alone!! We need them to survive!!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Maureen Engle

Date submitted (Alaskan Standard Time): 11/10/2019 12:00:00 AM
First name: roxanne
Last name: engle
Organization:
Title:
Comments:
Roxanne Engle. I live in Cincinnati, Ohio.My name is roxanne engle and I live in Cincinnati, Ohio.

Please don't clearcut the Tongass Forest! This will cause destruction and lose habitat for wildlife as well as cause extreme pollution! I've never even has the chance to see the beautiful forest of Alaska. Stop destroying our environment!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, roxanne engle

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Sandra
Last name: Engle
Organization:
Title:
Comments:
My name is Sandra Engle and I live in Mogadore, Ohio.

The future generations thank you for listening

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Sandra Engle

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Carol
Last name: Englender
Organization:
Title:
Comments:
My name is Carol Englender and I live in Sudbury, Massachusetts.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Carol Englender

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Philip
Last name: Englert
Organization:
Title:
Comments:
My name is Philip Englert and I live in Chicago, Illinois. I also work for the Chicago Park District. I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Philip Englert

Date submitted (Alaskan Standard Time): 11/11/2019 12:00:00 AM
First name: Diane
Last name: Engles
Organization:
Title:
Comments:
My name is Diane Engles and I live in Colorado Springs, Colorado.

Tongass National Forest belongs to us ALL. It should be preserved in its entirety for future generations.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Diane Engles

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: John
Last name: Englesby
Organization:
Title:
Comments:
My name is John Englesby and I live in Madison, Wisconsin.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, John Englesby

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: John
Last name: Englesby
Organization:
Title:
Comments:
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Thank you for considering my comments.
Regards, John Englesby

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First name: John
Last name: Englesby
Organization:
Title:
Comments:
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Thank you for considering my comments.
Regards, John Englesby

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Chelsea
Last name: English
Organization:
Title:
Comments:
HC3386

U.S. Forest Service Alaska Roadless Rule

Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Chelsea English

Bozeman, MT 59718

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Cheryn
Last name: English
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Cheryn English

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: deanne
Last name: english
Organization:
Title:
Comments:
A dictator burned the Amazon and made this possible for Trumpa and the dictators world wide to expel what was once 1?3rd of our climate protection! PLANT TREES DON'T CUT THEM DOWN!!! YIUOU ARE DILLING US WITH YOUR GREED!!!

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jade
Last name: English
Organization:
Title:
Comments:
My name is Jade English and I live in Sacramento, California.

Please continue to protect Tongass National Park in Alaska.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jade English

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Lynn
Last name: English
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Lynn English

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Patricia
Last name: English
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Patricia English

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Patricia
Last name: English
Organization:
Title:
Comments:
My name is Patricia English and I live in Wilkesboro, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Patricia English

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Adam
Last name: Englund
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Adam Englund

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Dan
Last name: Englund
Organization:
Title:
Comments:
My name is Dan Englund and I live in Rush City, Minnesota.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Dan Englund

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Felicity
Last name: Englund
Organization:
Title:
Comments:
HC5768

Dear U.S. Forest Service,

CC: Alaska Congressional Delegation and Federal Administration

I support the no-action alternative to leave the 2001 Roadless Rule in place on the Tongass National Forest. We must continue to phase out old-growth clear-cut logging and instead prioritize restoring degraded watersheds and fish streams that contribute to the growing fisheries and tourism-based economies of Southeast. To that end, please conserve the Tongass 77 and TNC priority areas in the final Roadless Rule.

Sincerely,

Comments: *(Eg: list locations you recreate, or why you value Tongass fish & wildlife)* [Text italicized for emphasis]

The old growth stands of the Tongass are my home and where I was born and raised. The importance of keeping this fragile, temperate rainforest intact cannot be overstated. Alaskans and the world depend on this clean air and water and our abundance of salmon. These things are priceless. We do not need a temporary influx of $$ from logging or a road to now here.

[Box checked] I would like to get more involved in the campaign!

*By taking this action, you are consenting to receive future communications via phone, text message, email, or mail from Sitka Conservation Society and its partners working to protect the Tongass. * [Text italicized for emphasis]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Klaudia
Last name: Englund
Organization:
Title:
Comments:
My name is Klaudia Englund and I live in Anacortes, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Klaudia Englund

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Victoria
Last name: Englund
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Victoria Englund

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Peter
Last name: Engonidis
Organization:
Title:
Comments:
My name is Peter Engonidis and I live in Myrtle Beach, South Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Peter Engonidis

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Elliot
Last name: Engstrom
Organization:
Title:
Comments:
HC6417

Dear Secretary Perdue,

I am writing to support the *No-Action Alternative*[text bolded for emphasis] for the Draft Environmental Impact Statement on the proposed changes to the Alaska Roadless Rule. I strongly object to your plans reduce and remove protections from roadless areas in the Tongass National Forest. The Tongass contains the largest remaining intact temperature rainforest on Earth, and its value in providing clean water and habitat for fish and wildlife is essential to the economic and ecological health of Southeast Alaska. Furthermore, it's a critical carbon sink to combat climate change.

I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska and across the country.

Sincerely,

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Joanna
Last name: Engstrom
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Joanna Engstrom

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Lee
Last name: Engstrom
Organization:
Title:
Comments:
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Regards, Lee Engstrom

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Lee
Last name: Engstrom
Organization:
Title:
Comments:
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S.T.O.P. this insane assault on our environment N.O.W.!!!!!
Regards, Lee Engstrom

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Margaret
Last name: Engvall
Organization:
Title:
Comments:
My name is Margaret Engvall and I live in Baltimore, Maryland.

Climate change is real, and clear cutting old forests is irresponsible.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Margaret Engvall

Date submitted (Alaskan Standard Time): 10/20/2019 12:00:00 AM
First name: Evan
Last name: Engwall
Organization:
Title:
Comments:
I am writing to strongly oppose the opening of the Tongass National Forest to logging. The potential damage to the salmon population and the people and animals who depend on them is considerable. Furthermore, the costs to the Forest Service will be so high, in opening an maintaining access for logging, that the Tongass should be left as it. Sincerely,Evan Engwall

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/5/2019 12:41:19 PM
First name: Kwasi
Last name: Enin
Organization:
Title:
Comments:
My name is Kwasi Enin and I live in St. Louis, MO. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I am here to support my friend Ellie and the woods

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for hydroelectric development, medium-impact recreation (FS cabins, trails, mooring buoys, 3-sided shelters), low-impact recreation (camping, hiking, hunting, foraging, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, develop more recreational opportunities, like trails and cabins, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 12/11/2019 12:00:00 AM
First name: Crystal
Last name: Enkvist
Organization: Alaska Power Association
Title: Executive Director
Comments:
The following text was copy/pasted from an attached letter. The system cannot display the formatting, graphics, or tables from the attached original.

December 11, 2019

Alaska Roadless Rule

United States Forest Service

Alaska Region

Ecosystem Planning and Budget Staff

P.O. Box 21628

Juneau, AK 99802

Alaska Roadless Rulemaking #54511

Comments from Alaska Power Association supporting a full Tongass National Forest exemption from the 2001 Roadless Area Conservation Rule.

Dear Forest Service Rulemaking Team:

Thank you for this opportunity to comment on the proposed exemption of the Tongass National Forest (the Tongass) from the 2001 Roadless Area Conservation Rule. Alaska Power Association (APA) is the statewide trade association for electric utilities in Alaska. Our members provide power to a majority of Alaskans from Utqiagvik to Unalaska, through the Interior and Southcentral, and down the Inside Passage.

APA supports a full Tongass exemption from the Roadless Rule. The proposed exemption would return decision-making authority for development to the Forest Service, allowing decisions concerning road construction and roadless area management of the Tongass to be made by local officials on a case-by-case basis. This is a preferable approach to the one-size-fits-all regulation the Tongass has been subjected to under the Roadless Rule. We also urge the Forest Service to adopt the Alaska Citizen Advisory Committee exception language for Alternatives 2-5.

APA encourages the Forest Service to expand the exemption to the Chugach National Forest, so electric consumers living in the area can benefit from projects that are now severely impacted by the Roadless Rule.

The Roadless Rule has caused significant roadblocks and expense to electric consumers in Southeast Alaska due to regulatory barriers on utility operations and hydropower development. Many communities in Southeast utilize hydropower to generate clean, stable-priced electricity, and even more communities are integrating hydropower to lower or eliminate their dependence on diesel generation.

The following are examples from the Alaska electric utility industry that support the necessity for a Tongass exemption in the Roadless Rule:

The Roadless Rule significantly limits the ability to construct new hydropower plants. Construction activities for new hydropower plants in Southeast Alaska need road access from tideline to transport

materials and equipment. Elimination of this access has prohibited the development of future low-cost renewable energy resources. If the Rule doesn't prohibit a project altogether, it can substantially increase the time and cost to develop new projects, thus making a project too costly to develop.

For instance, a planned intertie's cost ballooned to four times what was estimated - more than $51 million - due a requirement that more than 80 helicopter landing pads be used to transport materials to the project site from the air. This requirement was implemented to prevent a primitive road from being built to the project site.

APA cannot emphasize enough the development of renewable energy in Alaska. Alaska's alternatives to renewable energy are fossil fuels. Any decision that stifles the development of hydropower and other forms of renewable energy should be carefully reconsidered.

The Roadless Rule is also a limiting factor in developing and maintaining reliable power transmission lines in Southeast Alaska. During one electric utility's avalanche mitigation studies, it was required to eliminate mitigation options that were dependent on material and equipment access from tideline. Simply being able to pioneer a path for an excavator to track from tideline to the transmission line - a distance of approximately 500 feet - was not permittable under the Roadless Rule, which prevented activities such as developing earthen berms around structures or positioning heavy wire reels for repairing a damaged conductor.

Under these restrictions, the alternative is to contract an expensive heavy-lift helicopter, which more than doubles the cost of a project and limits design parameters due to the weight limitations of helicopters. In addition, such helicopters are not readily available and potentially extend the period of repair and back-up diesel powered generation usage. Being permitted to construct an access road to a project drastically cuts overall costs for construction and maintenance, costs that are ultimately passed on to ratepayers.

Electric utilities that construct hydropower projects and associated transmission must abide by significant environmental regulations under Federal Energy Regulatory Commission rules and/or state regulations. Alaska's electric utilities are exceptional stewards of the environment; Alaskans live, work and recreate in pristine wilderness while at the same time understanding that the economies of many parts of the state are dependent on natural resources.

By returning decision-making to local forestry officials, as opposed to a blanket ban on development within the Tongass, important projects that stabilize electric rates and lower diesel dependency can assist with economic development in Southeast Alaska. Additionally, necessary maintenance projects on hydroelectric sites and other electric infrastructure will become easier and less costly to accomplish if the Tongass is fully exempted from the Roadless Rule.

Respectfully submitted:

[signature]

Crystal Enkvist
Executive Director

[Position]

Alaska Power Association
Anchorage, Alaska 99503-6650

December 11, 2019

Alaska Roadless Rule
United States Forest Service
Alaska Region
Ecosystem Planning and Budget Staff
P.O. Box 21628
Juneau, AK 99802

Alaska Roadless Rulemaking #54511

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materials and equipment. Elimination of this access has prohibited the development of future low-cost renewable energy resources. If the Rule doesn't prohibit a project altogether, it can substantially increase the time and cost to develop new projects, thus making a project too costly to develop.

For instance, a planned intertie's cost ballooned to four times what was estimated – more than $51 million – due a requirement that more than 80 helicopter landing pads be used to transport materials to the project site from the air. This requirement was implemented to prevent a primitive road from being built to the project site.

APA cannot emphasize enough the development of renewable energy in Alaska. Alaska's alternatives to renewable energy are fossil fuels. Any decision that stifles the development of hydropower and other forms of renewable energy should be carefully reconsidered.

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Under these restrictions, the alternative is to contract an expensive heavy-lift helicopter, which more than doubles the cost of a project and limits design parameters due to the weight limitations of helicopters. In addition, such helicopters are not readily available and potentially extend the period of repair and back-up diesel powered generation usage. Being permitted to construct an access road to a project drastically cuts overall costs for construction and maintenance, costs that are ultimately passed on to ratepayers.

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By returning decision-making to local forestry officials, as opposed to a blanket ban on development within the Tongass, important projects that stabilize electric rates and lower diesel dependency can assist with economic development in Southeast Alaska. Additionally, necessary maintenance projects on hydroelectric sites and other electric infrastructure will become easier and less costly to accomplish if the Tongass is fully exempted from the Roadless Rule.

Respectfully submitted:

Crystal Enkvist
Executive Director

Date submitted (Alaskan Standard Time): 12/12/2019 12:00:00 AM
First name: David
Last name: Enloe
Organization:
Title:
Comments:
The NFS Should Be Prioritizing Our Forests

Dear Interdisciplinary Team Leader Ken Tu,

I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place for the Tongass National Forest.

I read this morning about the EU voting to create a carbon "border tax" targeting countries with "lax" emissions policies "like the US and China." It is unacceptable that the US has fallen into that group. The NFS, of all organizations, and in times like these, should be making strong statements that we are prioritizing our forests over expansion of our economy. Everyone must admit that an economy based on indefinite expansion is unsustainable. So why continue to pretend that it will last? Why continue to justify destroying what we have left of the planet with "creating jobs" and "stimulating the economy." It is so easy and seemingly noble to prioritize the now and those currently in need over the future and the needs of the next generation. But it's laughable to actually think that our current needs are more important that those of our grandchildren in 50 years. That's like saying it's more important to eat organic kale today than be able to afford a child's medical insurance tomorrow. The first is a luxury (I love organic kale!), the second is a necessity. A "growing economy" is a luxury. The forests that have inhabited, built, and sustained all species of life on this planet (not to mention fostered human happiness in so many ways) are a necessity.

Stop being the National deForesting Machine and begin acting like the National Forest Service. Thank you.

Sincerely,

David Enloe

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Martha
Last name: Ennis
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Martha Ennis

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Martha
Last name: Ennis
Organization:
Title:
Comments:
My name is Martha Ennis and I live in Albuquerque, New Mexico.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Martha Ennis

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Robert
Last name: Ennis
Organization:
Title:
Comments:
My name is Robert Ennis and I live in Chicago, Illinois.

Please stop the poisoning of us and the environment with these known to be toxic chemicals. It is well past the time to eliminate thes chemicals.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Robert Ennis

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jolene
Last name: Enns
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Jolene Enns

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Pamela
Last name: Enos
Organization:
Title:
Comments:
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Regards, Pamela Enos

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Pamela
Last name: Enos
Organization:
Title:
Comments:
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Regards, Pamela Enos

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Elaine
Last name: Enright
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Elaine Enright

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Elizabeth
Last name: Enright
Organization:
Title:
Comments:
My name is Elizabeth Enright and I live in Scottsdale, Arizona.

I am appalled by the current behaviors of the decision makers contributing to polluting the earth.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Elizabeth Enright

Date submitted (Alaskan Standard Time): 12/13/2019 6:32:11 AM
First name: Loren
Last name: Enright
Organization:
Title:
Comments:
I support Option 6, I believe it is an important step in efforts to restore reasonable access on the Tongass.
This will restore balance in federal regulation between conservation and resource development.
The Roadless Rule should never have been applied to the Tongass.

·Roughly 80 percent of the forest is already protected from most types of resource development.
Other laws and regulations are applicable and provide ample protection for needed projects.
This is about supporting all activities as mandated by USFS, timber, energy, mining, transportation, and recreation.

Date submitted (Alaskan Standard Time): 12/13/2019 6:32:11 AM
First name: Morgan
Last name: Enright
Organization:
Title:
Comments:
I support Option 6, I believe it is an important step in efforts to restore reasonable access on the Tongass and supporting the USFS objectives of multi use.
This will restore balance in federal regulation between conservation and resource development.
The Roadless Rule should never have been applied to the Tongass.

·Roughly 80 percent of the forest is already protected from most types of resource development.
Other laws and regulations are applicable and provide ample protection for needed projects.
This is about supporting all activities as mandated by USFS, timber, energy, mining, transportation, and recreation.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Mark
Last name: Enser
Organization:
Title:
Comments:
My name is Mark Enser and I live in Red Feather Lakes, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Mark Enser

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Deborah
Last name: Ensign
Organization:
Title:
Comments:
My name is Deborah Ensign and I live in Tucson, Arizona.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Deborah Ensign

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lynda
Last name: Ensign
Organization:
Title:
Comments:
My name is Lynda Ensign and I live in Spokane, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Lynda Ensign

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Tammy
Last name: Ensman
Organization:
Title:
Comments:
My name is Tammy Ensman and I live in Spencerport, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Tammy Ensman

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Richard
Last name: Entenman
Organization:
Title:
Comments:
My name is Richard Entenman and I live in Berkeley, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Richard Entenman

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Stephan
Last name: Entringer
Organization:
Title:
Comments:
HC3626

U.S. Forest Service Alaska Roadless Rule Committee:

I moved to Alaska from upper Michigan because I wanted to experience a land that has not been dramatically altered by human activity. All you have to do is look back in history and see what has happened in the lower states from logging old growth forest and the devastating effect it has had on the pristine watersheds and habitats they once provided. There are very few places left on this planet where we haven't had a devastating effect on the ecosystem and this is one. It should be left alone and preserved for future generations to see how the world was before humans intervened in the natural course evolution.

The Roadless Rule has been instrumental in conserving the Chugach and Tongass National Forest and in supporting their associated fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77, by selecting the 'no action' alternative. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Stephan Entringer

Kenai, AK 99611

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Susan
Last name: Enzinna
Organization:
Title:
Comments:
My name is Susan Enzinna and I live in Broomfield, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Susan Enzinna

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Susan
Last name: Enzinna
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Susan Enzinna

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: AL
Last name: Epding
Organization:
Title:
Comments:
My name is AL Epding and I live in Port Orford, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, AL Epding

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Gina
Last name: Epley
Organization:
Title:
Comments:
My name is Gina Epley and I live in Granite Quarry, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Gina Epley

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Arlen
Last name: Epp
Organization:
Title:
Comments:
My name is Arlen Epp and I live in Elkhart, IN 46514.I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.Sincerely,Arlen Epp

Regards, Arlen Epp

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Theresa
Last name: Epp
Organization:
Title:
Comments:
My name is Theresa Epp and I live in Thetford, Vermont.

Protect our national parks from industrial development.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Theresa Epp

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Donald
Last name: Eppenbach
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Donald Eppenbach

Date submitted (Alaskan Standard Time): 11/26/2019 12:00:00 AM
First name: Cameron
Last name: Eppers
Organization:
Title:
Comments:
HC2

The forest is important is Southeast Alaska because we are a rain *forest*[Text underlined for emphasis]!

Selective cutting[Text underlined for emphasis]

Help stop fires that possibly will happen.

[Position]

Date submitted (Alaskan Standard Time): 11/18/2019 3:00:00 PM
First name: Thomas
Last name: Eppes
Organization:
Title:
Comments:
My name is Thomas Eppes and I live in Thonotosassa, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Thomas Eppes

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: kathi
Last name: epprecht
Organization:
Title:
Comments:
My name is kathi epprecht and I live in Boston, Massachusetts.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, kathi epprecht

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Dane
Last name: Epps
Organization:
Title:
Comments:
I choose Alternative One

I do NOT want renewed road building and logging in Tongass National Forest- please preserve our land!

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Estelle
Last name: Epstein
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Estelle Epstein

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Greg
Last name: Epstein
Organization:
Title:
Comments:
HC3696

U.S. Forest Service Alaska Roadless Rule

Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.

Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,

Greg Epstein

Jackson, WY 83001

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Greg
Last name: Epstein
Organization:
Title:
Comments:
3696

U.S. Forest Service Alaska Roadless Rule
Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.
Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,
Greg Epstein
Jackson, WY 83001

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Judy
Last name: Epstein
Organization:
Title:
Comments:
My name is Judy Epstein and I live in Minneapolis, Minnesota.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Judy Epstein

Date submitted (Alaskan Standard Time): 12/11/2019 12:00:00 AM
First name: Justine
Last name: Epstein
Organization:
Title:
Comments:
My name is Justine Epstein and I live in Sebastopol, CA. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

This year I was evacuated from my home due to climate-change caused fires in northern California. This is the third year that my region has been directly impacted by climate change, both fires and floods. As a young person coming of age, I have witnessed the changes in our climate locally and globally and am increasingly concerned for the future of our collective home. I feel it is essential to protect the Tongass National Forest old growth because I recognize that the planetary biosphere is an interdependent ecosystem and the work of those trees is essential for the health of the whole. Thank you for taking the steps for its protection.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Ken
Last name: Epstein
Organization:
Title:
Comments:
My name is Ken Epstein and I live in Queens, New York.

I hope you continue your efforts. So many others have started out with great energy but fizzled out after a short time. Good luck, stay the course. It's your planet now.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Ken Epstein

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Leonard
Last name: Epstein
Organization:
Title:
Comments:
My name is Leonard Epstein and I live in Port St. Lucie, Florida.

Don't allow short-term corporate profits to clearcut ancient forest land. Think of future generations who want to protect "America's Climate Forest".

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Leonard Epstein

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/25/2019 12:00:00 AM
First name: Luanne
Last name: Epstein
Organization:
Title:
Comments:
My name is Luanne Epstein and I live in Kentwood, Michigan.

There are things in life that are far more important than corporate profits! Protecting the Tongass National Forest is one of them. Removing protection of this forest will affect indigenous people and many animals as well as the rest of us irregardless of where we live. The climate crisis is real and undercutting of these trees will speed up that crisis, which NONE OF US can afford. The loss of protected animals will also affect us. There is NO NEED to open this forest to enrich the timber industry and HURT EVERYONE including POTUS and his child and grandchildren. Additionally, that forest belongs to the people of the United States, not the government! Please reconsider your terrible decision!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Luanne Epstein

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: M.
Last name: Epstein
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, M. Epstein

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Mark
Last name: Epstein
Organization:
Title:
Comments:
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Regards, Mark Epstein

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Mindy
Last name: Epstein
Organization:
Title:
Comments:
My name is Mindy Epstein and I live in Hermitage, Pennsylvania.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Mindy Epstein

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Nick
Last name: Epstein
Organization:
Title:
Comments:
My name is Nick Epstein and I live in Chicago, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Nick Epstein

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: As
Last name: Er
Organization:
Title:
Comments:
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Regards, As Er

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Gail
Last name: Erath
Organization:
Title:
Comments:
My name is Gail Erath and I live in Biddeford, Maine.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Gail Erath

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: cheryl
Last name: erb
Organization:
Title:
Comments:
My name is cheryl erb and I live in Salem, Oregon.

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Thank you for considering my comments.
Regards, cheryl erb

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: John
Last name: Erb
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, John Erb

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Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Peter
Last name: Erb
Organization:
Title:
Comments:
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Regards, Peter Erb

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Antonino
Last name: Erba
Organization:
Title:
Comments:
My name is Antonino Erba and I live in Dubuque, Iowa.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Antonino Erba

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Roger
Last name: Erbe
Organization:
Title:
Comments:
My name is Roger Erbe and I live in Lansing, Michigan.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Roger Erbe

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lori
Last name: Erbs
Organization:
Title:
Comments:
My name is Lori Erbs and I live in Acme, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Lori Erbs

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: George
Last name: Erceg
Organization:
Title:
Comments:
My name is George Erceg and I live in Natrona Heights, Pennsylvania.

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Thank you for considering my comments.
Regards, George Erceg

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lynn
Last name: Erckmann
Organization:
Title:
Comments:
My name is Lynn Erckmann and I live in Kirkland, Washington.

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Thank you for considering my comments.
Regards, Lynn Erckmann

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Dale
Last name: Erdman
Organization:
Title:
Comments:
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Regards, Dale Erdman

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Lewis
Last name: Erenberg
Organization:
Title:
Comments:
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Regards, Lewis Erenberg

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Marla
Last name: Erhart
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Peggy
Last name: Erhart
Organization:
Title:
Comments:
Please leave this Tongass rain forest alone. Technology has now deduced that there are easily renewable plants, like hemp and bamboo, that can do the same things as trees. Not only is the action of cutting trees causing many forest dwellers to lose their homes, it is a loss for tourism.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 10/18/2019 4:37:34 PM
First name: Walter
Last name: Erhorn
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,
Walter Erhorn
Spring Valley, CA 91979

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Jane
Last name: Ericksen
Organization:
Title:
Comments:
HC840

Dear Secretary Perdue,

I am a visitor to the lands and waters of Southeast Alaska. The Tongass National Forest is a large part of why I am here. Visitors like me come to witness the vast, beautiful stands of old-growth trees that can't be found on such a scale anywhere else in the United States. We come to crew on commercial fishing boats. We come to hunt, fish and hike in America's largest National Forest. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Alaskans and Americans.

I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. Tourism and commercial fishing are at the heart of Southeast's economy, not the antiquated timber industry.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Randy
Last name: Ericksen
Organization:
Title:
Comments:
HC838

Dear Secretary Perdue,

I am a visitor to the lands and waters of Southeast Alaska. The Tongass National Forest is a large part of why I am here. Visitors like me come to witness the vast, beautiful stands of old-growth trees that can't be found on such a scale anywhere else in the United States. We come to crew on commercial fishing boats. We come to hunt, fish and hike in America's largest National Forest. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Alaskans and Americans.

I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. Tourism and commercial fishing are at the heart of Southeast's economy, not the antiquated timber industry.

Date submitted (Alaskan Standard Time): 10/31/2019 12:00:00 AM
First name: Barbara
Last name: Erickson
Organization: Alaska Native Sisterhood
Title: President
Comments:
Hello,

I am the current President of the local Camp 16 Alaska Native Sisterhood and I am strongly opposed to the monetization of our National Tongass Forest! The old growth trees cannot be replaced. To cut them down for money would be a scar on our forest for years into the future.

Leave the forest alone for everyone to enjoy forever, not just to satisfy someone's pocket book for the present moment.

Sincerely,

Barbara Erickson, President

Alaska Native Sisterhood

Camp #16

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:01:05 PM
First name: Barbara
Last name: Erickson
Organization:
Title:
Comments:
My name is Barbara Erickson and I live in Petersburg, Alaska. I am a Tlingit lifelong resident of Alaska. I have used the forest for fishing, hunting, gathering and recreation from the time I was young. I am also the President of Camp 16 Alaska Native Sisterhood. I am currently working as the ANA assistant of the Petersburg Indian Association and I know the historical and cultural value of the forest as ours; to care for and to utilize wisely, not greedily, thus destroying not only the forest, but the habitat and environments around the forest. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, subsistence harvesting, foraging for wild foods, the peace and solitude I find in nature, recreating, practicing my culture, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. It shows the Forest Service is responding to the needs and voices of Southeast Alaskan communities. I depend on roadless areas in the Tongass National Forest for healthy fish habitat, deer habitat and subsistence hunting, foraging and gathering wild foods, recreating and enjoying nature, viewing wildlife, keeping public lands wild for future generations, fiscal responsibility and saving taxpayer dollars . A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because All the money and construction involved can never replace the old growth trees that are only seen as $, the symbol that represents a "double-cross snake that bites on both ends", the damages that may be incurred cannot be repaired. The trees will never be replaced. Leave our forest alone.. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should transition to second growth logging improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 12/10/2019 3:00:00 PM
First name: Barton
Last name: Erickson
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Barton
Last name: Erickson
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
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Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: CAROLE
Last name: ERICKSON
Organization:
Title:
Comments:
My name is CAROLE ERICKSON and I live in Columbus, Indiana.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, CAROLE ERICKSON

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: CAROLE
Last name: ERICKSON
Organization:
Title:
Comments:
My name is CAROLE ERICKSON and I live in Columbus, Indiana.

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Thank you for considering my comments.
Regards, CAROLE ERICKSON

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Christopher
Last name: Erickson
Organization:
Title:
Comments:
My name is Christopher Erickson and I live in Bloomington, Indiana.

Research and funding needs to be put toward this issue for the sake of public health and welfare. Please make this issue a regulatory priority.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Christopher Erickson

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Dana
Last name: Erickson
Organization:
Title:
Comments:
HC6337

Dear Secretary Perdue,

I am writing to support the *No-Action Alternative*[text bolded for emphasis] for the Draft Environmental Impact Statement on the proposed changes to the Alaska Roadless Rule. I strongly object to your plans reduce and remove protections from roadless areas in the Tongass National Forest. The Tongass contains the largest remaining intact temperature rainforest on Earth, and its value in providing clean water and habitat for fish and wildlife is essential to the economic and ecological health of Southeast Alaska. Furthermore, it's a critical carbon sink to combat climate change.

I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska and across the country. -Please, please! This place is important to all Americans.

Sincerely,

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: David
Last name: Erickson
Organization:
Title:
Comments:
My name is David Erickson and I live in Tucker, Georgia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, David Erickson

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: David
Last name: Erickson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, David Erickson

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Don
Last name: Erickson
Organization:
Title:
Comments:
My name is Don Erickson and I live in Moline, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Don Erickson

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Douglas
Last name: Erickson
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/11/2019 3:00:00 PM
First name: Dylan
Last name: Erickson
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
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I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/11/2019 12:00:00 AM
First name: Jim
Last name: Erickson
Organization:
Title:
Comments:
Tongass Roadless Rule

Hello,

I stand against the roadless rule.

While I am NOT in favor of industrial logging I believe this rule was created to appease a certain group of people (and mostly people who live in a concrete jungle, as they say) as a way to shut down this type logging. All others were not considered in the creation of the roadless rule and did a disservice to some in the process .

While I understand their concerns, I don't think that terminating the roadless rule will automatically mean industrial logging will be back. If logging was my concern then I'd say that the Tongass has had very little (by comparison) of the Tongass logged anyway according to what I"ve seen published. I should add that although I live in a heavily logged section of southeast Alaska and have seen how terrible it can be, I still say that we need to have less rules.

The reason I would be in favor of cancelling the roadless rule is to simply get rid of government overreach. I think Alaskans are smarter than that and do not need government rules to regulate good sense.

Get rid of the roadless rule but scrutinize any project that may disturb the Tongass.

Allow for flexibility!

Sincerely,

James Erickson

Hoonah, AK 99829

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: John
Last name: Erickson
Organization:
Title:
Comments:
My name is John Erickson and I live in Southgate, Michigan.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, John Erickson

Date submitted (Alaskan Standard Time): 11/27/2019 12:00:00 AM
First name: Jon
Last name: Erickson
Organization: City & Borough of Yakutat
Title: City and Borough Manager
Comments:
The following text was copy/pasted from an attached letter. The system cannot display the formatting, graphics, or tables from the attached original.

CITY & BOROUGH of YAKUTAT

Yakutat, Alaska 99699

11/27/2019

Alaska Roadless Rulemaking #54511

RE: Comment/Support of Alaska Roadless Rule Alternative 6 [mdash] Full Exemption

The City and Borough of Yakutat is a community of 550 people on the northern end of the Alaska Panhandle, nestled in the upper end of the Tongass National Forest, an area riot connected by road to the rest of Alaska.

The community leaders have been making efforts to facilitate new opportunities to try and rise-up out of an economic depression. Unfortunately, with limited options for new industry and prohibited access to natural resources, the community's survival currently rests on declining fisheries income, a few years of ANSCA corporation timber harvest, competitive grants from governing agencies (federal and State), and as funds allow for supportive infrastructure, a slow growing Tourism industry.

The Alaska Marine Highway System has been forced to reduce service to rural Alaska communities which will increase the cost of living considerably. How will communities be able to accommodate an increase in expenses and stagnant or declining revenues?

Access to marketable natural resources areas and growing small business within the Tongass National Forest is a crucial factor in the Yakutat's ability to strengthen its economic health.

Abundant resources exist in the Yakutat area of the Tongass National Forest. The Roadless Rule prevents access to various areas outside of Wilderness. limiting any uses both consumptive and non-consumptive. With only one seasonal air taxi, escalating fuel prices, and dangers of ocean travel within Yakutat Bay, makes access to public lands costly, resulting in reduced economic opportunity. Road access is a reasonable solution.

The City & Borough of Yakutat strongly supports the Proposed Alaska Roadless Rule Alternative 6 [shy]Full Exemption. As a minimum for economic opportunity, the City & Borough of Yakutat would accept Proposed Alaska Roadless Rule Alternative 3 [mdash] Community Use Priority, which would allow small scale timber harvest in support of local operators, infrastructure development in support of the community and provide for Alaska Native cultural uses.

Sincerely,

Jon Erickson EdD

City and Borough Manager

Yakutat, AK 99689 [mdash]

[Position]

Date submitted (Alaskan Standard Time): 11/27/2019 12:00:00 AM
First name: Jon
Last name: Erickson
Organization: City &Borough of Yakutat
Title: City and Borough Manager
Comments:
see attached from the City and Borough of Yakutat Alaska

The following text was copy/pasted from an attached letter. The system cannot display the formatting, graphics, or tables from the attached original.

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Yakutat, Alaska 99699

11/27/2019

Alaska Roadless Rulemaking #54511

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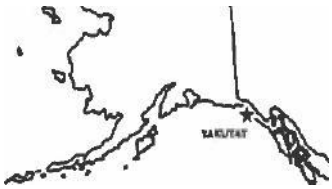
Sincerely,

Jon Erickson EdD

City and Borough Manager

Yakutat, AK 99689 [mdash]

[Position]



CITY & BOROUGH of YAKUTAT

Yakutat, Alaska 99699

11/27/2019

Alaska Roadless Rulemaking #54511

RE: **Comment/Support of Alaska Roadless Rule Alternative 6 — Full Exemption**

The City and Borough of Yakutat is a community of 550 people on the northern end of the Alaska Panhandle, nestled in the upper end of the Tongass National Forest, an area riot connected by road to the rest of Alaska.

The community leaders have been making efforts **to** facilitate new opportunities to try and rise-up out of an economic depression. Unfortunately, with limited options for new industry and prohibited access to natural resources, the community's survival currently rests on declining fisheries income, a few years of ANSCA corporation timber harvest, competitive grants from governing agencies (federal and State), and as funds allow for supportive infrastructure, a slow growing Tourism industry.

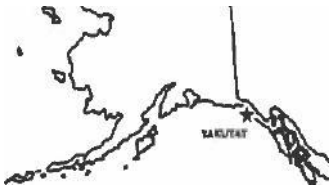
The Alaska Marine Highway System has been forced to reduce service to rural Alaska communities which will increase the cost of living considerably. How will communities be able to accommodate an increase in expenses and stagnant or declining revenues?

Access to marketable natural resources areas and growing small business within the Tongass National Forest is a crucial factor in the Yakutat's ability to strengthen its economic health.

Abundant resources exist in the Yakutat area of the Tongass National Forest. The Roadless Rule prevents access to various areas outside of Wilderness. limiting any uses both consumptive and non-consumptive. With only one seasonal air taxi, escalating fuel prices, and dangers of ocean travel within Yakutat Bay, makes access to public lands costly, resulting in reduced economic opportunity. Road access is a reasonable solution.

The City & Borough of Yakutat strongly supports the Proposed Alaska Roadless Rule Alternative 6 - Full Exemption. As a minimum for economic opportunity, the City & Borough of Yakutat would accept Proposed Alaska Roadless Rule Alternative 3 — Community Use Priority, which would allow small scale timber harvest in support of local operators, infrastructure development in support of the community **and** provide for Alaska Native cultural uses.
Sincerely,

Jon Erickson **EdD**
City and Borough **Manager**
Yakutat, AK 99689 —



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Sincerely,

Jon Erickson **EdD**
City and Borough **Manager**
Yakutat, AK 99689 —

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Jordan
Last name: Erickson
Organization:
Title:
Comments:
HC898

Dear Secretary Perdue,

I am a visitor to the lands and waters of Southeast Alaska. The Tongass National Forest is a large part of why I am here. Visitors like me come to witness the vast, beautiful stands of old-growth trees that can't be found on such a scale anywhere else in the United States. We come to crew on commercial fishing boats. We come to hunt, fish and hike in America's largest National Forest. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Alaskans and Americans.

I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. Tourism and commercial fishing are at the heart of Southeast's economy, not the antiquated timber industry.

Date submitted (Alaskan Standard Time): 11/23/2019 3:00:00 PM
First name: julie
Last name: erickson
Organization:
Title:
Comments:
My name is julie erickson and I live in Winona, Minnesota.

Please let your legacy be preservation, not destruction.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, julie erickson

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Karen
Last name: Erickson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Karen Erickson

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Katelyn
Last name: Erickson
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Kathleen
Last name: Erickson
Organization:
Title:
Comments:
My name is Kathleen Erickson and I live in Tucson, Arizona.

I am horrified by our continued devastation of our earth home. Please do all that you can to keep regulations in place that help, rather than destroy, our precious environment. I would like to see far more regulations to protect our water and air and endangered species. Thank you for taking my comment.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Kathleen Erickson

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Kathleen
Last name: Erickson
Organization:
Title:
Comments:
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Regards, Kathleen Erickson

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: KathyHope
Last name: Erickson
Organization: Sitka Tribe of Alaska
Title: Chairman
Comments:
The following text was copy/pasted from an attached letter. The system cannot display the formatting, grpahics, or tables from the attached original.

Attached please find the written comments from the Sitka Tribe of Alaska regarding the Forest Service proposal to exempt the Tongass National Forest from the 2001 Roadless Area Conservation Area Rule. The fact that the Tribe has provides these comments should not be considered any waiver of rights to government to government consultation and appropriate consultation regarding our subsistence rights.

If there is any need for follow up to our comments please contact, Lisa Gassman, Sitka Tribe of Alaska General Manager.

Sincerely,

KathyHope Erickson Chairman

Enclosure: STA comments on Proposed Rule and DEIS

Comments from Sitka Tribe of Alaska

Alaska Roadless Rule; Roadless Area Conservation; National Forest System Lands in Alaska

Please accept these comments on the above-referenced Proposed Exemption of the Tongass National Forest from the 2001 Roadless Area Conservation Rule[mdash]Draft Environmental Impact Statement (DEIS), on behalf of the Sitka Tribe of Alaska (STA).' STA is the beneficiary of a trust relationship with the United States, the Trustee, with constitutionally protected subsistence rights to harvest, consume and gather in and adjacent to the Tongass National Forest. The United States has specific and enforceable fiduciary responsibilities to protect [mdash] and refrain from impairing [mdash] tribal dependent resources. 2 These comments are submitted in view of the need to ensure protection and preservation of these and other reserved rights, resources and habitats, and to safeguard the health, livelihood and well-being of STA tribal citizens.

The Sitka Tribe of Alaska (STA) is a federally recognized Indian tribe whose traditional territory consists of the lands and shorelines that that now make up the Tongass National Forest in Southeast Alaska. STA's ancestors founded the community of Sitka where Tlingit people from across the region have come to harvest, worship and reside in the lands and shores of the Tongass National Forest since time immemorial. STA represents the interests of tribal citizens with a central mission to protect the social, economic, and cultural well-being of its tribal citizenship, including its tribal citizens legally protected rights for opportunity and priority to continue their subsistence practices for; fish, such as salmon and herring, deer, bear, berries, medicinal plants, migratory and non-migratory birds in the Tongass. STA carries the obligation for future Tlingit generations to protect and when necessary, actively defend the ecosystem upon which future Tlingit generations will rely upon for continued existence of the culture. The Tongass National Forest is a critical ecosystem for the continued survival of the Tlingit culture.

STA has strong comments relating to the process undertaken by the Forest Service, the data that has been relied upon and the lack of clear compliance with other applicable federal laws.

ANILCA and Subsistence

The DEIS includes a superficial report of both Alaska National Interest Lands Conservation Act' (ANILCA) subsistence users and Alaska Native subsistence users.' The DEIS includes subsistence data references that is old and out of date; back to 1987 for some of the Native subsistence users or no subsistence data, like in the case of Sitka.5 The Forest Service states that it obtained the subsistence data from the Alaska Department of Fish & Game (ADF&G). It appears that the Forest Service engaged in no independent analysis for this data, yet the Forest Service relies heavily upon old and in some cases non-existent data to engage in the subsistence effects analysis. With it is reliance upon outdated data, the DEIS cannot be viewed as appropriately evaluating the scope and distribution of subsistence users in Southeast Alaska. STA specifically takes issue with the lack of inclusion of Sitka and its environs in the subsistence user data points.

The DEIS discusses a distribution of subsistence harvest in the context of available technology such as boats and sea planes but fails to recognize that changing ocean conditions and climate have impacted the distribution of subsistence harvest.' The changes in ocean condition have occurred and been document since the ADF&G study of the late 80s; those changes in ocean condition have changed the necessary practices of subsistence harvesters. The DEIS fails to account for changes in the distribution of subsistence as a result of modern ocean and climate changes. The subsistence distribution has changed since the late 80s but the DEIS is making determinations as if it has remained static.

A final EIS must include updated subsistence distribution, access and competition data with appropriate evaluation of climate and ocean changes; reliance upon old data created by the State is not an appropriate evaluative metric to assess the impacts of the proposed action on Alaska Native subsistence harvesters and users of the Tongass.

ANILCA and Consultation

Section 805 of ANILCA establishes local and regional advisory councils and mandates that the Secretary shall consider the report and recommendations of the regional advisory councils concerning the taking of fish and wildlife on the public lands within their respective regions for subsistence uses.' STA believes that this DEIS and alternatives analysis was undertaken by the Forest Service without appropriate reliance upon the recommendations of the Southeast Alaska Subsistence Regional Advisory Council. Prior to making determinations that change the use of public lands, Section 810 of ANILCA mandates federal agencies to evaluate the "effect of land use, occupancy or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use, occupancy or disposition of public lands needed for subsistence purposes.'"

During the March 19-21, 2019, Winter meeting of the Southeast Alaska Subsistence Council, Nicole Grewe, regional economist and core member of the Alaska Roadless rulemaking team gave a presentation to the members of the Council where she stated, "that the agency [USFS] interpretation of ANILCA 810 is that the roadless rulemaking is not the withdrawal, reservation, leasing or otherwise permitting of the land."9 During that same meeting the Council moved to send a comment letter to USFS seeking Section 810 evaluation of the Roadless Rule. No record of any response to the Council's letter regrading Section 810 concerns has been located in the public record. It is shocking to STA that the Roadless Rule could be considered outside the scope of Section 810 given the practical effect on subsistence practice access and opportunity from most of the alternatives analyzed in the DEIS.

Subsequent to the release of the DEIS, USFS did have a series of "informational meetings" around Southeast and some of them were identified in the media as being carried out pursuant to Section 810.10

It is entirely unclear to STA whether USFS believes Section 810 is controlling to the Roadless Rule and whether USFS attempted to comply with Section 810 in this process. The USFS Roadless Rule website does contain a list of meetings that took place in Native communities but it is clear the meetings were not truly for purposes of addressing Section 810 subsistence concerns as no comments were accepted by USFS.11 Subsistence commenters appear to have been directed to participate in this, the more generalized, NEPA comment period.

STA requests that the USFS undertake an ANILCA Section 810 analysis as part of a final EIS and include that in the Record of Decision. Part of that Section 810 analysis must include a meaningful solicitation and review of comments and recommendations from the Southeast Alaska Subsistence Regional Council. The ANILCA

analysis is separate from the NEPA analysis and must evaluate the "significance" of the proposed actions on subsistence interests.12

NEPA and Subsistence Analysis

USFS did invite STA and other tribes and tribal organizations to participate as "cooperating agencies." The USFS outreach to tribes suggested that tribes were invited "to be a cooperating agency due to their expertise on subsistence and potential impacts to specific communities in Alaska."13 This statement suggests that the USFS was approaching its NEPA requirements as also meeting its ANILCA subsistence review obligations; that is an incorrect approach under federal law. 14

The same outreach to tribes stated that the "[t]he State of Alaska is a cooperating agency in this rulemaking effort because of its expertise on the economic development concerns related to

roadless area management within Alaska."15 This statement is curious; how can the State have any significant expertise regarding development of federal lands that have never been developed? STA came to understand this attitude of deference to the State in better context upon learning about the Governor's meeting with President Trump, the delayed release of the DIES and the agency preferred alternative 6.16 STA believes this political entanglement of the federal executive and the state executive has the effect of nullifying meaningful public participation.

Ultimately, STA did not participate as a cooperating agency but did seek government to government consultation with USFS as part of the rulemaking process. STA requests that USFS comply the prevailing and controlling case law and engage in the subsistence analysis separate from the NEPA process. STA also requests that the NEPA process be based on objective findings regarding environmental, social and economic effects rather than politically aligned interests outside of Alaska.

184 Fed.Reg. 55522, October 17, 2019, (hereafter "DEIS").

2 Cf. United States v. Winans, 198 U.S. 371 (1905). See also People of Togiak v. United States, 470 F.Supp. 423, (D.C. D.C. 1979), and Kenaitze Indian Tribe v. Alaska, 860 F. 2d 312 (9th Cir. 1988), cert. den., 491 U.S. 905 (1989).

3 16 U.S.C. [sect][sect] 3111-3126.

4 DEIS 3-217.

5 DEIS 3-221.

6 DEIS 3-222.

16 U.S.C. [sect] 3115.

8 16 U.S.C. [sect] 3120(a).

9 See, Southeast Alaska Subsistence Regional Council Winter 2019 Meeting Notes, page 12.

to https://www.kfsk.orR/2019/11/08/u-s-forest-service-holds-roadless-rule-meeting-hearing-in-petersbura. Last viewed December 15, 2019.

11https://www.fs.usda.govinfsi11558/wwwinepa/109834 FSPLT3 5060967.pdf. Last viewed December 15, 2019.

12 Village of Gambell v. Hodel, 774 F.2d 1414, 1419-20 (9th Cir. 1985) ("Hodel") (requirement for agency to study subsistence impacts is separate from requirement of National Environmental Policy Act to study environmental impacts), rev'd on other grounds sub nom. Amoco Prod. Co. v. Village of Gambell, 480 U.S. 531 (1987).

13 USFS Roadless Rule Letter and Attachments to Tribes 20180730. Received by STA Chairman KathyHope Erickson on September 6, 2018.

14 Hodel at supra.

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: KathyHope
Last name: Erickson
Organization: Sitka Tribe of Alaska
Title:
Comments:
HC6403

Sitka Tribe of Alaska

Tribal Government for Sitka, Alaska

December 16, 2019

Re: Roadless Rule Comments from Sitka Tribe of Alaska

Attached please find the written comments from the Sitka Tribe of Alaska regarding the Forest Service proposal to exempt the Tongass National Forest from the 2001 Roadless Area Conservation Area Rule. The fact that the Tribe has provides these comments should not be considered any waiver of rights to government to government consultation and appropriate consultation regarding our subsistence rights.

If there is any need for follow up to our comments please contact, Lisa Gassman, Sitka Tribe of Alaska General Manager.

Sincerely,

[Signature]

Kathy Hope Erickson

Chairman

Enclosure: STA comments on Proposed Rule and DEIS

Comments from Sitka Tribe of Alaska

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ANILCA and Subsistence [text underlined for emphasis] [text bolded for emphasis]

The DEIS includes a superficial report of both Alaska National Interest Lands Conservation Act 3 [16 U.S.C. && 3111-3126.](ANILCA) subsistence users and Alaska Native subsistence users. 4[DEIS 3-217] The DEIS includes subsistence data references that is old and out of date; back to 1987 for some of the Native subsistence users or no subsistence data, like in the case of Sitka. 5[DEIS 3-221] The Forest Service states that it obtained the subsistence data from the Alaska Department of Fish & Game (ADF&G). It appears that the Forest Service engaged in no independent analysis for this data, yet the Forest Service relies heavily upon old and in some cases non-existent data to engage in the subsistence effects analysis. With it is reliance upon outdated data, the DEIS cannot be viewed as appropriately evaluating the scope and distribution of subsistence users in Southeast Alaska. STA specifically takes issue with the lack of inclusion of Sitka and its environs in the subsistence user data points.

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ANILCA and Consultation [text underlined for emphasis] [text bolded for emphasis]

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[*http://www.kfsk.org/2019/11/08/u-s-forest-service-holds-roadless-rule-meeting-hearing-in-petersburg/,* [Text underlined for emphasis]. Last viewed December 15, 2019.]

It is entirely unclear to STA whether USFS believes Section 810 is controlling to the Roadless Rule and whether USFS attempted to comply with Section 810 this process. The USFS Roadless Rule website does contain a list of meeting that took place in Native communities but it is clear the meetings were not truly for purposes of addressing Section 810 subsistence concerns as no comments were accepted by USFS. 11 [*https://www.fs.usda.gov/nfs/11558/www/nepa/109834 FSPLT3 5060967.pdf* [Text underlined for emphasis]. Last viewed December 15, 2019.] Subsistence commenters appear to have been directed to participate in this, the more generalized, NEPA comment period.

STA requests that the USFS undertake an ANILCA Section 810 analysis as part of a final EIS and include that in the Record of Decision. Part of that Section 810 analysis must include a meaningful solicitation and review of comments and recommendations from the Southeast Alaska Subsistence Regional Council. The ANILCA analysis is separate from the NEPA analysis and must evaluate the "significance" of the proposed action on subsistence interests.12 [*Village of Gambell v. Hodel,* [Text italicized for emphasis] 774 F.2d 1414, 1419-20 (9th Cir.1985)("Hodel")(requirement for agency to study subsistence impacts is separate from requirement of National Environmental Policy Act to study environmental impacts), rev'd on other grounds sub nom.*Amoco Prod.Co.v.Village of Gambell, * [Text italicized for emphasis] 480 U.S. 531 (1987).]

NEPA and Subsistence Analysis [text underlined for emphasis] [text bolded for emphasis]

USFS did invite STA and other tribes and tribal organizations to participate as "cooperating agencies." The USFS outreach to tribes suggested that tribes were invited "to be a cooperating agency due to their expertise on subsistence and potential impacts to specific communities in Alaska." 13 [USFS Roadless Rule Letter and Attachments to Tribes 20190730.Received by STA Chairman KathyHope Erickson of September 6, 2018. This statement suggests that the USFS was approaching its NEPA requirements as also meeting its ANILCA subsistence review obligations; that is an incorrect approach under federal law. 14[*Hodel* [Text italicized for emphasis] at supra.]

The same outreach to tribes stated that the "[t]he State of Alaska is a cooperating agency in this rulemaking effort because of its expertise on the economic development concerns related to roadless area management within Alaska." 15[Id.] This statement is curious; how can the State have any significant expertise regarding development of federal lands that have never been developed? STA came to understand this attitude of deference to the State in better context upon learning about the Governor's meeting with President Trump, the delayed release of the DIES and the agency preferred alternative 6. 16[*https://www.washingtongpost.com/climate-environment/trump-pushes-to-allow-new-logging-in-alaskas-tongass-national-forest/2019/08/27/b4ca78d6-c832-11e9-be05-f76ac4ec618c stor.html* [Text underlined for emphasis]. Last viewed December 15, 2019.

[Position]

Sitka Tribe of Alaska

Tribal Government for Sitka, Alaska

December 16, 2019

Alaska Roadless Rule
www.fs.usda.gov/project/?project=54511
USDA Forest Service
P.O. Box 21628
Juneau, Alaska 99802-1628

Submitted electronically:

Re: Roadless Rule Comments from Sitka Tribe of Alaska

Attached please find the written comments from the Sitka Tribe of Alaska regarding the Forest Service proposal to exempt the Tongass National Forest from the 2001 Roadless Area Conservation Area Rule. The fact that the Tribe has provides these comments should not be considered any waiver of rights to government to government consultation and appropriate consultation regarding our subsistence rights.

If there is any need for follow up to our comments please contact, Lisa Gassman, Sitka Tribe of Alaska General Manager,

Sincerely,

KathyHope Erickson
Chairman

Enclosure: STA comments on Proposed Rule and DEIS

Comments from Sitka Tribe of Alaska

Alaska Roadless Rule; Roadless Area Conservation; National Forest System Lands in Alaska

Please accept these comments on the above-referenced Proposed Exemption of the Tongass National Forest from the 2001 Roadless Area Conservation Rule—Draft Environmental Impact Statement (DEIS), on behalf of the Sitka Tribe of Alaska (STA).[1] STA is the beneficiary of a trust relationship with the United States, the Trustee, with constitutionally protected subsistence rights to harvest, consume and gather in and adjacent to the Tongass National Forest. The United States has specific and enforceable fiduciary responsibilities to protect – and refrain from impairing – tribal dependent resources. [2] These comments are submitted in view of the need to ensure protection and preservation of these and other reserved rights, resources and habitats, and to safeguard the health, livelihood and well-being of STA tribal citizens.

The Sitka Tribe of Alaska (STA) is a federally recognized Indian tribe whose traditional territory consists of the lands and shorelines that that now make up the Tongass National Forest in Southeast Alaska. STA's ancestors founded the community of Sitka where Tlingit people from across the region have come to harvest, worship and reside in the lands and shores of the Tongass National Forest since time immemorial. STA represents the interests of tribal citizens with a central mission to protect the social, economic, and cultural well-being of its tribal citizenship, including its tribal citizens legally protected rights for opportunity and priority to continue their subsistence practices for; fish, such as salmon and herring, deer, bear, berries, medicinal plants, migratory and non-migratory birds in the Tongass. STA carries the obligation for future Tlingit generations to protect and when necessary, actively defend the ecosystem upon which future Tlingit generations will rely upon for continued existence of the culture. The Tongass National Forest is a critical ecosystem for the continued survival of the Tlingit culture.

STA has strong comments relating to the process undertaken by the Forest Service, the data that has been relied upon and the lack of clear compliance with other applicable federal laws.

ANILCA and Subsistence

The DEIS includes a superficial report of both Alaska National Interest Lands Conservation Act[3] (ANILCA) subsistence users and Alaska Native subsistence users.[4] The DEIS includes subsistence data references that is old and out of date; back to 1987 for some of the Native subsistence users or no subsistence data, like in the case of Sitka.[5] The Forest Service states that it obtained the subsistence data from the Alaska Department of Fish & Game (ADF&G). It appears that the Forest Service engaged in no independent analysis for this data, yet the Forest Service relies

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[1] 84 Fed.Reg. 55522, October 17, 2019, (hereafter "DEIS").

[2] Cf. *United States v. Winans*, 198 U.S. 371 (1905). *See also People of Togiak v. United States,* 470 F.Supp. 423, (D.C. D.C. 1979), and *Kenaitze Indian Tribe v. Alaska*, 860 F. 2d 312 (9th Cir. 1988), *cert. den.,* 491 U.S. 905 (1989).

[3] 16 U.S.C. §§ 3111-3126.

[4] DEIS 3-217.

[5] DEIS 3-221.

heavily upon old and in some cases non-existent data to engage in the subsistence effects analysis. With it is reliance upon outdated data, the DEIS cannot be viewed as appropriately evaluating the scope and distribution of subsistence users in Southeast Alaska. STA specifically takes issue with the lack of inclusion of Sitka and its environs in the subsistence user data points.

The DEIS discusses a distribution of subsistence harvest in the context of available technology such as boats and sea planes but fails to recognize that changing ocean conditions and climate have impacted the distribution of subsistence harvest.[6] The changes in ocean condition have occurred and been document since the ADF&G study of the late 80s; those changes in ocean condition have changed the necessary practices of subsistence harvesters. The DEIS fails to account for changes in the distribution of subsistence as a result of modern ocean and climate changes. The subsistence distribution has changed since the late 80s but the DEIS is making determinations as if it has remained static.

A final EIS must include updated subsistence distribution, access and competition data with appropriate evaluation of climate and ocean changes; reliance upon old data created by the State is not an appropriate evaluative metric to assess the impacts of the proposed action on Alaska Native subsistence harvesters and users of the Tongass.

ANILCA and Consultation

Section 805 of ANILCA establishes local and regional advisory councils and mandates that the Secretary *shall consider the report and recommendations* of the regional advisory councils concerning the taking of fish and wildlife on the public lands within their respective regions for subsistence uses.[7] STA believes that this DEIS and alternatives analysis was undertaken by the Forest Service without appropriate reliance upon the recommendations of the Southeast Alaska Subsistence Regional Advisory Council. Prior to making determinations that change the use of public lands, Section 810 of ANILCA mandates federal agencies to evaluate the "effect of land use, occupancy or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use, occupancy or disposition of public lands needed for subsistence purposes."[8]

During the March 19-21, 2019, Winter meeting of the Southeast Alaska Subsistence Council, Nicole Grewe, regional economist and core member of the Alaska Roadless rulemaking team gave a presentation to the members of the Council where she stated, "that the agency [USFS] interpretation of ANILCA 810 is that the roadless rulemaking is not the withdrawal, reservation, leasing or otherwise permitting of the land."[9] During that same meeting the Council moved to send a comment letter to USFS seeking Section 810 evaluation of the Roadless Rule. No record

[6] DEIS 3-222.
[7] 16 U.S.C. § 3115.
[8] 16 U.S.C. § 3120(a).
[9] See, Southeast Alaska Subsistence Regional Council Winter 2019 Meeting Notes, page 12.

of any response to the Council's letter regrading Section 810 concerns has been located in the public record. It is shocking to STA that the Roadless Rule could be considered outside the scope of Section 810 given the practical effect on subsistence practice access and opportunity from most of the alternatives analyzed in the DEIS.

Subsequent to the release of the DEIS, USFS did have a series of "informational meetings" around Southeast and some of them were identified in the media as being carried out pursuant to Section 810.[10]

It is entirely unclear to STA whether USFS believes Section 810 is controlling to the Roadless Rule and whether USFS attempted to comply with Section 810 in this process. The USFS Roadless Rule website does contain a list of meetings that took place in Native communities but it is clear the meetings were not truly for purposes of addressing Section 810 subsistence concerns as no comments were accepted by USFS.[11] Subsistence commenters appear to have been directed to participate in this, the more generalized, NEPA comment period.

STA requests that the USFS undertake an ANILCA Section 810 analysis as part of a final EIS and include that in the Record of Decision. Part of that Section 810 analysis must include a meaningful solicitation and review of comments and recommendations from the Southeast Alaska Subsistence Regional Council. The ANILCA analysis is separate from the NEPA analysis and must evaluate the "significance" of the proposed actions on subsistence interests.[12]

NEPA and Subsistence Analysis

USFS did invite STA and other tribes and tribal organizations to participate as "cooperating agencies." The USFS outreach to tribes suggested that tribes were invited "to be a cooperating agency due to their expertise on subsistence and potential impacts to specific communities in Alaska."[13] This statement suggests that the USFS was approaching its NEPA requirements as also meeting its ANILCA subsistence review obligations; that is an incorrect approach under federal law. [14]

The same outreach to tribes stated that the "[t]he State of Alaska is a cooperating agency in this rulemaking effort because of its expertise on the economic development concerns related to

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[10] https://www.kfsk.org/2019/11/08/u-s-forest-service-holds-roadless-rule-meeting-hearing-in-petersburg/. Last viewed December 15, 2019.

[11] https://www.fs.usda.gov/nfs/11558/www/nepa/109834_FSPLT3_5060967.pdf. Last viewed December 15, 2019.

[12] *Village of Gambell v. Hodel*, 774 F.2d 1414, 1419-20 (9th Cir. 1985) ("*Hodel*") (requirement for agency to study subsistence impacts is separate from requirement of National Environmental Policy Act to study environmental impacts), rev'd on other grounds sub nom. *Amoco Prod. Co. v. Village of Gambell*, 480 U.S. 531 (1987).

[13] USFS Roadless Rule Letter and Attachments to Tribes 20180730. Received by STA Chairman KathyHope Erickson on September 6, 2018.

[14] *Hodel* at supra.

roadless area management within Alaska."[15] This statement is curious; how can the State have any significant expertise regarding development of federal lands that have never been developed? STA came to understand this attitude of deference to the State in better context upon learning about the Governor's meeting with President Trump, the delayed release of the DIES and the agency preferred alternative 6.[16] STA believes this political entanglement of the federal executive and the state executive has the effect of nullifying meaningful public participation.

Ultimately, STA did not participate as a cooperating agency but did seek government to government consultation with USFS as part of the rulemaking process. STA requests that USFS comply the prevailing and controlling case law and engage in the subsistence analysis separate from the NEPA process. STA also requests that the NEPA process be based on objective findings regarding environmental, social and economic effects rather than politically aligned interests outside of Alaska.

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[15] Id.

[16] https://www.washingtonpost.com/climate-environment/trump-pushes-to-allow-new-logging-in-alaskas-tongass-national-forest/2019/08/27/b4ca78d6-c832-11e9-be05-f76ac4ec618c_story.html. Last viewed December 15, 2019.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Mark
Last name: Erickson
Organization:
Title:
Comments:
As I read so many of the comments, I am struck by how many are from people living in urban sprawl outside of Alaska. It becomes understandable why they advocate to leave the Roadless Rule as it is.

I'm from Alaska. Considering the Tongass encompasses essentially the entire Southeast Region of our state, the decisions being made impact the people who live there much more so than those who may or may not ever visit.

I support Alternative 6, a full exemption to the USDA Roadless Rule. The people in the area need to have viable means to enable them to grow their economies in a reasonable and sustainable manner. Alaska is a world leader in developing resource development and maintaining balance in ecosystems for the maximum benefit of all. In the Tongass, the majority of the forest is already permanently set aside from timber harvesting. Most of the recreation in the areas use the existing logging roads and occurs around the areas that have been harvested in the past. The Roadless Rule is a major impediment to any future mining and/or viable development that may be beneficial to the state and local people and is restrictive of community access. I believe it is pertinent that Alaska be allowed to develop our resources in the sustainable manner that balances all interests that we have proven our abilities to do and the Alternative 6 be adopted.

Thank you for your time.

[Position]

Date submitted (Alaskan Standard Time): 11/13/2019 3:00:00 PM
First name: Meredith
Last name: Erickson
Organization:
Title:
Comments:
My name is Meredith Erickson and I live in Marietta, Georgia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Meredith Erickson

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Rebecca
Last name: Erickson
Organization:
Title:
Comments:
Please, please protect our land. It is so important, to our people, for our climate, for everyone! I support the Roadless Rule.

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Rebecca
Last name: Erickson
Organization:
Title:
Comments:
My name is [Rebecca] [Erickson] and I live in [Ashland], [MO].

Tongass Forest is a unique ecosystem. It harbors a unique community of plants and animals. It is a deep carbon sink. Disturbing Tongass with new roads and timber cutting destroys the heritage of millions of years of ecosystem development. Tongass is seriously important to study as a primeval ecosystem; NOT as a primary resource for copy and toilet paper.

Put people to work planting paper pulp trees in previously harvested areas. Don't cut ancient forests.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Rebecca Erickson

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Russell
Last name: Erickson
Organization:
Title:
Comments:
My name is Russell Erickson and I live in Concord, California.

Add this to Brazil and Bolivia cutting the Amazon will REALLY hasten global warming and a disastrous future for our grandchildren!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Russell Erickson

[Position]

[Position]

Date submitted (Alaskan Standard Time): 10/23/2019 12:00:00 AM
First name: Russell
Last name: Erickson
Organization:
Title:
Comments:
If new rules for opening roads relate to any opening of the Tongass forest, I strongly object. It benefits a few lumber companies, perhaps even mining companies, and opens one of the few remaining great world forests to at least partial destruction at a time global warming demands all the trees we have. We cannot sacrifice our grandchildren's lives to increasing wealth for the already wealthy people and corporations.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Mrs.
Last name: Ericsen
Organization:
Title:
Comments:
My name is Mrs. Ericsen and I live in White Plains, New York.

Your corruption and unGodly, immoral plan to cut down our forests which turns lands dead, kills off wildlife and reduces world oxygen in the time of unprecedented pollution, GOP Cronyism and corruption. Appointing corrupt insiders that are fracking, destroying, polluting, getting deals in exchange for their silence, deregulating etc. Cronyism in GOP/Trump (who has blackmailed everyone) and Fox who supports, protects and represents polluters and who ARE THE SWAMP!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Mrs. Ericsen

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Hilarie
Last name: Ericson
Organization:
Title:
Comments:
My name is Hilarie Ericson and I live in Seattle, Washington.

stop

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Hilarie Ericson

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Sandra
Last name: Ericson
Organization:
Title:
Comments:
My name is Sandra Ericson and I live in Eugene, Oregon
Dear Forest Service,
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Sandra Ericson

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Libby
Last name: Erie
Organization:
Title:
Comments:
My name is Libby Erie and I live in Lake Stevens, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Libby Erie

Date submitted (Alaskan Standard Time): 10/26/2019 12:00:00 AM
First name: Anon
Last name: Erik
Organization:
Title:
Comments:
Comment

Good morning,

I am simply opposed to any such development in the Tongass as proposed. The virgin national forests that exist are gems and ought not be touched.

Thank you,

Erik Pierson

Homer, AK 99603

[Position]

Date submitted (Alaskan Standard Time): 11/23/2019 12:00:00 AM
First name: Kimberlee
Last name: Eriksen
Organization:
Title:
Comments:
My name is Kimberlee Eriksen and I live in Townville, Pennsylvania.

It is a crime to ignore recommendations by experts' concerns regarding mistakes being made environmentally that negatively and permanently effect climate. We don't have unlimited chances to get that wrong.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Kimberlee Eriksen

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/27/2019 12:00:00 AM
First name: Jon
Last name: Erikson
Organization: City & Borough of Yakutat
Title: City and Borough Manager
Comments:
FW: Roadless Rule comment from Yakutat

I just spoke to our city manager, Jon Erickson, and he was not sure if this comment was received. I told him I would try to follow up and make sure.

Sorry if the attached letter is a repeat.

Thanks, Teresa

Teresa Swanson

Supervisory Resource Assistant

Forest Service

Tongass National Forest, Yakutat Ranger District

Yakutat, AK 99689

www.fs.fed.us

Caring for the land and serving people

From: JonE

Sent: Wednesday, November 27, 2019 3:38 PM

To: 'Herndon, Dana (Murkowski)

Cc: Benson, Lee A -FS ; Swanson, Teresa A -FS

Subject: Roadless Rule comment from Yakutat

<<...>>

Jon Erickson EdD

City and Borough Manager

Yakutat, AK 99689

Any reply should be directed to the sender only. Do not Reply All.

The following text was copy/pasted from an attached letter. The system cannot display the formatting, graphics, or tables from the attached original.

Alaska Roadless Rulemaking #54511

RE: Comment/Support of Alaska Roadless Rule Alternative 6 [mdash] Full Exemption

The City and Borough of Yakutat is a community of 550 people on the northern end of the Alaska Panhandle, nestled in the upper end of the Tongass National Forest, an area riot connected by road to the rest of Alaska.

The community leaders have been making efforts to facilitate new opportunities to try and rise-up out of an economic depression. Unfortunately, with limited options for new industry and prohibited access to natural resources, the community's survival currently rests on declining fisheries income, a few years of ANSCA corporation timber harvest, competitive grants from governing agencies (federal and State), and as funds allow for supportive infrastructure, a slow growing Tourism industry.

The Alaska Marine Highway System has been forced to reduce service to rural Alaska communities which will increase the cost of living considerably. How will communities be able to accommodate an increase in expenses and stagnant or declining revenues?

Access to marketable natural resources areas and growing small business within the Tongass National Forest is a crucial factor in the Yakutat's ability to strengthen its economic health.

Abundant resources exist in the Yakutat area of the Tongass National Forest. The Roadless Rule prevents access to various areas outside of Wilderness. limiting any uses both consumptive and non-consumptive. With only one seasonal air taxi, escalating fuel prices, and dangers of ocean travel within Yakutat Bay, makes access to public lands costly, resulting in reduced economic opportunity. Road access is a reasonable solution.

The City & Borough of Yakutat strongly supports the Proposed Alaska Roadless Rule Alternative 6 [shy]Full Exemption. As a minimum for economic opportunity, the City & Borough of Yakutat would accept Proposed Alaska Roadless Rule Alternative 3 [mdash] Community Use Priority, which would allow small scale timber harvest in support of local operators, infrastructure development in support of the community and provide for Alaska Native cultural uses.

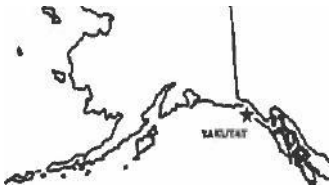
Sincerely,

Jon Erickson EdD

City and Borough Manager

Yakutat, AK 99689 [mdash]

[Position]



CITY & BOROUGH of YAKUTAT

Yakutat, Alaska 99699

11/27/2019

Alaska Roadless Rulemaking #54511

RE: **Comment/Support of Alaska Roadless Rule Alternative 6 — Full Exemption**

The City and Borough of Yakutat is a community of 550 people on the northern end of the Alaska Panhandle, nestled in the upper end of the Tongass National Forest, an area riot connected by road to the rest of Alaska.

The community leaders have been making efforts **to** facilitate new opportunities to try and rise-up out of an economic depression. Unfortunately, with limited options for new industry and prohibited access to natural resources, the community's survival currently rests on declining fisheries income, a few years of ANSCA corporation timber harvest, competitive grants from governing agencies (federal and State), and as funds allow for supportive infrastructure, a slow growing Tourism industry.

The Alaska Marine Highway System has been forced to reduce service to rural Alaska communities which will increase the cost of living considerably. How will communities be able to accommodate an increase in expenses and stagnant or declining revenues?

Access to marketable natural resources areas and growing small business within the Tongass National Forest is a crucial factor in the Yakutat's ability to strengthen its economic health.

Abundant resources exist in the Yakutat area of the Tongass National Forest. The Roadless Rule prevents access to various areas outside of Wilderness. limiting any uses both consumptive and non-consumptive. With only one seasonal air taxi, escalating fuel prices, and dangers of ocean travel within Yakutat Bay, makes access to public lands costly, resulting in reduced economic opportunity. Road access is a reasonable solution.

The City & Borough of Yakutat strongly supports the Proposed Alaska Roadless Rule Alternative 6 - Full Exemption. As a minimum for economic opportunity, the City & Borough of Yakutat would accept Proposed Alaska Roadless Rule Alternative 3 — Community Use Priority, which would allow small scale timber harvest in support of local operators, infrastructure development in support of the community **and** provide for Alaska Native cultural uses.
Sincerely,

Jon Erickson **EdD**
City and Borough **Manager**
Yakutat, AK 99689 —

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Charlotte
Last name: Eriksson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Charlotte Eriksson

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Suzanne
Last name: Eriksson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Suzanne Eriksson

Date submitted (Alaskan Standard Time): 11/5/2019 12:00:00 AM
First name: Anon
Last name: eriliz.moore@gmail.com
Organization:
Title:
Comments:
Please maintain protections for the Tongass and Chugach National Forests

Dear Secretary Perdue,

I remind you, but you know it well: these national public lands belong to all Americans, present and future. You must protect them.

I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. My family and I value forests over all things.

The Tongass National Forest contains some of the largest intact old-growth temperate rainforest in the world. With the Amazon and the vast northern boreal forests, the Tongass is also the lungs of the world. They provide clean water at no cost. They are instrumental in creating "rivers of water" in the air, circulating around the world. They are essential, immediate habitat for salmon and other fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska.

I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

Please also keep strong the protections from our national forest's roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of America's best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales, paid for by taxpayers, the very people who lose out, through higher CO2, spiraling climate change, fires, and more, should these trees be cut.

Thank you for your work for the American people and our national forests.

Sincerely,

Erin Moore

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Kris
Last name: Erkiletian
Organization:
Title:
Comments:
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation. Dont pander to the special interests who are trying to sell off our lands for personal profit.
Regards, Kris Erkiletian

Date submitted (Alaskan Standard Time): 10/18/2019 2:58:43 PM
First name: Sheila
Last name: Erlbaum
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,
Sheila Erlbaum
Philadelphia, PA 19119

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Sheila
Last name: Erlbaum
Organization:
Title:
Comments:
My name is Sheila Erlbaum and I live in Philadelphia, Pennsylvania.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Sheila Erlbaum

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Rob
Last name: Erlick
Organization:
Title:
Comments:
My name is Rob Erlick and I live in Los Angeles, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Rob Erlick

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jeanne
Last name: Erling
Organization:
Title:
Comments:
My name Jeanne Erling and I live in Dayton Ohio
[Your personal comment will be added here.]
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.Jeanne Erling
Regards, Jeanne Erling

Date submitted (Alaskan Standard Time): 11/10/2019 12:00:00 AM
First name: Heather
Last name: Erne
Organization:
Title:
Comments:
To whom it may concern, My name is Heather Erne and it is my great desire that my little son should grow up to know the beauty and wonder of our great forest. And also to understand the connection we share with it, which is of significant importance. It is with hope I ask for you to please reconsider your desire to mame this beautiful part of nature that so many creatures and humans depend upon. With so many alternative renewable resources, I ask, please re-consider the true value vrs profit. Most sincerely,Heather Erne

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Heather Erne

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Brad
Last name: Ernest
Organization:
Title:
Comments:
HC3517

U.S. Forest Service Alaska Roadless Rule

Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Brad Ernest

Avon, CO 91620

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Rosalind
Last name: Ernest
Organization:
Title:
Comments:
My name is Rosalind Ernest and I live in Stevens, Pennsylvania.

The Tongass National Forest plays a critical role in climate change. It is a national treasure that must be preserved for future generations. Once destroyed it can not be replaced. Please do not place corporate interests above the will of the people.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Rosalind Ernest

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Cathie
Last name: Ernst
Organization:
Title:
Comments:
My name is Cathie Ernst and I live in Scottsdale, Arizona.

This is wrong

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Cathie Ernst

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: charles
Last name: ernst
Organization:
Title:
Comments:
My name is charles ernst and I live in Caldwell, Idaho.

Management plan or another plan of mass destruction?

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, charles ernst

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Donald
Last name: Ernst
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Donald Ernst

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Paul
Last name: Erny
Organization:
Title:
Comments:
I approve of the rollback of the roadless rule in the Tongass National Forest. I spend a lot of time in the forests around Haines Alaska and witness a lot of waste. Some of the areas where the trees have been left to rot instead of harvesting them is a waste. Of course I support a managed situation but these natural resources should be used. Most of us live in a home that is built with wood. This attitude that I'm here now, shut the door, is very selfish.

[Position]

Date submitted (Alaskan Standard Time): 12/11/2019 3:00:00 PM
First name: Lacey
Last name: Erquiaga
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Colette
Last name: Erreca-Norris
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Colette Erreca-Norris

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Gabriella
Last name: Errico
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Gabriella Errico

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: William
Last name: Errico
Organization:
Title:
Comments:
HC4068

U.S. Forest Service Alaska Roadless Rule Committee:

As a long time conservationist and youth educator I understand the value of preserving out environment. There is no justifiable reason to take any action that endangers our environment. .Once gone there no taking back the destruction of our destruction of habitat.

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

William Errico

Vienna, VA 22182

[Position]

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: William
Last name: Errico
Organization:
Title:
Comments:
4068

U.S. Forest Service Alaska Roadless Rule Committee:

As a long time conservationist and youth educator I understand the value of preserving out environment. There is no justifiable reason to take any action that endangers our environment. .Once gone there no taking back the destruction of our destruction of habitat.
The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,
William Errico
Vienna, VA 22182

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Andy
Last name: Ersfeld
Organization:
Title:
Comments:
My name is Andy Ersfeld and I live in Hailey, Idaho.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Andy Ersfeld

Date submitted (Alaskan Standard Time): 12/14/2019 12:00:00 AM
First name: Carolyn
Last name: Erskine
Organization:
Title:
Comments:
Alaska Roadless Rulemaking #54511

Roadless Rulemaking,

RE: Alaska Roadless DEIS Comment

Dear Secretary Perdue:

Support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. Keep the current Roadless Rule. Use protection for the Tongass National Forest.

The Tongass is a carbon sink containing some of the largest intact old-growth temperate rain-forest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska, I object to your plans to reduce and remove protections from our national forest's roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of America's best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales.

The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.

Carolyn Erskine

Berkeley, California 94707-2727

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Joanne
Last name: Erskine
Organization:
Title:
Comments:
preserve roadless rule

please see attachment

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: John
Last name: Erskine
Organization:
Title:
Comments:
My name is John Erskine and I live in Holland, Michigan.

The world's eco-system is changing rapidly. We need to identify and support our planet's efforts to rectify the damage rendered through humanity's ignorance and negligence!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, John Erskine

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Andrew
Last name: Ervin
Organization:
Title:
Comments:
My name is Andrew Ervin and I live in Cedar Crest, New Mexico.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Andrew Ervin

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Birdie
Last name: Ervin
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Birdie Ervin

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Cecile
Last name: Ervin
Organization:
Title:
Comments:
My name is Cecile Ervin and I live in Walla Walla, Washington.

Please preserve our precious wild places for future generations!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Cecile Ervin

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Cecile
Last name: Ervin
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Cecile Ervin

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Susan
Last name: Ervin
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Susan Ervin

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Susan
Last name: Ervin
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Susan Ervin

Date submitted (Alaskan Standard Time): 11/20/2019 3:00:00 PM
First name: Tyler
Last name: Ervin
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 10/20/2019 12:00:00 AM
First name: Jacqueline
Last name: Ervine
Organization:
Title:
Comments:
The preservation of our planet is now more paramount than ever before. Continuing deforestation at the behest of advancing a failing capitalist society is a danger to a global society, as even micro-events accumulate to yield devastating effects. Renewable materials are able to be used for products that have traditionally been produced via lumber, but the deep-rooted monetary investments and lobbying involved in the logging business prevent the evolution of progressive views towards the environment and realistic, sustainable ways of transferring the production of such products to more eco-friendly alternatives. There are also few measures and regulations in place to replace any damage which is done as a consequence of the logging industry. Its crucial from this point forward to consider the cost of human prosperity on this planet versus the short-term profit by billionaires pushing legislation to their favor. Protect wildlife, protect the planet, protect human kind.

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Donald
Last name: Erway
Organization:
Title:
Comments:
My name is Donald Erway and I live in Kailua-kona, Hawaii.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Donald Erway

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Cherie
Last name: Erwin
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Cherie Erwin

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Dell
Last name: Erwin
Organization:
Title:
Comments:
Please do not open national forest lands to loggers who will cut trees hundreds of years old! These treasures should be protected and preserved gir us snd future generations! Do nit allow this land to be raoed!

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Jeffrey
Last name: Erwin
Organization:
Title:
Comments:
My name is Jeffrey Erwin and I live in Reno, Nevada.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jeffrey Erwin

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Kelly
Last name: Erwin
Organization:
Title:
Comments:
My name is Kelly Erwin and I live in Cathedral City, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Kelly Erwin

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Kirk
Last name: Erwin
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Kirk Erwin

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Phyllis
Last name: Erwin
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Phyllis Erwin

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Brenda
Last name: Esacove
Organization:
Title:
Comments:
My name is Brenda Esacove and I live in Los Angeles, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Brenda Esacove

Date submitted (Alaskan Standard Time): 12/9/2019 3:00:00 PM
First name: Vanessa
Last name: Escamilla
Organization:
Title:
Comments:
My name is Vanessa escamilla and I live in Los Angeles, CA
To whom it may concern,
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
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Thank you for considering my comments.
Regards, Vanessa Escamilla

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jessica
Last name: Esch
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Jessica Esch

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Margaret
Last name: Eschbach
Organization:
Title:
Comments:
My name is Margaret Eschbach and I live in Lexington, South Carolina.

Please protect animals' habitats

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Margaret Eschbach

Date submitted (Alaskan Standard Time): 11/20/2019 3:00:00 PM
First name: Jon
Last name: Eschenburg
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Rebecca
Last name: Eschete
Organization:
Title:
Comments:
My name is Rebecca Eschete and I live in San Antonio, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Rebecca Eschete

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Susan
Last name: Eschrich
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Susan Eschrich

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lauren
Last name: Escobales
Organization:
Title:
Comments:
My name is Lauren Escobales and I live in Virginia Beach, Virginia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Lauren Escobales

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Alexandra
Last name: Escobar
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/26/2019 7:04:43 AM
First name: Aryelle
Last name: Escobedo
Organization:
Title:
Comments:
My name is Aryelle Escobedo and I live in Galveston, TX. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I am a college student where my studies focus on marine biology and marine fisheries. I am aware of how ecosystem are complex environments yet they are sensitive to changes and the importance of how stable environment help the wildlife.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the high density of incredible wildlife it contains, its status as a national and global treasure. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, restore salmon habitat that was hurt by past logging practices. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Carmelinda
Last name: Escuder
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Carmelinda Escuder

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Carmelinda
Last name: Escuder
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Carmelinda Escuder

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jane
Last name: Eshelman
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Jane Eshelman

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jim
Last name: Eshelman
Organization:
Title:
Comments:
My name is Jim Eshelman and I live in Durham, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jim Eshelman

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Shawn
Last name: Esher
Organization:
Title:
Comments:
My name is Shawn Esher and I live in Dover, Pennsylvania.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
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Thank you for considering my comments.
Regards, Shawn Esher

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Shawn
Last name: Esher
Organization:
Title:
Comments:
My name is Shawn Esher and I live in Dover, Pennsylvania.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
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Thank you for considering my comments.
Regards, Shawn Esher

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Penny
Last name: Eskenazi
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Penny Eskenazi

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Amy
Last name: Eskew
Organization:
Title:
Comments:
NO logging in Tongass National Forest!! No roads should be built in Tongass, particularly when there is such a dispute between experts about the science being used by the current trump administration. Historically, large-scale industrial logging has damaged salmon streams. The Tongass is spawning ground for 40 percent of wild salmon along the West Coast. DO NOT allow this!!

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jerry
Last name: Eskew
Organization:
Title:
Comments:
My name is Jerry Eskew and I live in Las Vegas, Nevada.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jerry Eskew

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jennifer
Last name: Eskridge-Hart
Organization:
Title:
Comments:
My name is Jennifer Eskridge-Hart and I live in Chicago, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jennifer Eskridge-Hart

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Carol
Last name: Esler
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Carol Esler

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Carol
Last name: Esler
Organization:
Title:
Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Carol Esler

Date submitted (Alaskan Standard Time): 11/10/2019 12:00:00 AM
First name: Izzy
Last name: Esler
Organization:
Title:
Comments:
My name is Izzy Esler and I live in Cleveland, Ohio.

Let us protect some of the only wilderness we have left. Trees are one of the best bets we have in combatting climate change.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Izzy Esler

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/13/2019 12:00:00 AM
First name: Jasmine
Last name: Esmay
Organization:
Title:
Comments:
HC629

Dear Secretary Perdue and Senator Murkowski,

I am currently on a boat cruise in Redoubt Bay, an iconic local subsistence and recreation site. Located just twelve miles from the city of Sitka, Redoubt Falls is one of Sitka's most important subsistence fishing spots. We dipnet for Redoubt sockeye to stock our freezers and cupboards with the rich red flesh of this all-important fish. In recent years, the Forest Service has estimated that Redoubt has provided up to 60% of the total sockeye subsistence harvest in the Sitka Management Area. We feed our families out of Tongass watershed like Redoubt Bay.

The Forest Service supports our subsistence harvest by maintaining a weir system at Redoubt to monitor and count the fish entering the lake. The Forest Service coordinates with the Alaska Department of Fish & Game to make management decisions based on the data collected throughout the season, which determines the safe allotment limit for our subsistence harvest. Our harvest of salmon depends entirely on the intact ecosystem and productivity of Tongass watersheds. Healthy forests support our ability to fulfill our subsistence needs at Redoubt, as well as supporting commercial and sport salmon fisheries across the Tongass.

Currently, Redoubt ay is listed as a T77 watershed. T77 watersheds are areas of the Tongass National Forest identified as particularly prolific, intact salmon habitat. Much of the 15,000 miles of streams on the Tongass support salmon populations, but the T77 watersheds are especially critical to protect. It is important to me that the 2001 Roadless Rule remains in place on high value salmon watersheds like the T77, and throughout the Tongass National Forest. Opening up these areas to more clearcutting and roadbuilding will jeopardize our way of life, and will sacrifice the spirit of Sitka that brings so many people to this special place. I support keeping the 2001 Roadless Rule in effect on the Tongass, and I urge the Secretary to select a no action alternative in the Alaska-specific Roadless rulemaking process. Please protect this land for future generations to enjoy in perpetuity.

Personal Comments: I am not interested in learning more!

Keep public lands PUBLIC for future generations.

Date submitted (Alaskan Standard Time): 11/6/2019 12:00:00 AM
First name: Anon
Last name: Esmeralda
Organization:
Title:
Comments:
Tongass rainforest

To whom it may concern:

I'm not sure how true the claims are but I do not support the forest being open to logging. At the end of the day we trust in the government to do what's right for the people collectively, not just for the interests of the few who get rich or the few who could possibly gain from this. There are lives at stake, human and animals, lively-hood needs to become more important than making a few dollars. No roads should be made no trees should be cut down.

Thank you for your time and consideration.

Sincerely,

A concerned citizen

[Position]

Date submitted (Alaskan Standard Time): 10/24/2019 12:00:00 AM
First name: Morris
Last name: Esmiol
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on. So despite the huge size of the forest and its resources, I would ask that the Tongass forest remain roadless.

If however the forest service does open up the forest, I would hope the service would judiciously save large swaths of old growth forest and restrict the cutting of trees that would be classified as old growth.

I believe the US has plenty of lumber for its own needs; the Tongass wood most likely would be exported. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,

Morris Esmiol

Farmington, NM 87401

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: David
Last name: Esopi
Organization:
Title:
Comments:
My name is David Esopi and I live in Watertown, Massachusetts.
Boo to cutting down forests! Save the trees in Alaska!
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, David Esopi

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Kathleen
Last name: Espamer
Organization:
Title:
Comments:
My name is Kathleen Espamer and I live in Camp Hill, Pennsylvania.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Kathleen Espamer

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: David
Last name: Espasandin
Organization:
Title:
Comments:
My name is David Espasandin and I live in Grafton, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, David Espasandin

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Greg
Last name: Espe
Organization:
Title:
Comments:
My name is Greg Espe and I live in Seattle, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Greg Espe

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Joyce
Last name: Espineta
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Joyce Espineta

Date submitted (Alaskan Standard Time): 12/10/2019 7:17:56 PM
First name: Alexander
Last name: Espinosa
Organization:
Title:
Comments:
My name is Alexander Espinosa and I live in Topanga, CA. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

The Tongass National Forest must be protected from ecological devastation!

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), inter-tie/transmission line construction. It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Patricia
Last name: Espinosa
Organization:
Title:
Comments:
My name is Patricia Espinosa and I live in Lakewood, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Patricia Espinosa

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Pedro
Last name: Espinosa
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Pedro Espinosa

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Bernadette
Last name: Espinoza
Organization:
Title:
Comments:
My name is Bernadette Espinoza and I live in Cortez, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Bernadette Espinoza

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Debra
Last name: Espinoza
Organization:
Title:
Comments:
My name is Debra Espinoza and I live in El Paso, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Debra Espinoza

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Louise
Last name: Espinoza
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Louise Espinoza

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: MICHAEL
Last name: ESPINOZA
Organization:
Title:
Comments:
My name is MICHAEL ESPINOZA and I live in Roswell, New Mexico.

THIS IS FOR OUR CHILDREN'S FUTURE AND THEIR CHILDRENS FUTURE AND SO ON. NOT JUST OURS.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, MICHAEL ESPINOZA

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Susan
Last name: Espinoza
Organization:
Title:
Comments:
My name is Susan Espinoza and I live in Minnetonka, Minnesota.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Susan Espinoza

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Yaraly
Last name: Espinoza
Organization:
Title:
Comments:
My name is Yaraly Espinoza and I live in Oviedo, Florida.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Yaraly Espinoza

Date submitted (Alaskan Standard Time): 12/12/2019 3:00:00 PM
First name: Juan
Last name: Espinoza Jr
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Amanda
Last name: Esposito
Organization:
Title:
Comments:
My name is Amanda Esposito and I live in Reno, Nevada.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Amanda Esposito

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Brittany
Last name: Esposito
Organization:
Title:
Comments:
My name is Brittany Esposito and I live in Fallon, Nevada.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Brittany Esposito

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Dan
Last name: Esposito
Organization:
Title:
Comments:
My name is Dan Esposito and I live in Manhattan Beach, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Dan Esposito

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Eric
Last name: Esposito
Organization:
Title:
Comments:
My name is Eric Esposito and I live in Brooklyn, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Eric Esposito

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Jennifer
Last name: Esposito
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Jennifer Esposito

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Karen
Last name: Esposito
Organization:
Title:
Comments:
My name is Karen Esposito and I live in New York, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Karen Esposito

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Lori
Last name: Esposito
Organization:
Title:
Comments:
My name is Lori Esposito and I live in Annandale, Virginia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Lori Esposito

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Louis
Last name: Esposito
Organization:
Title:
Comments:
My name is Louis Esposito and I live in Brooklyn, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Louis Esposito

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Susan
Last name: Esposito
Organization:
Title:
Comments:
My name is Susan Esposito and I live in Staten Island, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Susan Esposito

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Pete
Last name: Esquibel
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Pete Esquibel

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Robert
Last name: Esselburn
Organization:
Title:
Comments:
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Regards, Robert Esselburn

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Tim
Last name: Esselman
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Conrad
Last name: Essen
Organization:
Title:
Comments:
My name is Conrad Essen and I live in [@advCity], California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Conrad Essen

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Nicholas
Last name: Esser
Organization:
Title:
Comments:
My name is Nicholas Esser and I live in Simi Valley, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Nicholas Esser

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Pamela
Last name: Esser
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Pamela Esser

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Pamela
Last name: Esser
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Pamela Esser

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Pamela
Last name: Esser
Organization:
Title:
Comments:
My name is Pamela Esser and I live in Bloomfield Hills, Michigan.

Please save the cultural heritage sites and th pure natural beauty of this land.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Pamela Esser

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Bill
Last name: Essex
Organization:
Title:
Comments:
My name is Bill Essex and I live in Canajoharie, New York.

Surely there is more value in keeping the areas pristine & encourage economic tourism

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Bill Essex

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Angela
Last name: Esslinger
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Angela Esslinger

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: [illegible]
Last name: Esslinger
Organization:
Title:
Comments:
HC6208

Dear U.S. Forest Service:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for more than 20 years. *Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77.* [Text bolded for emphasis] Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. *Please do not roll back roadless are protection for habitat that our irreplaceable fish and wildlife populations need to survive.* [Text bolded for emphasis]

Customize your comment by listing reasons the Tongass is important to you or why you value Alaska Roadless areas: (ex: specific locations you recreate, activities you do, or why you value fish & wildlife) [Text italicized]

Sincerely,

Would you like to volunteer with TU Alaska to Help America's Salmon Forest?

Yes No

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: John
Last name: Essman
Organization:
Title:
Comments:
My name is John Essman and I live in Healdsburg, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, John Essman

Date submitted (Alaskan Standard Time): 12/2/2019 12:00:00 AM
First name: Robert
Last name: Essman
Organization:
Title:
Comments:
Don't exempt the Tongass from the Roadless Rule

U.S. Forest Service

RE: Don't exempt the Tongass from the Roadless Rule

null

Docket Number: FS-2019-0023

Secretary Perdue:

I urge you to keep the Roadless Area Conservation Rule intact for the Tongass National Forest because it was forged by our best scientific understanding, bi-partisan and has the future of a healthy environment stamped all over it...

The Tongass serves as a habitat for hundreds of species of wildlife, including wolves, grizzly bears and so many others. More than 300 species of birds make their homes in its trees, and its streams and waterways provide habitat for spawning salmon and trout.

To open this pristine wild space up for destructive, un-scientific, short term profit driven development is immoral. Removing its Roadless Rule protections would be a tragedy. Keep the Roadless Rule -- and the Tongass National Forest -- intact along with your legacy.

Sincerely,

Sincerely,

Robert Essman

Stamford, CT 06906

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Robert
Last name: Essman
Organization:
Title:
Comments:
My name is Robert Essman and I live in Stamford, Connecticut.

The science and the public arenow and have been crystal clear: The roadless rule was drafted to protect the ecosystems and thereby protects the wildlife and the native peoples' future from destructive extractive industries and outdoor enthusiasts easy access. The small amount of prestine ecosystems must be saved for future American citizens.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.

Regards, Robert Essman

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Jeffrey
Last name: Essner
Organization:
Title:
Comments:
HC5163

U.S. Forest Service Alaska Roadless Rule Committee:

I just visited this area and was amazed by the beauty. Wonderful fisheries and people. Please keep this wild.

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Jeffrey Essner

Ames, IA 50010

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Gen
Last name: Esson
Organization:
Title:
Comments:
My name is Gen Esson and I live in Maplewood, Missouri.

We need clean air.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Gen Esson

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Helen
Last name: Estabrook
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Helen Estabrook

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Mikael
Last name: Estarrona
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Mikael Estarrona

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: William
Last name: Estay
Organization:
Title:
Comments:
My name is William Estay and I live in Sharpsburg, Georgia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, William Estay

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Judy
Last name: Estelle
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Judy Estelle

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Renee
Last name: Estelle
Organization:
Title:
Comments:
My name is Renee Estelle and I live in Westminster, Colorado.

I fully support all efforts to preserve the Tongass Forest. Protection for it must be maintained.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Renee Estelle

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Richard
Last name: Esten
Organization:
Title:
Comments:
My name is Richard Esten and I live in Hebron, Connecticut.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Richard Esten

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Dawn
Last name: Estep
Organization:
Title:
Comments:
My name is Dawn Estep and I live in Burkburnett, Texas.

Listen to the people! We need to protect these lands!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Dawn Estep

Date submitted (Alaskan Standard Time): 12/14/2019 7:32:24 AM
First name: Lyndsay
Last name: Estep
Organization:
Title:
Comments:
My name is Lyndsay Estep and I live in Homer, MI. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

These lands are the last truly untouched in the country. They need to be preserved.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), medium-impact recreation (FS cabins, trails, mooring buoys, 3-sided shelters), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc), inter-tie/transmission line construction, hydroelectric development. It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, establish the economic value of the carbon stored in the Tongass, restore salmon habitat that was hurt by past logging practices. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 12/11/2019 3:00:00 PM
First name: Mason
Last name: Estep
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: John
Last name: Estes
Organization:
Title:
Comments:
My name is John Estes and I live in Birmingham, Alabama.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, John Estes

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Karen
Last name: Estes
Organization:
Title:
Comments:
My name is Karen Estes and I live in Pinellas Park, Florida.

Please stop putting corporate interests above conservation needs. Thst is a fool's errand and totally detrimental to our planet's future.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Karen Estes

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Michaela
Last name: Estes
Organization:
Title:
Comments:
My name is Michaela Estes and I live in Ronks, Pennsylvania.

Please improve and not weaken clean air protection

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Michaela Estes

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Robert
Last name: Estienne
Organization:
Title:
Comments:
My name is Robert Estienne and I live in Salem, VA. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I feel that the preservation of natural areas is a dangerously overlooked responsibility in our care of this planet. We need to do better.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations, support small-scale, sustainable logging, establish the economic value of the carbon stored in the Tongass. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless

Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Cesar
Last name: Estier
Organization:
Title:
Comments:
HC944

Dear Chief Christiansen,

I am a visitor to the lands and waters of Southeast Alaska. The Tongass National Forest is a large part of why I am here. Visitors like me come to witness the vast, beautiful stands of old-growth trees that can't be found on such a scale anywhere else in the United States. We come to crew on commercial fishing boats. We come to hunt, fish and hike in America's largest National Forest. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Alaskans and Americans.

I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. Tourism and commercial fishing are at the heart of Southeast's economy, not the antiquated timber industry.

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Karen
Last name: Estok
Organization:
Title:
Comments:
My name is Karen Estok and I live in Manalapan Township, New Jersey.

What you choose to save is what you say about yourself!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Karen Estok

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: marianne
Last name: Estournes
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, marianne Estournes

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: marianne
Last name: Estournes
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, marianne Estournes

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Laurie
Last name: Estrada
Organization:
Title:
Comments:
My name is Laurie Estrada and I live in Bakersfield, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Laurie Estrada

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Samuel
Last name: Estrada
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Samuel Estrada

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: William
Last name: Estrada
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, William Estrada

Date submitted (Alaskan Standard Time): 12/13/2019 12:00:00 AM
First name: Rebecca
Last name: Estrin
Organization:
Title:
Comments:
HC486

Dear Roadless Rule Planning Team,

The health of the Tongass National Forest is important to me. I depend on the Tongass which is a unique and global treasure.

The freshwater streams where salmon and old growth forest of the Tongass provide spawning habitat for these fish, which in turn feed a matrix of bears, birds, insects, and other wildlife that Alaska is so famous for. The health of our economy, which is heavily dependent on the fishing and tourism industries, also depends on the salmon, wildlife and presence of old growth forests. A sustainable future for Southeast Alaska requires protecting expansive areas of intact habitat - in short, it requires keeping our Roadless areas roadless! I urge the Forest Service and the Secretary to protect important salmon spawning habitat, maintain old growth forests for winter deer habitat, and keep the places I like to recreate free of clearcuts and roadbuilding.

WHO I AM: [text bolded for emphasis] Include your name, where you live, and any relevant biographical information. Do you live or work on the Tongass National Forest? What is your relationship to the Tongass?

I am Rebecca Estrin, I live in Ketchikan Alaska. My family has lived off the land of the Tongass for thousands of years. It must be protected for future generations to live "our way of life."

PREFERRED ALTERNATIVE: [text bolded for emphasis] The Forest Service will choose how to proceed from a number of different alternatives. If you want the Roadless Rule to remain on the Tongass, write "No Action."

No Action

WHY I PREFER THIS ALTERNATIVE: [text bolded for emphasis] How would this alternative affect you and Southeast Alaskans?

It will help the Native peoples "way of life". Think of "the fish in the trees" everything as a domino effect. It must be protected.

AREAS: [text bolded for emphasis] Are there specific islands, watersheds, or mountains that you depend on? Name the most important areas that the Roadless Rule to protect. Examples include the Tenakee Inlet, Nakwasina Sound, Fish Bay, Ushk Bay, Northern Prince of Wales, T77 salmon watershed areas, Audobon TNC ecological priority areas, etc.

Salmon watersheds T77 need to stay protected so our salmon stay abundant.

USE: [text bolded for emphasis] What activities do you use the Tongass National Forest for? Hunting, fishing, recreation, subsistence, business, tourism, etc.

SUGGESTION: [text bolded for emphasis] How should the Forest Service manage the Tongass National Forest, rather than old-growth clearcut logging? More sustainable alternatives to timber harvest include salmon watershed restoration, visitor industry infrastructure, deer habitat enhancement, young growth thinning, and maintenance of recreation infrastructure such as trails and cabins.

Additional comments for the Forest Service:

Sincerely,

Rebecca Estrin

I want to receive a copy of the Draft Environmental Statement

Date submitted (Alaskan Standard Time): 11/14/2019 3:00:00 PM
First name: ADELA
Last name: ESTUDILLO
Organization:
Title:
Comments:
My name is ADELA ESTUDILLO and I live in Anaheim, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, ADELA ESTUDILLO

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Christine
Last name: Etapa
Organization:
Title:
Comments:
My name is Christine Etapa and I live in Chicago, Illinois.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Christine Etapa

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: John
Last name: Etchison
Organization:
Title:
Comments:
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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, John Etchison

Date submitted (Alaskan Standard Time): 11/5/2019 12:00:00 AM
First name: Wesley
Last name: Ether
Organization:
Title:
Comments:
Hello World!

Regards, Wesley Ether

[Position]

Date submitted (Alaskan Standard Time): 11/5/2019 12:00:00 AM
First name: Wesley
Last name: Ether
Organization:
Title:
Comments:
Hello World!

Regards, Wesley Ether

[Position]

Date submitted (Alaskan Standard Time): 11/4/2019 12:00:00 AM
First name: Wesley
Last name: Ether
Organization:
Title:
Comments:
Hello World!

Regards, Wesley Ether

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Mary
Last name: Etherton
Organization:
Title:
Comments:
My name is Mary Etherton and I live in Reisterstown, Maryland.

Keep these forest's pristine! A healthy environment is our greatest resource.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Mary Etherton

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Diane
Last name: Ethridge
Organization:
Title:
Comments:
My name is Diane Ethridge and I live in Conroe, Texas.

Please do all you can to save our natural resources and beauty. Thank you!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Diane Ethridge

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Linnea
Last name: Etkin
Organization:
Title:
Comments:
My name is Linnea Etkin and I live in Brooklyn, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Linnea Etkin

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Herb
Last name: Ettel
Organization:
Title:
Comments:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

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Regards, Herb Ettel

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Herb
Last name: Ettel
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Herb Ettel

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Russ
Last name: Ettinger
Organization:
Title:
Comments:
My name is Russ Ettinger and I live in Grand Rapids, Michigan.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Russ Ettinger

Date submitted (Alaskan Standard Time): 11/13/2019 3:00:00 PM
First name: Jennifer
Last name: Eubanks
Organization:
Title:
Comments:
My name is Jennifer Eubanks and I live in Denver, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jennifer Eubanks

Date submitted (Alaskan Standard Time): 11/26/2019 12:00:00 AM
First name: Dan
Last name: Euclide
Organization:
Title:
Comments:
HC14

I love exploring the lush forests of the Tongass. I have tons of fun memories of trips, and hope to take more! Please don't build a road and ruin the beauty. Fund the furry and keep the Tongass wild!!

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Elaine
Last name: Eudy
Organization:
Title:
Comments:
My name is Elaine Eudy and I live in East Point, Georgia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Elaine Eudy

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Raymond
Last name: Eurquhart
Organization:
Title:
Comments:
My name is Raymond Eurquhart and I live in Durham, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Raymond Eurquhart

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Albert
Last name: Eurs
Organization:
Title:
Comments:
My name is Albert Eurs and I live in Cypress, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Albert Eurs

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Marilee
Last name: Eusebio
Organization:
Title:
Comments:
My name is Marilee Eusebio and I live in Davis, California.

I am currently reading 'The Hidden Life of Trees: What they Feel, How They communicate' by Peter Wohllenben. The book underlines and reaffirms my understanding of the need for the world's forests for human and other animal survival. Please do not role back the Roadless Area Conservation Rule in Alaska or elsewhere.Sincerely,Marilee Eusebio2112 Saratoga PlaceDavis, CA

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Marilee Eusebio

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Paul
Last name: Eusey
Organization:
Title:
Comments:
My name is Paul Eusey and I live in Elk Grove, California.

Fuck You!!! Go cut trees some place else you fucking assholes!!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Paul Eusey

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: S
Last name: Eva
Organization:
Title:
Comments:
My name is S Eva and I live in Hopkins, Minnesota.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, S Eva

Date submitted (Alaskan Standard Time): 12/10/2019 12:00:00 AM
First name: Mona
Last name: Evan
Organization:
Title:
Comments:
My name is Mona Evan and I live in Kake, AK. Born in 1970 and raised in Southeast Alaska I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, subsistence harvesting, foraging for wild foods, the peace and solitude I find in nature, recreating, practicing my culture, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations .

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. The rule is working fine as it is by balancing the conservation of our fish and wildlife habitat with important development projects.. I depend on roadless areas in the Tongass National Forest for healthy fish habitat, deer habitat and subsistence hunting, foraging and gathering wild foods, practicing my culture, recreating and enjoying nature, viewing wildlife, keeping public lands wild for future generations, fiscal responsibility and saving taxpayer dollars . A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Baranof Island, Chichagof Island, Admiralty Island, the central mainland from Hobart Bay to Stikine River, the southern mainland from Bradfield Canal to Dixon Entrance Kupreanof Island, Kuiu Island, Prince of Wales Island, all of the inventoried roadless areas on the Tongass. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for the uses and activities I listed above. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because A full exemption is not in the best interests of Southeast Alaskans because it means that no one is listening to the residents of the lands. None of the projects ever proposed in the Tongass has been denied. The Roadless Rule is another layer of protection for the lands and everyone and everything residing in and on these lands.. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should devote resources to support our fishing and visitor industries transition to second growth logging invest in creating and maintaining recreation infrastructure improve and streamline existing permitting processes for important community projects rather than rehashing old conflicts.

Help us protect our homelands as we've done for thousands of years. To destroy so much forest and lands for a short term financial gain is not the answer. Work with us and help us build with what we have left. Please

don't destroy what's left. We are just now recovering from the previous era of logging and it was detrimental to our way of life. Another trauma we've added to list over history to recover from. Thank you for your consideration.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: V
Last name: Evan
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, V Evan

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Enrico
Last name: Evangelisti
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Enrico Evangelisti

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Vincent
Last name: Evangelisti
Organization:
Title:
Comments:
My name is Vincent Evangelisti and I live in Philadelphia, Pennsylvania.

Thank you for your attention to my concerns.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Vincent Evangelisti

Date submitted (Alaskan Standard Time): 12/9/2019 8:58:47 PM
First name: Jamie
Last name: Evanini
Organization:
Title:
Comments:
My name is Jamie Evanini and I live in Pennington, NJ. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I am deeply concerned about climate change and keeping old growth forests intact and healthy, because doing so is one of the best ways we have of keeping carbon out of the atmosphere. I am also concerned that getting rid of the roadless rule in the Tongass National Forest will threaten the commercial fishing and tourism industries, which employ far more people than the timber industry in that area.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that provide vital wildlife habitat, and already allows for important community and economic development projects. As an American citizen concerned about the impact of climate children for my children and granchildren, I value the Tongass National Forest and the Chugach National Forest for their role as America's best natural solution to climate change and the millions of metric tons of carbon sequestered within them. Their wild salmon populations and huge swaths of intact ecosystems and all the biodiversity they contain, the lifestyles of the indigenous communities that the forest supports -- all of these must be protected by selecting the No-Action Alternative. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc), low-impact recreation (camping, hiking, hunting, foraging, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, or perform restorative actions that support wildlife populations on previously degraded landscapes. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the commercial fishing and tourism industries in the Tongass region.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. This proposal to get rid of the Roadless Rule should not go forward because it has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

Date submitted (Alaskan Standard Time): 10/22/2019 12:00:00 AM
First name: Aaron
Last name: Evanisko
Organization:
Title:
Comments:
Absolutely not! Preserve this treasure with no further incursion. It is worth far.more as-is than as lumber.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/24/2019 3:00:00 PM
First name: A
Last name: Evans
Organization:
Title:
Comments:
My name is A Evans and I live in Washington, District of Columbia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, A Evans

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Alice
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Alice Evans

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Andrew
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Andrew Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Andrew
Last name: Evans
Organization:
Title:
Comments:
My name is Andrew Evans and I live in Beaverton, Oregon.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Andrew Evans

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Angela
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Angela Evans

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Aubrey
Last name: Evans
Organization:
Title:
Comments:
My name is Aubrey Evans and I live in University City, Missouri.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Aubrey Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Ava
Last name: Evans
Organization:
Title:
Comments:
My name is Ava Evans and I live in Los Angeles, California.

Our forests mustve protected they are too valuable to be compromised

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Ava Evans

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Bill
Last name: Evans
Organization:
Title:
Comments:
My name is Bill Evans and I live in La Mesa, California.

Promise me you wont desecrate the Tongass N.Forest- a unique & extraordinary intact ecosystem! Dont become a criminal by destroying part of it for toilet paper & plywood! Thank you for your integrity.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Bill Evans

Date submitted (Alaskan Standard Time): 11/11/2019 12:00:00 AM
First name: Bill
Last name: Evans
Organization:
Title:
Comments:
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Thank you for considering my comments.

Regards, Bill Evans

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Catherine
Last name: Evans
Organization:
Title:
Comments:
My name is Catherine Evans and I live in Dallas, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Catherine Evans

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Chad
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Chad Evans

Date submitted (Alaskan Standard Time): 11/12/2019 3:00:00 PM
First name: Chad
Last name: Evans
Organization:
Title:
Comments:
My name is Chad Evans and I live in Seattle, Washington.

Keep wild places wild!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Chad Evans

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Christine
Last name: Evans
Organization:
Title:
Comments:
Dear Forest Service,

I am strongly in favor of Alternative 1 of this proposal and keeping current Roadless Rule protections in place for all of Alaska, including the Tongass. As you well know, the Tongass National Forest includes the largest temperate rainforest left in North America, and holds nearly a third of all the old-growth temperate rainforest left on Earth. The Tongass is a biodiversity hot spot and is so important to the people who live there. We simply cannot afford to lose more of our wild places to unnecessary industrial activities that make a few people rich at the expense of all of us.

Climate change is one of the most serious issues facing our country and planet, and the last thing we should be doing is cutting down the last of our old growth forests and removing critical carbon sinks.

Please listen to the American people rather than lobbyists and industry. The Tongass is one of the most precious living libraries left on this Earth and we would be utter fools to destroy it.

[Position]

Date submitted (Alaskan Standard Time): 11/11/2019 3:00:00 PM
First name: Christopher
Last name: Evans
Organization:
Title:
Comments:
My name is Christopher Evans and I live in Philadelphia, Pennsylvania.

We have another planet somewhere? Maybe we should take better care of this one, no?

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

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Thank you for considering my comments.
Regards, Christopher Evans

Date submitted (Alaskan Standard Time): 11/20/2019 3:00:00 PM
First name: Coleman
Last name: Evans
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Coleman
Last name: Evans
Organization:
Title:
Comments:
My name is Coleman Evans and I live in Lake Stevens, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Coleman Evans

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Coleman
Last name: Evans
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Colleen
Last name: Evans
Organization:
Title:
Comments:
My name is Colleen Evans and I live in Sacramento, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Colleen Evans

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: D.
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, D. Evans

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: D.
Last name: Evans
Organization:
Title:
Comments:
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Regards, D. Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Dale
Last name: Evans
Organization:
Title:
Comments:
My name is Dale Evans and I live in Waimanalo, Hawaii.

I believe we must preserve whatever pristine natural resources are left on this planet.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Dale Evans

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Daniel
Last name: Evans
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
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I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Daniel
Last name: Evans
Organization:
Title:
Comments:
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Regards, Daniel Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: David
Last name: Evans
Organization:
Title:
Comments:
My name is David Evans and I live in Lancaster, Virginia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, David Evans

Date submitted (Alaskan Standard Time): 12/14/2019 3:00:00 PM
First name: Donald
Last name: Evans
Organization:
Title:
Comments:
My name is Donald Evans and I live in Broomfield, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Donald Evans

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Donna
Last name: Evans
Organization:
Title:
Comments:
This is a terrible injustice & the ultimate gesture of greed with no regard toward nature & the environment .

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Dylan
Last name: Evans
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/11/2019 9:52:50 AM
First name: Eli
Last name: Evans
Organization:
Title:
Comments:
My name is Eli Evans and I live in Sitka, Alaska. 1 year i love the tongass! I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will impact my fishing, hunting, subsistence harvesting, the peace and solitude I find in nature, recreating, the status of the Tongass as a national and global treasure, the forest's ability to sequester carbon and mitigate climate change impacts, the conservation of resources for future generations foraging for wild foods,.

Out of the alternatives described in the AKRR DEIS I support alternative 1: no action. it protects important fish and wildlife habitat from clearcutting and roadbuilding. I depend on roadless areas in the Tongass National Forest for healthy fish habitat, deer habitat and subsistence hunting, foraging and gathering wild foods, carbon sequestration and local climate change mitigation, keeping public lands wild for future generations, recreating and enjoying nature, viewing wildlife,. A full exemption does not protect these values, nor does it effectively balance economic development and conservation of roadless area characteristics. A full exemption from the Roadless Rule and increased logging and roadbuilding will negatively impact the Tongass and what I and many others use and depend on the forest to provide for us.

The Roadless areas on the Tongass that are especially important to me are those on or around Baranof Island,. I want the roadless areas in these locations to stay in roadless status in any alternative selected by the Forest Service, and be managed to provide for low-impact recreation such as camping, hiking, hunting, and fishing passive or active watershed restoration of salmon streams and wildlife habitat. It is important to me that the T77 and the TNC conservation priority areas retain their roadless protections.

I do not support the Forest Services preferred alternative of a full exemption. A full exemption is not in the interests of Southeast Alaskans who live in and use the Tongass National Forest, because It discounts the voices of many southeast Alaskans that spoke against it.. The State of Alaska says that a full exemption is needed for rural economic development opportunities. However, a full exemption would not help create more rural economic development opportunities, it would instead harm our existing rural economies that are based on the visitor industry and commercial fishing industry.

It would further harm rural economic opportunities because pursuing the same outdated economic model of old growth clearcut harvesting for export stifles innovation and possibility in other sectors, such as mariculture, sustainable young growth harvest, and rural agriculture. If the Forest Service wants to support rural economic development, they should devote resources to support our fishing and visitor industries invest in creating and maintaining recreation infrastructure.

I urge the Forest Service to prioritize the voices of Southeast Alaskans over those of our political representation and corporate interests. Choosing a full exemption will not create a long lasting, durable solution for roadless areas on the Tongass. It will only increase the legal challenges, uncertainty for businesses, and conflict on the Tongass going forward.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Eli
Last name: Evans
Organization:
Title:
Comments:
HC761

Dear Alaska Roadless Rule Planning Committee,

I live and work on the lands and waters of the Tongass National Forest. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, Alaskans rely on the intact habitat that the roadless areas of the Tongass National Forest and the Chugach NF contain. That is why I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I strongly oppose any efforts to weaken protections for Roadless areas in the Tongass National Forest and the Chugach National Forest.

The Forest Service needs to continue phasing out old-growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. The Forest Service should focus on restoring degraded watershed and fish streams and carbon sequestration.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Elinore
Last name: Evans
Organization:
Title:
Comments:
My name is Elinore Evans and I live in Willoughby Hills, Ohio.

We have to consider the wellbeing of future generations rather than the short term economic gains.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Elinore Evans

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Elizabeth
Last name: Evans
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Elizabeth
Last name: Evans
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Elizabeth
Last name: Evans
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Elizabeth
Last name: Evans
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Elizabeth
Last name: Evans
Organization:
Title:
Comments:
HC5698

Dear U.S. Forest Service,

CC: Alaska Congressional Delegation and Federal Administration

I support the no-action alternative to leave the 2001 Roadless Rule in place on the Tongass National Forest. We must continue to phase out old-growth clear-cut logging and instead prioritize restoring degraded watersheds and fish streams that contribute to the growing fisheries and tourism-based economies of Southeast. To that end, please conserve the Tongass 77 and TNC priority areas in the final Roadless Rule.

Sincerely,

Comments: *(Eg: list locations you recreate, or why you value Tongass fish & wildlife)* [Text italicized for emphasis]

[Box unchecked] I would like to get more involved in the campaign!

*By taking this action, you are consenting to receive future communications via phone, text message, email, or mail from Sitka Conservation Society and its partners working to protect the Tongass. * [Text italicized for emphasis]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Elizabeth
Last name: Evans
Organization:
Title:
Comments:
HC1311

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 12/13/2019 12:00:00 AM
First name: Els
Last name: Evans
Organization:
Title:
Comments:
HC434

Dear Roadless Rule Planning Team,

The health of the Tongass National Forest is important to me. I depend on the Tongass which is a unique and global treasure.

The freshwater streams where salmon and old growth forest of the Tongass provide spawning habitat for these fish, which in turn feed a matrix of bears, birds, insects, and other wildlife that Alaska is so famous for. The health of our economy, which is heavily dependent on the fishing and tourism industries, also depends on the salmon, wildlife and presence of old growth forests. A sustainable future for Southeast Alaska requires protecting expansive areas of intact habitat - in short, it requires keeping our Roadless areas roadless! I urge the Forest Service and the Secretary to protect important salmon spawning habitat, maintain old growth forests for winter deer habitat, and keep the places I like to recreate free of clearcuts and roadbuilding.

WHO I AM: [text bolded for emphasis] Include your name, where you live, and any relevant biographical information. Do you live or work on the Tongass National Forest? What is your relationship to the Tongass?

My name is Els Evans, I live in Sitka I work with youth.

PREFERRED ALTERNATIVE: [text bolded for emphasis] The Forest Service will choose how to proceed from a number of different alternatives. If you want the Roadless Rule to remain on the Tongass, write "No Action."

No Action

WHY I PREFER THIS ALTERNATIVE: [text bolded for emphasis] How would this alternative affect you and Southeast Alaskans?

I depend on salmon to eat and love walking in the rainforest

AREAS: [text bolded for emphasis] Are there specific islands, watersheds, or mountains that you depend on? Name the most important areas that the Roadless Rule to protect. Examples include the Tenakee Inlet, Nakwasina Sound, Fish Bay, Ushk Bay, Northern Prince of Wales, T77 salmon watershed areas, Audobon TNC ecological priority areas, etc.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Evelyn
Last name: Evans
Organization:
Title:
Comments:
My name is Evelyn Evans and I live in Defuniak Springs, Florida.

Our forests are worth more than logging profits!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Evelyn Evans

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Gordon
Last name: Evans
Organization:
Title:
Comments:
HC5699

Dear U.S. Forest Service,

CC: Alaska Congressional Delegation and Federal Administration

I support the no-action alternative to leave the 2001 Roadless Rule in place on the Tongass National Forest. We must continue to phase out old-growth clear-cut logging and instead prioritize restoring degraded watersheds and fish streams that contribute to the growing fisheries and tourism-based economies of Southeast. To that end, please conserve the Tongass 77 and TNC priority areas in the final Roadless Rule.

Sincerely,

Comments: *(Eg: list locations you recreate, or why you value Tongass fish & wildlife)* [Text italicized for emphasis]

[Box unchecked] I would like to get more involved in the campaign!

*By taking this action, you are consenting to receive future communications via phone, text message, email, or mail from Sitka Conservation Society and its partners working to protect the Tongass. * [Text italicized for emphasis]

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Greg
Last name: Evans
Organization:
Title:
Comments:
My name is Greg Evans and I live in Columbus, Georgia.

Please take heed to this because the lives of future generations are depending on what decisions we make today! Thank you.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Greg Evans

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/11/2019 3:00:00 PM
First name: Hannah
Last name: Evans
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Hersha
Last name: Evans
Organization:
Title:
Comments:
My name is Hersha Evans and I live in Christiansburg, Virginia.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Hersha Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: HOLLY
Last name: EVANS
Organization:
Title:
Comments:
My name is HOLLY EVANS and I live in Los Angeles, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, HOLLY EVANS

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: [illegible]
Last name: Evans
Organization:
Title:
Comments:
HC1468

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Jean
Last name: Evans
Organization:
Title:
Comments:
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Jean Evans

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Jennifer
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Jennifer Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: John
Last name: Evans
Organization:
Title:
Comments:
My name is John Evans and I live in Walnut Creek, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, John Evans

Date submitted (Alaskan Standard Time): 12/14/2019 3:00:00 PM
First name: Judy
Last name: Evans
Organization:
Title:
Comments:
My name is Judy Evans and I live in Murrysville, Pennsylvania.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Judy Evans

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Kent
Last name: Evans
Organization:
Title:
Comments:
Evidence shows that opening up the forest to new road development for logging purposes will be detrimental to watersheds and, inevitably, will negatively impact salmon spawning in streams throughout the National Forest System Lands in Alaska. Salmon populations are already declining globally and making more roads in a fragile salmon spawning forest will only reduce salmon populations at a faster rate. Pay attention to the science, voters will choose conservation over unnecessary logging practices. The proposed changes are not about correcting areas delimited as protected from road development, they are proposed as changes to eliminate good established protection of watersheds and protection of salmon spawning areas. Do not change the rules.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/6/2019 12:00:00 AM
First name: Kim
Last name: Evans
Organization:
Title:
Comments:
No Action on Roadless

Dear Secretary Perdue and Chief Christensen, and anyone else whose interest is financial gain,

Please select the "no-action" alternative on the Alaska-specific Roadless Rule and protect all inventoried roadless areas on the Tongass National Forest under the 2001 National Roadless Rule.

The Tongass contains some of the last remaining intact old-growth temperate rainforests in the world, and its value in providing endless recreation opportunities, clean water, and fish and wildlife habitat is essential to the economic, cultural, and ecological health of Southeast Alaska. I urge you to keep the 2001 National Roadless Rule intact and current protections in place on the Tongass National Forest.

The Roadless Rule is among the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve that pristine habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unsustainable taxpayer subsidies.

Lastly, the 2001 National Roadless Rule is well designed and flexible enough to allow for access and development projects. Since 2009 48 projects have been approved in the Tongass, the majority relating to surface exploration of potential mining and hydropower. The USFS has also taken steps to expedite this approval process, now taking only one to three weeks for the Tongass National Forest.

For these reasons, again, I strongly urge you to select the "no-action" alternative on the Alaska-specific Roadless Rule and keep the 2001 National Roadless Rule on the Tongass.

Thank you

Kim Evans

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Laurie
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Laurie Evans

Date submitted (Alaskan Standard Time): 12/13/2019 12:00:00 AM
First name: Mandy
Last name: Evans
Organization:
Title:
Comments:
HC599

Dear Secretary Perdue and Senator Murkowski,

I am currently on a boat cruise off the coast of the West Chichagof-Yakobi Wilderness. The West Chichagof-Yakobi Wilderness was the first citizen-initiated Wilderness area in Alaska; in 1967, Sitkans who recognized the value of this area came together to protect it. This Wilderness area is rich in biodiversity and supports an incredibly productive ecosystem. Salmon are sustained by the vast freshwater stream systems that empty into fjords and inlets. Brown bears feast upon these salmon as they swim upstream, distributing their carcasses throughout the forest. These carcasses fertilize the soil and feed the Sitka spruce, mountain hemlock, and yellow cedar trees that tower over the land. Underneath this old growth canopy, Sitka Black-tail deer browse on abundant berries and shrubs.

However, the West Chichagof-Yakobi Wilderness is not the only place in Southeast Alaska with such incredible beauty and biodiversity. The flora and fauna we find in this wilderness area also thrive in inventoried roadless areas throughout the Tongass. Intact roadless areas provide our communities with important hunting, fishing, foraging, and recreating opportunities. We depend on the entirety of the Tongass for our subsistence and our livelihoods including our commercial fishing and tourism industries. I am grateful for the Wilderness designation that the West Chichagof-Yacobi area received, and would like to see such protections extended to areas such as Ushk Bay and Poison Cove.

Outside of Wilderness areas like West Chichagof, the roadless areas we depend on are threatened by politicians and special interests pushing for short term profits that have long term ecological and economic consequences. Wilderness areas, roadless areas, and the intact habitat they support are an investment in the long term sustainability of our region. Please keep the National Roadless Rule in place on the Tongass. T77 areas are particularly important to me; these watersheds are critical to maintaining the salmon runs we depend on for jobs and food. Please do not remove protections for these areas, or anywhere else on the Tongass.

Personal Comments: I am not interested in learning more!

As stated above. As a 28-year resident, I want the current wilderness designation extended to protect Ushk Bay & Poison Cove. Please keep the National Roadless Rule in place on the Tongass.

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Marilyn
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Marilyn Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Martha
Last name: Evans
Organization:
Title:
Comments:
My name is Martha Evans and I live in Plainview, New York.

TREES CLEAN THE AIR AND MAKE OXYGEN!!!!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Martha Evans

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Martha
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Martha Evans

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Martha
Last name: Evans
Organization:
Title:
Comments:
Preserve Tongass National Forest

Dear U.S. Forest Service,

I strongly oppose the Forest Service's plan to eliminate "Roadless Rule" protections for the Tongass National Forest and urge you to select the "no action" alternative instead.

As you know the Tongass is home to a wide range of wildlife, including Alexander Archipelago wolves, grizzly bears and salmon. It also absorbs a vast amount of carbon, with its centuries-old trees serving as a carbon-reserve life raft in this time of climate change. Logging releases most of that carbon into the atmosphere.

The Tongass belongs to all Americans and supports tourism and fishing - both of which rely on intact forests to thrive. It's important to save these last remaining forests for the wildlife and waters they contain.

Further, the 2001 Roadless Rule, protects all roadless lands because of the critical role they play in protecting pure water, secure wildlife habitat and remote recreation.

Please - think of future generations by selecting the "no action" alternative to maintain "Roadless Rule" protections for the Tongass and Chugach.

Sincerely,

Martha Evans

Indianapolis, IN 46240

[Position]

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Michael
Last name: Evans
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Mr.
Last name: Evans
Organization:
Title:
Comments:
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
Thank you for considering my comments.
Regards, Mr. Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Pam
Last name: Evans
Organization:
Title:
Comments:
My name is Pam Evans and I live in Garden Valley, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Pam Evans

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Pamela
Last name: Evans
Organization:
Title:
Comments:
My name is Pamela Evans and I live in Kemp, Texas.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Pamela Evans

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Penni
Last name: Evans
Organization:
Title:
Comments:
no way - leave that area alone!!!

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Philip
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Philip Evans

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Ramona
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Ramona Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Ramona
Last name: Evans
Organization:
Title:
Comments:
My name is Ramona Evans and I live in Long Beach, California.

Please save Big Ears from Trump.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Ramona Evans

Date submitted (Alaskan Standard Time): 10/17/2019 12:00:00 AM
First name: Rebecca
Last name: Evans
Organization:
Title:
Comments:
Please preserve our beautiful forests and natural resources. It makes me sad that we have to get petitions together to stop greedy politicians from destroying something that is supposed to be sacred for all to enjoy. "I am the Lorax- I speak for the trees..."

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Sherlene
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Sherlene Evans

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Steven
Last name: Evans
Organization:
Title:
Comments:
My name is Steven Evans and I live in Corrales, New Mexico.

Please protect our planet now...our grandchildren deserve it!!!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Steven Evans

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Susan
Last name: Evans
Organization:
Title:
Comments:
My name is Susan Evans and I live in Bellingham, Washington.

Our Public Lands are here for the public, not big money special interest groups. Stop the destruction now!

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Susan Evans

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Wendy
Last name: Evans
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Wendy Evans

Date submitted (Alaskan Standard Time): 11/1/2019 12:00:00 AM
First name: Anon
Last name:
Organization:
Title:
Comments:
No more logging in the Tongass NF

I urge you to protect the Tongass National Forest from additional roads and from any increase in logging activities as well as from any harm to its old growth areas. Doing otherwise, threatens our Tongass National Forest and its amazing array of diverse habitats, wildlife, and sacred sites that are revered by Native Americans. And our Tongass also has a vital role in carbon sequestration -- a role that will continue to become increasingly important day-by-day.

I strongly urge you to select the "No-Action" Alternative #1.

Thank you,

Hersha Evans

[Position]

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Luci
Last name: Evanston
Organization:
Title:
Comments:
Roadless Rule

I am weighing in that I do not believe any changes to the Roadless Rule laws should be made that allow additional road building.

Sent from Mail for Windows 10

[Position]

Date submitted (Alaskan Standard Time): 12/11/2019 3:00:00 PM
First name: Gaines
Last name: Evatt
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/16/2019 3:00:00 PM
First name: Tracy
Last name: Eve
Organization:
Title:
Comments:
My name is Tracy Eve and I live in Columbia, Maryland.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Tracy Eve

Date submitted (Alaskan Standard Time): 10/26/2019 12:00:00 AM
First name: A
Last name: Even
Organization:
Title:
Comments:
As a citizen of this country and supporter of public lands I urge the Forest Service to do the right thing and uphold the roadless rule for the Tongas. As our earth becomes increasingly imperiled it is more important than ever to maintain the irreplaceable roadless areas and old growth forests held in the public commons. The USDA Forest Service is charged with balanced management and use of lands that it stewards. Please maintain balance by continuing to protect these lands from resource extraction - the Service has plenty of other places that it has emphasized timber extraction. Please to not release these cherished lands to the hands of the short sighted greedy few who wish to use and destroy the last of the earth's remaining natural resources for monetary gain. I stand in favor of maintaining full protections for these lands. These areas are part of the life support system on this planet that sustain all of us.

[Position]

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Leslie
Last name: Evenden
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Leslie
Last name: Evenden
Organization:
Title:
Comments:
HC1272

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

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Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Leslie
Last name: Evenden
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Leslie
Last name: Evenden
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Leslie
Last name: Evenden
Organization:
Title:
Comments:

Dear Chief Christiansen,

I live and work on the lands and waters of the Tongass National Forest. The health of the Tongass National Forest is critical to sustaining my way of life in this rugged region. From hunting and fishing, to hiking and camping, to our tourism and commercial fishing-based economies, we rely on the intact habitat that the roadless areas of the Tongass contain. That is why it is important to me that the 2001 Roadless Rule remain in place on the Tongass National Forest. A no-action alternative is the best option for Southeast Alaska.

Prioritizing one antiquated industry over private sectors is bad business, and bad for Southeast Alaska. I support the Tongass Transition and I would like the Forest Service to continue phasing out old growth clearcutting. Please prioritize conservation of the T77 and TNC conservation priority areas in any new Alaska Roadless Rule. This forest is a salmon forest, and the Forest Service should focus on restoring degraded watersheds and fish streams.

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Jean
Last name: Evens
Organization:
Title:
Comments:
My name is Jean Evens and I live in International Falls, Minnesota.

The time to stop these detrimental changes is now.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Jean Evens

Date submitted (Alaskan Standard Time): 12/15/2019 12:00:00 AM
First name: Lisa
Last name: Evens
Organization:
Title:
Comments:
My name is Lisa Evens and I live in Redwood City, CA. I am writing to oppose rolling back the Roadless Area Conservation Rule in Alaska or anywhere else in the U.S.

The Roadless Rule was implemented with great public support to protect our nations must pristine public lands. I urge you to choose the No Action alternative. Any other choice ignores overwhelming public support for the Rule and harms Alaskans and US taxpayers. Rolling back the Roadless Rule puts wildlife and critical habitat at risk, threatens access to clean water, and takes us in the wrong direction when we need to be addressing a climate emergency. Alaska tourism, not forestry, generates the greatest economic benefit and would be negatively impacted by rolling back the Roadless Rule.

Put public interest before corporate profits and keep the Roadless Rule unchanged.

Sincerely,

Lisa Evens

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Elizabeth
Last name: Evenson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Elizabeth Evenson

Date submitted (Alaskan Standard Time): 10/21/2019 12:00:00 AM
First name: Lynn
Last name: Evenson
Organization:
Title:
Comments:
Keep 'Roadless Rule' Protections for the Tongass National Forest

Dear U.S. Forest Service,

Once in awhile, "nothing" is the best thing to do. That is the case here: choose the "no action" alternative as regards the Tongass National Forest's 9 million untouched acres. I ask that you choose that course of (non)action.

I speak as a lifelong outdoor bum, a happy citizen of wild areas where roads, phones, machines, power poles and buildings are banned. I am one of millions who spend billions of dollars a year to be in such places. I live in Ely, Minnesota, 3/4 of a mile from my front door to 2 million acres of unpolluted water in the Boundary Waters and Quetico canoe wildernesses.

The Forest Service's plan to eliminate "Roadless Rule" protections for the Tongass National Forest will open the door to clearcutting and bulldozing. You know this. The Tongass belongs to all Americans, not the timber industry, which provides a small fraction of the jobs and income in Southeast Alaska compared to tourism and fishing - both of which rely on intact forests to thrive. Your agency has fragmented and logged so much of our national forests, harming wildlife and waters along the way. I have little faith in your ability to change course here, but will demand it anyway.

Further, I vehemently oppose your plan to open the Chugach National Forest to bulldozing and clearcutting for logging. This is simply a backdoor repeal of the 2001 Roadless Rule, a sneaky move that is beneath you - or should be.

Besides being an outdoor enthusiast, I also have a nasty habit of breathing. The forests of the earth do massive amounts of work to keep our air suitable for such activities. Surely you know that. Surely you wish to keep the air clean enough to breathe, for yourself and everyone else (except possibly your orange-haired boss).

You know that this administration regards untouched wild places as worthless. It also takes great pleasure in harm for no reason other than spite. You must be the grown-up in the room. Please think of future generations by selecting the "no action" alternative to maintain "Roadless Rule" protections for the Tongass and Chugach, and all other wild lands.

Whatever course you take, you can expect to hear from me and my millions of like-minded dirtbags. It is up to you whether you'll welcome or dread the messages. No threat, but rather a promise.

Sincerely,

Lynn Evenson

Ely, MN 55731

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Marilyn
Last name: Evenson
Organization:
Title:
Comments:
My name is Marilyn Evenson and I live in Norwalk, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Marilyn Evenson

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Mark
Last name: Evenson
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Mark Evenson

Date submitted (Alaskan Standard Time): 12/14/2019 12:00:00 AM
First name: Nancy
Last name: Everds
Organization:
Title:
Comments:
Please keep this cares roadless. There are so few places this grand. Don't destroy it.

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Greg
Last name: Everett
Organization:
Title:
Comments:
My name is Greg Everett and I live in Eagle River, Wisconsin.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Greg Everett

Date submitted (Alaskan Standard Time): 10/18/2019 8:52:29 PM
First name: John
Last name: Everett
Organization:
Title:
Comments:
Comments to oppose modification to the Roadless Rule

Dear U.S. Forest Service,

The Roadless Rule helps protect old-growth habitat for birds like the Prince of Wales Spruce Grouse and Northern Goshawk, as well as for mammals like wolves and deer. Opening roadless areas to more logging and roads will fragment the forest and eliminate more of the big old trees that these animals rely on.

Yet, all of the action alternatives in the Draft Environmental Impact Statement allow more roadbuilding and logging across the Tongass National Forest. Logging roads and timber operations cost tens of millions of taxpayer dollars every year, with zero return on investment. Meanwhile, these destructive activities degrade the naturally sustainable wealth of salmon, wildlife watching, and tourism opportunities.

It is time to stop opening more and more acres to the timber industry and instead bolster protections to the old-growth forests and wild areas on the Tongass. I urge you to select the "No Action" Alternative (Alternative 1) and allow the Roadless Rule to remain intact on the Tongass National Forest.

Sincerely,
John Everett
Grass Valley, CA 95945

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: John
Last name: Everett
Organization:
Title:
Comments:
My name is John Everett and I live in Grass Valley, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, John Everett

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Kathy
Last name: Everett
Organization:
Title:
Comments:
My name is Kathy Everett and I live in Carlisle, Pennsylvania.

In the coming months, not years, what we can do, though limited, is crucial to our fight against the harm that will come from the warming of our planet. Not to do all we can to alleviate this trend is criminal. Please please do all in your authority to be on the side of humanity, to save our fragile environment. Thank you.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Kathy Everett

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 12:00:00 AM
First name: Robin
Last name: Everett
Organization:
Title:
Comments:
[Attached postcard received 12/31/2019. Redacted to protect personally identifiable information. Original is in the project record.]

Text:

Dear Secretary Perdue,

I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed changes to the Alaska Roadless Rule. I strongly object to your plans to reduce and remove protections from roadless areas in the Tongass National Forest. The Tongass contains the largest remaining intact temperate rainforest on Earth, and its value in providing clean water and habitat for fish and wildlife is essential to the economic and ecological health of Southeast Alaska, Furthermore, it's a critical carbon sink to combat climate change.

I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska and across the country.

Sincerely,

Name:

Address:

City: Zip:

Email:

Phone:

[Position]

Dear Secretary Perdue,

I am writing to support the **No Action Alternative** for the Draft Environmental Impact Statement on the proposed changes to the Alaska Roadless Rule. I strongly object to your plans to reduce and remove protections from roadless areas in the Tongass National Forest. The Tongass contains the largest remaining intact temperate rainforest on Earth, and its value in providing clean water and habitat for fish and wildlife is essential to the economic and ecological health of Southeast Alaska. Furthermore, it's a critical carbon sink to combat climate change.

I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska and across the country.

Sincerely,

Name: Robin Everett

Address: [redacted]

City: [redacted]

Email: [redacted]

Phone: [redacted]

SEATTLE

Dec. 31, 2019

Ken Tu
ID Team Leader
Alaska Roadless Rule
USDA Forest Service
P.O. Box 2168
Juneau, Alaska 99802-1628

Wenda Berry

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Todd
Last name: Everett
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Todd Everett

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Aurora
Last name: Everhart
Organization:
Title:
Comments:
My name is Aurora Everhart and I live in Anacortes, WA. I am writing a comment on the Alaska Roadless Rule DEIS because I am concerned with how the Rule and the proposed full exemption will affect the Tongass National Forest and the Chugach National Forest.

I had the great privilege of visiting the Tongass National Forest many years ago. Its a unique environment that needs protection to provide a sustainable future for many.

I urge the Forest Service to select Alternative 1, the no action alternative, for the final decision on the Alaska Roadless Rule. This alternative protects the inventoried roadless areas in Alaska that are full of pristine wilderness and provide important fish and wildlife habitat, and already allows for important community and economic development projects. As an American citizen, I value the Tongass National Forest and the Chugach National Forest for its status as America's best natural solution to climate change and its sequestering of millions of metric tons of carbon and mitigating climate change, its wild salmon populations and the world-class fishing opportunities, its huge swaths of intact ecosystems and all the biodiversity it contains, its status as the largest intact temperate rainforest in the world, the recreational opportunities it provides, the high density of incredible wildlife it contains, to keep public lands wild for future generations, its status as a national and global treasure, the lifestyles of the indigenous communities that the forest supports. A full exemption does not protect these priorities, nor does it effectively balance economic development with the countless other benefits provided by roadless areas. I would like the Forest Service to manage roadless areas for low-impact recreation (camping, hiking, hunting, foraging, etc), medium-impact recreation (FS cabins, trails, mooring buoys, 3-sided shelters), passive/active watershed restoration (stream and habitat) to improve/maintain roadless characteristics (culvert removal/replacement, improve fish passage, wildlife thinning, etc). It is important to me that high-value intact habitat including the T77 watersheds and the TNC conservation priority areas retain their roadless protections in any alternative selected.

The Forest Service is wasting taxpayers' valuable time and money by trying to prop up a failing timber industry in Southeast Alaska. The nonpartisan, independent taxpayer watchdog Taxpayers for Common Sense reported that the Tongass timber program has losses of over $600 million of taxpayers money in the past 20 years. I would rather see my taxpayer dollars used to restore salmon habitat that was hurt by past logging practices, perform restorative actions that support wildlife populations on previously degraded landscapes that support wildlife populations. We need to stop subsidizing the clearcutting of old growth on the Tongass through taxpayer funded roadbuilding. If a full exemption were chosen, it would not create opportunities and would instead prioritize the special interests of one industry over the interests of the entire American public.

The Tongass is Americas homegrown natural solution to climate change. The forest sequesters 8% of the carbon stored in forests throughout the contiguous US states, some 3 billion metric tons of it. We must take action to mitigate and adapt to climate change, and maintaining the Tongass in a roadless state is critical for a sustainable future.

I urge the Forest Service to listen to the voices of the American people and prioritize them over corporate interests. The Forest Service should strengthen public involvement in developing land management policy and focus on broadly supported work rather than allowing special corporate interests to guide policy changes. Attempting to exempt inventoried roadless areas on the Chugach National Forest from the Alaska Roadless

Rule adds further insult to injury, and this proposal has not received any sufficient environmental impact analysis or public input. Choosing a full exemption will not create a long lasting, durable solution for roadless areas in Alaska it will only increase the legal challenges, uncertainty for businesses, and conflict over these forests going forward.

[Position]

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Scot
Last name: Everhart
Organization:
Title:
Comments:
My name is Scot Everhart and I live in Aurora, Colorado.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Scot Everhart

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: William
Last name: Everingham
Organization:
Title:
Comments:
3726

U.S. Forest Service Alaska Roadless Rule
Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.
Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,
William Everingham
Centennial, CO 80015

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: William
Last name: Everingham
Organization:
Title:
Comments:
HC3726

U.S. Forest Service Alaska Roadless Rule

Comment Period:

Comment Period Alaska Roadless Rule:

I am writing in support of the 'no action' alternative to leave the Roadless Rule unchanged in Alaska. I am concerned that changes to the rule would lead to greatly expand clear-cut logging of old growth timber and costly road building in undeveloped, wild areas of both the Tongass and Chugach Forests. These activities increase sedimentation, hurt water quality, often block salmon migration, and add to an already large backlog of needed road maintenance and restoration.

Our fisheries and wild forests are critical to the economy of Alaska. To grow these sectors of our economy, we need intact habitat. Please leave the Alaska Roadless Rule in place.

Sincerely,

William Everingham

Centennial, CO 80015

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Scott
Last name: Everist
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Scott Everist

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Allison
Last name: Everitt
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Allison Everitt

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Allison
Last name: Everitt
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Allison Everitt

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Gayle
Last name: Everitt
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Gayle Everitt

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Gayle
Last name: Everitt
Organization:
Title:
Comments:
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Regards, Gayle Everitt

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Margaret
Last name: Everitt
Organization:
Title:
Comments:
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Regards, Margaret Everitt

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Mary
Last name: Everling
Organization:
Title:
Comments:
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Regards, Mary Everling

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Nicole
Last name: Everling
Organization:
Title:
Comments:
My name is Nicole Everling and I live in Eagan, Minnesota.

We desperately need to protect our future on this planet and keep carbon sources in the ground.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Nicole Everling

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Daniel
Last name: Everly
Organization:
Title:
Comments:
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Regards, Daniel Everly

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Daniel
Last name: Everly
Organization:
Title:
Comments:
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Regards, Daniel Everly

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Patricia
Last name: Everly
Organization:
Title:
Comments:
My name is Patricia Everly and I live in Clinton, Iowa.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.
Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.
NOT ONLY IS THIS WRONG FOR THE ABOVE REASONS, IT IS INCREDIBLY SHORT-SIGHTED.
Regards, Patricia Everly

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Pamela
Last name: Evers
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Pamela Evers

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Patricia
Last name: Evers
Organization:
Title:
Comments:
My name is Patricia Evers and I live in Anchorage, AK.

What we do now effects future generations, yours included.It is our responsibly as human beings to protect the land.The rule was implemented for a REASON.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Patricia Evers

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: William
Last name: Evers
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: April
Last name: Eversole
Organization:
Title:
Comments:
My name is April Eversole and I live in Hanoverton, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, April Eversole

Date submitted (Alaskan Standard Time): 12/12/2019 3:00:00 PM
First name: Herb
Last name: Evert
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
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Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Herb
Last name: Evert
Organization:
Title:
Comments:
My name is Herb Evert and I live in Cottage Grove, Wisconsin.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Herb Evert

Date submitted (Alaskan Standard Time): 12/5/2019 3:00:00 PM
First name: Kathy
Last name: Evert
Organization:
Title:
Comments:
My name is Kathy Evert and I live in Elcho, Wisconsin.
I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest.
You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.
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Thank you for considering my comments.
Regards, Kathy Evert

Date submitted (Alaskan Standard Time): 10/24/2019 12:00:00 AM
First name: McKenna
Last name: Evert
Organization:
Title:
Comments:
See attached file(s)

The following text was copy/pasted from an attached letter. The system cannot display the formatting, graphics, or tables from the attached original.

To the Forest Service,

I do not agree with the removal of the Tongass National Forest from the Roadless Rule. The only positive side to this scenario is to open several acres of the forest for logging purposes, but there are several downsides and negative aspects that surely outweighs the good in this situation. Logging the trees in this area will make the forest more prone to water pollution in rivers and streams, will decline the salmon and deer populations due to the pollution, and create a visual pollution of the scenery that these fortifying trees provide.

Because this forest is so vast in its quantities of fishing and hunting, and is such a fantastic place to fish and hunt, it attracts a lot of tourism. The fishers and hunters the forest brings in alone provides a lot of local jobs to the people that live in or around the area already, and the paving of new constructed or reconstructed roads will be expensive. As I have already mentioned, the removal of these trees will greatly decline the populations of these fish and wildlife, which in turn will decline the amount of tourism to this area, which will also in turn result in the loss of jobs to the local people.

The removal of the acres of trees in general will cause a great decline in the prosperity of the forest as a whole. As soon as the trees are chopped down, it will change the flow of those nearby rivers and streams that rely on these trees to meander, and leave them prone to erosion due to the roots of the trees not being able to hold the soil in place. The trees can provide shelter and food to the wildlife in the forest, but when the resources are taken away, the wildlife that needs to survive on these trees will start to face a decline. Eagles and ravens in the area rely on the trees for shelter; taking the trees away will just minimize their ability to find a home. The wildlife that relies on the rivers and streams to provide plentiful amounts of fish will also face a decline if their food source, due to rivers and streams changing flow and the fish dying off to pollution, is taken away from them as a whole.

I strongly urge the rethinking of this idea, because it is not only about expanding the logging industry. These trees have been in this forest for a long, undisturbed time; most of these trees would not even be sufficient for the logging industry due to most of them being low quality sources of timber. Logging will greatly affect the ecosystem of the habitat as a whole, and everything living within or around it. Not only will it affect the wilderness, but it will face a lack in tourism if the habitat is in a decline with the wildlife populations due to the logging of its trees. People will not want to come to a forest for hunting and fishing if there isn[rsquo]t good enough and plentiful enough game in the area that is within a stable population.

Sincerely,

McKenna Evert

[Position]

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Sincerely,

McKenna Evert

[Position]

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Sincerely,

McKenna Evert

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Jim
Last name: Everts
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Jim Everts

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Richard
Last name: Everuth
Organization:
Title:
Comments:
HC4887

Dear U.S. Forest Service,

CC: Alaska Congressional Delegation and Federal Administration

I support the no-action alternative to leave the 2001 Roadless Rule in place on the Tongass National Forest. We must continue to phase out old-growth clear-cut logging and instead prioritize restoring degraded watersheds and fish streams that contribute to the growing fisheries and tourism-based economies of Southeast. To that end, please conserve the Tongass 77 and TNC priority areas in the final Roadless Rule.

Sincerely,

Comments: *(Eg: list locations you recreate, or why you value Tongass fish & wildlife)* [Text italicized for emphasis]

[Box unchecked] I would like to get more involved in the campaign!

*By taking this action, you are consenting to receive future communications via phone, text message, email, or mail from Sitka Conservation Society and its partners working to protect the Tongass. * [Text italicized for emphasis]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Dale
Last name: Evilsizer
Organization:
Title:
Comments:
My name is Dale Evilsizer and I live in Quartz Hill, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Dale Evilsizer

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Susan
Last name: Evilsizer
Organization:
Title:
Comments:
My name is Susan Evilsizer and I live in Cleveland, Ohio.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Susan Evilsizer

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Eric
Last name: Evinczik
Organization:
Title:
Comments:
My name is Eric Evinczik and I live in Buffalo, New York.

Trump is the worst president we've had in a long time and his opening of the Tongass Forest is a very stupid idea.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Eric Evinczik

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/10/2019 3:00:00 PM
First name: Debra
Last name: Evon
Organization:
Title:
Comments:
My name is Debra Evon and I live in Minneapolis, Minnesota.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Debra Evon

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Nan
Last name: evoniuk
Organization:
Title:
Comments:
My name is Nan evoniuk and I live in Los Angeles, California.

We need MORE trees, not less! Leave this place alone! We will NOT give up the fight for public lands remaining public. NOTHING IS SACRED TO TRUMP BUT THE DOLLAR.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Nan evoniuk

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Lois
Last name: Evron
Organization:
Title:
Comments:
My name is Lois Evron and I live in Cedarhurst, New York.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Lois Evron

Date submitted (Alaskan Standard Time): 12/8/2019 3:00:00 PM
First name: Mike
Last name: Ewald
Organization:
Title:
Comments:
My name is Mike Ewald and I live in Miami, Florida.

"How is it the that the most intellectual creature to ever walk the planet is destroying it's only home ?"~Jane Goodall

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Mike Ewald

Date submitted (Alaskan Standard Time): 12/9/2019 12:00:00 AM
First name: Mike
Last name: Ewald
Organization:
Title:
Comments:
My name is Mike Ewald and I live in Miami, Florida.

"How is it the that the most intellectual creature to ever walk the planet is destroying it's only home ?"~Jane Goodall

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Mike Ewald

[Position]

[Position]

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Susan
Last name: Ewald
Organization:
Title:
Comments:
My name is Susan Ewald and I live in Purcellville, Virginia.

Please don't sell out America's century-old trees to placate a few lumber businesses with quick profits.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Susan Ewald

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Chris
Last name: Ewalt
Organization:
Title:
Comments:
My name is Chris Ewalt and I live in Shelbyville, Kentucky.

Please protect our forests. They belong to all of us not the wealthy timber companies. They are needed for the air we breathe and for helping to reduce the carbon emissions and help offset climate change. We need to take a stand now for the sake of humanity and the planet. Money means nothing if there is nothing left.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.

Regards, Chris Ewalt

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Anne
Last name: Ewart
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Anne Ewart

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Jamie
Last name: Ewen
Organization:
Title:
Comments:
My name is Jamie Ewen and I live in Ann Arbor, Michigan.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Jamie Ewen

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Leslie
Last name: Ewer
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Leslie Ewer

Date submitted (Alaskan Standard Time): 11/9/2019 3:00:00 PM
First name: Leslie
Last name: Ewer
Organization:
Title:
Comments:
My name is Leslie Ewer and I live in Rochester, Washington.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Thank you for considering my comments.
Regards, Leslie Ewer

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First name: Leslie
Last name: Ewer
Organization:
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The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Leslie Ewer

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First name: Leslie
Last name: Ewer
Organization:
Title:
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Regards, Leslie Ewer

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Leslie
Last name: Ewer
Organization:
Title:
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Regards, Leslie Ewer

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: William
Last name: Ewer
Organization:
Title:
Comments:
HC5284

U.S. Forest Service Alaska Roadless Rule Committee:

I was in Juneau, Ketchikan and Sitka in 2018 when I spent many enjoyable hours in the old growth forests. The wilderness areas along the Alaskan inside passage are remarkable. There is nothing like it in the lower 48 states. It would be a huge and unforgivable mistake to allow this coastline and its wilderness treasures to be ruined by new roads and logging that would imperil the wildlife and fish populations.

The Roadless Rule has been instrumental in conserving the Chugach and Tongass National Forest and in supporting their associated fish and wildlife-based industries for more than 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77, by selecting the 'no action' alternative. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

William Ewer

Longmont, CO 80504

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Greg
Last name: Ewert
Organization:
Title:
Comments:
HC3321

U.S. Forest Service Alaska Roadless Rule

Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Greg Ewert

Lake Forest, IL 60045

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Greg
Last name: Ewert
Organization:
Title:
Comments:
3321

U.S. Forest Service Alaska Roadless Rule
Comment Period

Comment Period Alaska Roadless Rule:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,
Greg Ewert
Lake Forest, IL 60045

Date submitted (Alaskan Standard Time): 11/7/2019 3:00:00 PM
First name: Gregg
Last name: Ewert
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Sylvia
Last name: Ewerts
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Sylvia Ewerts

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Sylvia
Last name: Ewerts
Organization:
Title:
Comments:
My name is Sylvia Ewerts and I live in Huntington, Vermont.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Sylvia Ewerts

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Ann
Last name: Ewing
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Ann Ewing

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Ann
Last name: Ewing
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Ann Ewing

Date submitted (Alaskan Standard Time): 11/5/2019 3:00:00 PM
First name: Bernard
Last name: Ewing
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Debra
Last name: Ewing
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Debra Ewing

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Douglas
Last name: Ewing
Organization:
Title:
Comments:
HC4095

U.S. Forest Service Alaska Roadless Rule Committee:

I go to Alaska (and spend my money there) to enjoy the fishing and the wilderness. Compromising the roadless rule would cause me to look elsewhere for the experience.

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,

Douglas Ewing

Tuxedo Park, NY 10987

Date submitted (Alaskan Standard Time): 1/1/0001 12:00:00 AM
First name: Douglas
Last name: Ewing
Organization:
Title:
Comments:
4095

U.S. Forest Service Alaska Roadless Rule Committee:

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The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for almost 20 years. Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77. Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. Please do not roll back roadless area protections for habitat that our irreplaceable fish and wildlife populations need to survive.

Sincerely,
Douglas Ewing
Tuxedo Park, NY 10987

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: James
Last name: Ewing
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, James Ewing

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: maria
Last name: ewing
Organization:
Title:
Comments:
My name is maria ewing and I live in Harrison Township, Michigan.

I beg of those in power to stand back from the financial profiting aspects of their decisions and look into their hearts when it comes to mother earth's precious gifts bestowed upon us, such as these magnificent monuments. Preserve them please! Mother Earth will thank you for it.Thank you.M. Ewing

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, maria ewing

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Marsha
Last name: Ewing
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Marsha Ewing

Date submitted (Alaskan Standard Time): 11/9/2019 12:00:00 AM
First name: Sheri
Last name: Ewing
Organization:
Title:
Comments:
My name is Sheri Ewing and I live in Ironwood, Michigan.

Once an unspoiled wilderness is open to logging or mining, you cannot undo the damage that is done as noted above.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

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Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Sheri Ewing

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Tony
Last name: Ewing
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Tony Ewing

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: William
Last name: Ewing
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, William Ewing

Date submitted (Alaskan Standard Time): 11/14/2019 12:00:00 AM
First name: Mona
Last name: Exinger
Organization:
Title:
Comments:
My name is Mona Exinger and I live in Warren, Oregon.

The oil and gas industry has proven over and over that it cannot be relied on to voluntarily control its own pollution. It's old news. The industry won't do anything unless it's REQUIRED.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Mona Exinger

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/15/2019 3:00:00 PM
First name: Brad
Last name: Exline
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Brad Exline

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Cynthia
Last name: Eyer
Organization:
Title:
Comments:
My name is Cynthia Eyer and I live in Garner, North Carolina.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Cynthia Eyer

Date submitted (Alaskan Standard Time): 12/12/2019 3:00:00 PM
First name: Pete
Last name: Eyheralde
Organization:
Title:
Comments:
As a supporter of Backcountry Hunters & Anglers and our wild public lands, waters and wildlife, I am very concerned with the proposed rulemaking announced in Federal Register Document Number 2019-0023. I am writing these comments to strongly encourage you to maintain roadless area protections for the Tongass National Forest, including the wild fisheries habitat in the Tongass 77 and adopt the no action Alternative 1. These public lands and waters are prized by sportsmen and women and are a mainstay of Alaska's economy, helping drive an $887 billion economic engine from outdoor recreation like hunting and fishing.
At nearly 17 million acres, the Tongass is the nation's largest national forest and the world's largest remaining intact coastal temperate rainforest; 9.3 million acres of that wild backcountry is inventoried roadless areas, providing high quality habitat for a unique diversity of sought-after game species, including mountain goats, black-tailed deer and both brown and black bears. The Tongass also encompasses thousands of miles of salmon-rich waterways, legendary among anglers and fundamental to the state's commercial salmon industry. The commercial fishing sector alone relies on the Tongass for more than 80 percent of its salmon and employs more than 4,300 people in the region, accounting for 9 percent of the area's entire employment. By contrast, timber production accounts for only 1 percent of the region's jobs.
Further, this proposal and the preferred alternative set a slippery precedent that threatens to unravel roadless rule protections for fish and wildlife across all of our nation's wild roadless forest lands. None of the identified alternatives take into consideration BHA's scoping comments to include balanced management policies for the Tongass, utilizing the 2001 Roadless Area Conservation Rule as a foundational benchmark for improvements so that any roadless policies only enhance the most important fish and wildlife habitats. Logging and timber harvest already co-exist with roadless areas in the Tongass after years of prior compromise and consensus-building.
I implore you to maintain the integrity of Alaska's roadless areas and the Tongass 77, critical watersheds for trout and salmon. The Roadless Area Conservation Rule is a collaborative management approach adopted following one of the most extensive public engagement campaigns in the history of federal rulemaking. It may be America's best and most popular land management rule ever. The costs to American taxpayers for road building and unconscionably subsidized resource extraction are too high - not to mention the irreparable impact to wildlife, water, subsistence practices and traditions like hunting and fishing.

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Organization:
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Comments:
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Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Will
Last name: Eyiott
Organization:
Title:
Comments:
HC6179

Dear U.S. Forest Service:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for more than 20 years. *Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77.* [Text bolded for emphasis] Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. *Please do not roll back roadless are protection for habitat that our irreplaceable fish and wildlife populations need to survive.* [Text bolded for emphasis]

Customize your comment by listing reasons the Tongass is important to you or why you value Alaska Roadless areas: (ex: specific locations you recreate, activities you do, or why you value fish & wildlife) [Text italicized]

I [illegible] fish, and guide in the Tongass. It's my house and my livelihood. It's worth so much more as it is, protected, not chopped up for a quick buck (especially an unsustainable, subsidized one). Keep the Rules protections in place. Thank you.

Sincerely,

Would you like to volunteer with TU Alaska to Help America's Salmon Forest?

Yes[Text circled] No

[Position]

Date submitted (Alaskan Standard Time): 10/20/2019 12:00:00 AM
First name: Jordan
Last name: Eyre
Organization: US Air Force, Retired
Title:
Comments:
Please, please don't open this public land to logging or drilling! This is the people's land, and this action effectively gifts public property to private businesses and takes money from my pocket. Additionally, I love to hike and camp. I backpack dozens of night per year. If this land if gifted to logging and drilling companies, it decreases the amount of land available to people like me to enjoy.

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/17/2019 12:00:00 AM
First name: Lisa
Last name: Eyring
Organization:
Title:
Comments:
HC6062

Dear U.S. Forest Service:

The Roadless Rule has been instrumental in conserving the Tongass National Forest and in supporting its fish and wildlife-based industries for more than 20 years. *Please uphold the Rule's protections for important fish and wildlife areas, including the Tongass 77.* [Text bolded for emphasis] Roadless areas are an important source of food, jobs, and income through commercial, subsistence, and recreational fishing. Salmon are part of Alaska's culture and we must protect them and their spawning streams. *Please do not roll back roadless are protection for habitat that our irreplaceable fish and wildlife populations need to survive.* [Text bolded for emphasis]

Customize your comment by listing reasons the Tongass is important to you or why you value Alaska Roadless areas: (ex: specific locations you recreate, activities you do, or why you value fish & wildlife) [Text italicized]

Sincerely,

Would you like to volunteer with TU Alaska to Help America's Salmon Forest?

Yes * No*[Text circled]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Carol
Last name: Eyster
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Carol Eyster

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Elizabeth
Last name: Ezerman
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

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Regards, Elizabeth Ezerman

Date submitted (Alaskan Standard Time): 11/8/2019 12:00:00 AM
First name: Matt
Last name: Ezero
Organization:
Title:
Comments:
My name is Matt Ezero and I live in Peru, New York.

Our forests must be preserved so that we can stave off the climate crisis and mass extinction of animal species, so please do what you can to protect them.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.

Regards, Matt Ezero

[Position]

[Position]

Date submitted (Alaskan Standard Time): 12/16/2019 3:00:00 PM
First name: Matt
Last name: Ezero
Organization:
Title:
Comments:
I am writing to support the No-Action Alternative for the Draft Environmental Impact Statement on the proposed Alaska Roadless Rule, Alternative #1. I support keeping the current Roadless Rule protections in place and intact for the Tongass National Forest. Trumps plan is yet another attack from the Trump administration on Indigenous rights. Alaskan Native communities -- including the Tlingit, Haida, and Tsimshian peoples -- have depended on the Tongass Rainforest for millennia. It is the backbone to their culture, traditions, and communities -- we simply cannot let it disappear.

The Tongass contains some of the largest intact old-growth temperate rainforest in the world, and its value in providing clean water for fish and wildlife habitat is essential to the economic and ecological health of Southeast Alaska. I urge you to keep the federal Roadless Rule intact and current protections in place for national forests in Alaska.

In addition, I strongly object to your plans to reduce and remove protections from our national forests roadless areas. The Roadless Rule is one of the smartest and most popular land management policies the Federal Government has ever adopted. Not only does it preserve some of Americas best fish and wildlife habitat, but it also saves untold millions of taxpayer dollars that might otherwise be spent to subsidize money-losing timber sales. The value of the Roadless Rule in preventing environmentally damaging and economically wasteful road-building and logging is particularly relevant in the Tongass, where logging costs vastly exceed timber revenues and require unconscionable taxpayer subsidies.
Regards, Matt Ezero

Date submitted (Alaskan Standard Time): 11/8/2019 3:00:00 PM
First name: Sam
Last name: Ezratty
Organization:
Title:
Comments:
My name is Sam Ezratty and I live in Woodland, California.

I am writing to express strong opposition to efforts to roll back the Roadless Area Conservation Rule (Roadless Rule) in Alaska or elsewhere. The Roadless Rule was implemented with unprecedented public support to protect some of our nations most pristine public lands, including large parts of the Tongass National Forest. You must choose the No Action alternative. Any other choice would ignore overwhelming public support and harm Alaskans, including Alaska Natives, and taxpayers across the nation.

In Southeast Alaska, tourism accounts for 28% of employment and generate an annual $1 billion in economic benefit, making it far more of an economic driver than the timber industry, which is less than 1% of the regional economy.

Any choice but the No Action alternative would also put wildlife and critical habitat at risk, threaten access to clean water, and be a step in the wrong direction on climate change jeopardizing Alaskans at a time when the state already faces severe challenges related to rising temperatures. I urge you not to abandon the Roadless Rule in Alaska and instead to put the public interest above corporate profits by choosing to keep the rule in place unchanged.

Thank you for considering my comments.
Regards, Sam Ezratty