

- **Greater Southeast Alaska Conservation Community • The Boat Company • •**
- **Cascadia Wildlands • Center for Biological Diversity • Greenpeace •**

Notice of Objection to the Proposed Amendment to the Land and Resource Management Plan and Final Environmental Impact Statement

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Dear Reviewing Officer Pendleton:

The undersigned organizations provide the following formal objection to the Proposed Land and Resource Management Plan (LRMP) and Final Environmental Impact Statement (FEIS). This letter is a formal objection to the Forest Plan Amendment pursuant to 36 C.F.R. § 219, Subpart B. The Responsible Official is Tongass National Forest Supervisor Earl Stewart who will implement the Amendment in the Tongass National Forest. [Draft ROD at 35]. The objection letter is submitted on behalf of Greenpeace, Cascadia Wildlands (“Cascadia”), the Greater Southeast Alaska Conservation Community (GSACC), Center for Biological Diversity (the “Center”) and The Boat Company. The undersigned organizations submitted timely comments on the DEIS on February 22, 2016, and are eligible to file an objection under 36 C.F.R. § 219.53(a). Because the citation to the location of our comments in the record is extremely cumbersome,¹ we reference instead throughout this letter to the exact copy we are submitting to today (along with other documents), as “Ref167” (GSACC et al. 2016).

Three DVD disks of exhibits have been sent by certified mail today. The collection includes new exhibits as well as previously submitted ones, since some exhibits from our earlier submissions were difficult to locate, in some cases missing, and for many of them, awkward to cite from the record. The collection submitted today is cleanly organized and has consistent numbering. The objection letter’s citations to the exhibits are of the form “Refnnn”.

Please cite this objection letter and the collections of exhibits as “GSACC et al. (2016).”

Larry Edwards of Greenpeace is the lead objector pursuant to 36 C.F.R. § 219.54(c)(3), as the most readily contacted representative of objectors. The legal notice for the project was published in the Ketchikan Daily News on July 1, 2016. [PR 769-02-000040] This objection letter is timely filed under 36 C.F.R. § 219.56 via electronic mail on August 30, 2016.

¹ The file has no number and is located at: “769_02_000139 (Public comments, DEIS)\archive\documents\Public Comment - Edwards_Larry (Attachment).pdf”

The Plan Amendment would, over time, transition the agency's timber program from logging primarily old-growth forest to logging primarily recovering forests ("young growth") while attempting to retain the existing timber industry in southeast Alaska. [FEIS at ES-2]. The proposed Amendment focuses on a very small component of the regional economy – the timber industry – and addresses primarily timber management issues: (1) reexamining the suitability of areas for timber harvest; (2) identifying the agency's desired level of overall forest removals; and (3) developing standards and guidelines for logging recovering forests. [*Id.* at ES-2-3]. The proposed Amendment fails to provide sufficient direction that would guarantee an end to old-growth logging and instead sets non-binding objectives aimed at increasing the proportion of second-growth forests removed by timber operators. [Draft LRMP at 5-7].

Our scoping and DEIS comments explained that we would support an Amendment process that focused on ending old-growth logging immediately by considering several alternative means of providing for regional economic, ecological and social sustainability. We noted that this process implicates many resource issues including climate change impacts, land allocations, harm to commercially and recreationally important salmon populations, and the inadequacy of the Forest Plan's conservation strategy, particularly for important subsistence species such as deer and iconic species such as the Alexander Archipelago wolf. In other words, the necessary scope of the Amendment should have encompassed a broader suite of resource values.

Instead the proposed Amendment and its focus on providing a long-term timber supply primarily for two companies are far too narrow to enable the Amendment process to accommodate the requisite range of alternatives and analysis. Major Forest Plan changes are necessary to address the ecological, economic and social sustainability needs of the region and its islandic ecosystems. The amended LRMP should have redirected the Tongass National Forest's current management emphasis away from subsidizing the marginal timber economy to supporting market-based growth in the recreation economy. It should have ensured adequate, high quality habitat, for abundant wildlife and fish populations throughout the forest, and elimination of the transportation system's deferred maintenance backlog. As explained in the following objection letter, the analysis in the FEIS is inadequate, and the proposed LRMP requires major changes in order to best meet the needs of the region, and to comply with minimum standards set forth under the National Forest Management Act and its implementing regulations.

In particular, we request that the preparation of an additional NEPA analysis that includes an alternative that eliminates old-growth logging *now*, and downscales the level and location of the proposed second-growth logging. Such an alternative would meet the agency's multiple use obligations under the NFMA and meet planning rule requirements. Additionally, we note the public cost of the timber sale program, and particularly the unquantified subsidies recommended by the Tongass Advisory Committee that would support public spending on a massive transportation system, mill equipment and timber sale preparation. Thus, an alternative that downscales the timber program is also a conservative, pro-business alternative that preserves forest resources for the benefit of the non-timber economic sectors that rely on private investment, risk and innovation to support market-based economies.

The following comments are submitted on behalf of The Boat Company, Cascadia Wildlands, the Center for Biological Diversity (The Center), Greenpeace, and the Greater Southeast Alaska Conservation Community (GSACC). The commenting organizations have members who use public lands managed by the Tongass National Forest for recreation, commercial fisheries, subsistence, wildlife viewing and other activities:

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 is a growing regional conservation non-profit organization in Southeast Alaska that was formed in 2011 by a Board with unparalleled experience in regional resource management issues. GSACC seeks to foster protection of southeast Alaska’s fish, wildlife and their habitats. Its membership uses public lands throughout southeast Alaska and the project area for commercial fishing, hunting, subsistence, professional scientific work, and a wide range of recreational activities.

Cascadia Wildlands members and staff use and enjoy the Tongass National Forest, Prince of Wales Island and the BTP project area for personal recreation, education, commercial fishing and tourism, photography and other uses. We fear our continuing enjoyment of the area would be adversely impacted by the BTP. Cascadia acts in the interest of conservation of these opportunities for ourselves, for future generations, and for the intrinsic worth we find in a healthy, functioning wildland.

Greenpeace is a non-profit environmental organization and its mission is to raise public awareness of environmental problems and promote changes that are essential to a green and peaceful future. The organization’s involvement in forest issues concerning the National Forest System generally and particularly the Tongass National Forest and other forests of southeast Alaska dates back to the early 1990s. Our concerns have included the effects of logging and associated road construction on ecosystems, roadless areas, fish, wildlife and hunting, as well as protection of the last remnants of old-growth forest in the United States.

The Center is a non-profit environmental advocacy organization with more than 300,000 members and online activists dedicated to conservation and recovery of species-at-risk of extinction and their habitats. Center members, activists and staff maintain long-standing interests in clean water and biological diversity on the Tongass National Forest. Its overriding concerns pertain to adverse impacts on rare, sensitive and imperiled species.

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I. Introduction

Our scoping and DEIS comments requested that you make substantial changes to the current Purpose and Need for the Amendment that allow for the development of a broader range of alternatives.² Implementation of the 1997 TLMP and 2008 TLMP Amendment has resulted in a disproportionate distribution in the island ecosystems south of Frederick Sound of large volume, export-driven timber sales that remove high value habitat that is needed for

² We have consistently explained that the range of alternatives needs to include an alternative that provides for an immediate end to old-growth logging and deferring removals of second-growth forests to mitigate damage caused by past logging. *See, e.g.* Ref157 (Greenpeace 1/20/2015 letter to Deputy Forest Supervisor Jason Anderson, Forest Service Chief Tom Tidwell and Undersecretary Robert Bonney); Ref834 (Greenpeace 1/28/2015 letter submitted to the TLMP IDT at the Sitka public meeting that day). Although the record failed to include public comment received through the Tongass Advisory Committee process, there was overwhelming public support for eliminating old-growth logging immediately.

at-risk and economically valuable fish and wildlife populations and ecosystems. Past, present and future intensive clearcutting of old-growth forests in the short-term and subsequently combined with plans to clearcut recovering forests over the long-term poses unjustifiable risks to Region 10 sensitive species, subsistence wildlife species such as deer, apex predators, salmon and unique, endemic wildlife species.

Our scoping and DEIS comments thus requested that you carefully consider whether the federal government can provide a better return from the public expenditures on Tongass National Forest management made by local and national taxpayers. In particular, we requested that you shift the Tongass National Forest's emphasis to developing recreation infrastructure, addressing the impacts of deferred road maintenance on salmon habitat in order to increase economic outputs from the fishery, maintaining existing old-growth habitat, and allowing second growth forest a longer period of recovery so that it can provide old-growth habitat features for wildlife.

The scope of the Amendment as proposed primarily aims at continuing a costly course of producing taxpayer-funded, large-scale old-growth timber sales as long as deemed necessary to maintain a "viable timber industry," and then shifts that subsidy to the logging of recovering forests. The Secretary's Memorandum Addressing Sustainable Forestry in Southeast Alaska references "a viable timber industry" but never defines the contours of a "viable" timber industry, making adherence to this goal entirely arbitrary.

Our balance of our objection letter begins with general objections in Section II. Flaws in the purpose and need for the Amendment and inadequate range of alternatives are covered in Section III. Section IV explains that the FEIS did not provide an adequate carbon accounting for the federal timber sale program, particularly in light of the global significance of federal forests in southeast Alaska as a carbon sink. Section V discusses the need to eliminate old-growth logging, particularly in high risk biogeographic provinces, and identifies problems with LRMP components for logging recovering forests. Section VI discusses plan changes related to the timber industry, and economics.

Section VII discusses risks to wildlife populations and the need to revise the 1997 TLMP conservation strategy, *now*, in light of increased wildlife viability risks on the southern Tongass that will be exacerbated first by the Transition's old growth logging component and second by the removals of recovering forests which would otherwise attain old-growth conditions over time and toward sustaining old-growth dependent species. Section VIII discusses concerns with the transportation system and aquatic habitat. Our comments conclude with a section addressing multiple resource concerns and the need provide a complete record for public review.

II. General Objections

A. The FEIS's Organization—Especially the Response to Comments—Prohibits Meaningful Public Participation and Impedes the Objection Process.

Before turning to our specific arguments and objections, we would like to express our frustration with the Forest Service's chosen approach for responding to substantive comments. We spent a burdensome amount of time digging through the FEIS Volume II, Appendix I – Response to Comments, searching for where the agency responded specifically to each of our points. In many instances, the "Comment" portions in Appendix I—where the agency attempted to summarize substantive comments—would appear similar to the comments we raised, but the "Response" portion would contain multiple and oftentimes vague cross-references to whole chapters of the Forest Plan, sections of the FEIS, or the Forest Service Manual or Handbook.

Most challenging to our ability to provide specific and detailed objections, many of the Responses contain a cross-reference—sometimes several—to other Responses. This made it quite difficult to discern the agency’s specific position on our substantive comments, which in turn made the process of providing specific objection points akin to shooting at a moving (or sometimes invisible) target. Indeed, we counted nearly 200 internal cross-references in Part B of the Response to Comments. In the Responses on the Conservation Strategy (“CONS”), which totaled only 13 pages, we counted 41 cross-references. For comment CONS-11, which focused on reducing slash in young-growth harvest areas, there are eight cross-references alone.

This is a critical structural flaw. The agency’s approach made it extremely difficult to tell where the agency had responded to our comments, and to determine whether we were looking in the best place for the agency’s responses. We recognize that the agency is tasked with the difficult job of addressing thousands of comments. However, the exercise of making Commenters search through multiple Responses, Appendices, sections of the FEIS, and documents from previous TLMPs in effort to discern the agency’s bottom-line answer to each of our comments was time-consuming and inefficient.

Such cross-referencing, while perhaps convenient for the agency, runs counter to NEPA’s central goal of meaningful public participation. NEPA “requires that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” [*WildEarth Guardians v. Montana Snowmobile Ass’n*, 790 F.3d 920, 924 (9th Cir. 2015)]. At this stage of the administrative proceedings, the public’s ability to play a role in the decisionmaking process is severely impeded where they are unable to discern the agency’s specific position on specific issues. At the stage where the public is required to provide specific feedback on the agency’s proposal, it is imperative that the agency supplies its rationale and explanation for its decision. How can meaningful public participation be achieved where it is impracticable—and at times impossible—to discern the agency’s specific position?

Moreover, we were unable to find neither an annotated copy of our DEIS comments in the planning record (that would show the points raised that the Forest Service flagged for response) nor a comments-response matrix document (that would show individual comments selected for response, an ID of the commenter, and at least a summary of a response). The Forest Service has commonly provided such documents in past planning records.

Beyond compromising the public’s ability to meaningfully participate to help shape better decisions, the practice of including myriad cross-references impedes the public’s ability to comply with the Objection process regulations codified at 36 C.F.R. § 219 Subpart B. Under the new Objection regulations, Objectors are held to stringent standards to ensure that their objections are not “set aside from review.” An Objection must provide a “concise statement explaining the objection and suggesting how the proposed plan decision may be improved,” and “demonstrate[] the link between prior substantive formal comments attributed to the objector and the content of the objection.” [36 C.F.R. § 219.54(c)(6), (7)]. Moreover, the “burden is on the objector to demonstrate compliance with the requirements for objection.” [*Id.* at § 219.53(a)].

The bottom line is that the regulations purport to hold Objectors to a rigorous standard, whereby objections must provide specific and detailed feedback on the proposed decision. At the Objections stage, we are tasked with identifying legal flaws, policy considerations, and suggested improvements for the plan and environmental analysis. Where it is difficult—or impossible—to determine the agency’s justification for various aspects of the plan, how can Objectors be expected to provide the specific and detailed feedback the Objection regulations require? If the shoe were on the other foot, and an

Objectors made vague references to other documents and cited hundreds of cross-references—thereby making it difficult or impossible to discern specific Objection point—their Objections would be “set aside from review.” 36 C.F.R. § 219.55.

We believe that the Forest Service’s methods here were inconsistent with the intent of NEPA.³ We request that the agency prepare a revised Response to Comments that provides the agency’s clear position on each substantive comment, in order to facilitate a more efficient, transparent, and productive Objection process.

III. The Purpose and Need for the TLMP Amendment focuses on an unreasonable assessment of timber industry needs

Our DEIS comments expressed the concern that the “viable timber industry” purpose and need fails to address planning rule requirements to ensure ecological, economic and social sustainability in the planning area. [36 C.F.R. § 219.8]. We requested that you reinitiate the scoping process and develop a revised purpose and need for the amendment that does not prioritize timber development “over the competing environmental and recreational goals without justification sufficient to support the agency’s balancing of these goals.” *Natural Resources Defense Council v. U.S. Forest Service*, 421 F.3d 797, 808 (9th Cir. 2005). The purpose and need for the Amendment in this context reflect an overly narrow focus on providing timber mainly for two private entities that rely primarily or entirely on federal timber for raw log exports. This narrow purpose and need arbitrarily precluded the development of a broader range of alternatives that consider non-timber forest resource uses which could better provide for ecological and socio-economic sustainability.

A. The timber industry focused purpose and need is overly narrow

The stated purposes of the Amendment are primarily to determine the suitability of federal lands for second-growth logging, identify a “projected timber sale quantity” (PTSQ) and establish standards and guidelines for logging recovering, second-growth forests. [FEIS at 1-8]. The stated purposes reflect a narrow selection of decision-making responsibilities under the new planning rule. These purposes in turn reflect a need statement which cites USDA Secretary Vilsack’s July 2013 memorandum directing the Tongass National Forest “to expedite the transition away from old-growth timber harvesting and towards a forest products industry that uses predominantly second-growth ... forests.” [*Id.* at 1-7]. The memorandum further seeks to “preserve[] a viable timber industry that provides jobs and opportunities for Southeast Alaska residents.” [*Id.*]. This latter statement is wide open to subjective interpretation, and resulted in one of the most important problems with the purpose and need statement. As interpreted by the Tongass National Forest, the “timber industry” need has resulted in the development of an entire Forest Plan Amendment dedicated to sustaining two private entities that rely largely on raw log exports.

³ To the extent the Forest Service has complied with the letter and intent of the Objection regulations at 36 C.F.R. § 219 Subpart B, we challenge those regulations as inconsistent with NEPA, and also NFMA. [See 16 U.S.C. § 1604(d); *id.* § 1604(g)(i)].

1. Objection Point 1: The viable timber industry purpose and need is too narrow for a programmatic review and fails to demonstrate a reasonable evaluation of changed socio-economic and ecological conditions

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments explained that the purpose and need was overly narrow for a programmatic document. [Ref167 at 10 (GSACC et al. 2016c)]. As explained by the CEQ, “the purpose and need statement for a programmatic review will differ from the purpose and need for a project- or site-specific EA or EIS.” [Ref091 at 18 (CEQ 2014a)].⁴ “The purpose and need for a [Programmatic] EA or a [Programmatic] EIS should be written to avoid eliminating reasonable alternatives and focused enough for the agency to conduct a rational analysis of the impacts and allow for the public to provide meaningful comment on the programmatic proposal.” [*Id.* at 18-19].

Here the purpose and need statement reflected a narrow, “viable timber industry” need so as to avoid considering alternatives that would respond to other, more important programmatic considerations. An agency “cannot define its objectives in unreasonably narrow terms.” [*City of Carmel-by-the-Sea v. U.S. Dep’t of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997)]. As explained by the 7th Circuit:

One obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing “reasonable alternatives out of consideration (and even out of existence). The federal courts cannot condone an agency’s frustration of Congressional will. If the agency constricts the definition of the project’s purpose and thereby excludes what truly are reasonable alternatives, the EIS cannot fulfill its role. Nor can the agency satisfy [NEPA]. 42 U.S.C. § 4332(2)(E). [*Simmons v. U.S. Army Corps of Eng’rs*, 120 F.3d 664, 666 (7th Cir. 1997)].

Congress enacted NFMA 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.” [*Sierra Club v. Peterson*, 185 F.3d 349, 353-54 (5th Cir. 1999)](*superseded* on other grounds, 228 F.3d 559 (5th Cir. 2000)]. 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. [S. Rep. 94-893, *reprinted in* 1976 U.S.C.C.A.N. 6662, 6671]. NFMA thus requires that forest plans provide for multiple uses, including recreation, watersheds, wildlife and fish. [16 U.S.C. § 1604(e)]. TLMP goals and objectives implementing this mandate thus seek to “[p]rovide a diversity of opportunities for resource uses that contribute to the local and regional economies of Southeast Alaska” and “[s]upport a wide range of natural resource employment opportunities within Southeast Alaska’s communities.” [LRMP at 2-3].

The Need statement arbitrarily focuses on the Secretary’s direction that the Tongass National Forest must “preserve a viable timber industry” while failing to respond to the transition goal toward “a more ecologically, socially and economically sustainable forest management” direction, and that the amendment should “guide future management of NFS lands and allocation of resources.” [FEIS at 1-9; PR 769_01_000046 at 1 (USDA 2013)].

The Amendment’s focus on maintaining the existing timber industry fails to provide for multiple uses. The new planning rule explains that that “[p]lan amendments may be broad or narrow, depending on the need for change, and should be used to keep plans current and

⁴ CEQ. 2014. Memorandum for heads of federal departments and agencies: effective use of Programmatic NEPA reviews. Council on Environmental Quality, Washington D.C. December 2014.

help units adapt to new information or changing conditions.” [36 C.F.R. 219.13(a)(emphasis added)]. Plan amendments may reflect “a new assessment, a monitoring report; or other documentation of new information, changed conditions, or changed circumstances.” [36 C.F.R. 219.13(b)]. A forest plan must guide the plan area’s contribution to social and economic sustainability, taking into account (1) social, cultural and economic conditions relevant to the area influenced by the plan; (2) sustainable recreation; including recreation settings, opportunities, and access; and scenic character; and (3) multiple uses that contribute to local, regional and national economies in a sustainable manner. [36 C.F.R. § 219.8 (8(b))]. The stated purpose and need for the proposed amendment neither reflect the broad need for changes nor a realistic assessment of changed conditions and consequently will fail to meet these requirements.

The Responsible Official is to base an amendment on a preliminary identification of need to change the plan. [36 C.F.R. § 219.13(b)]. Public comment on the 2012 planning rule framework noted that it provided the Responsible Official with too much discretion to determine the scope of an Amendment process, thus facilitating the result here - the exclusion of important resources or uses of interest from the scope of an amendment. [77 Fed. Reg. at 21199]. In response, the Department of Agriculture clarified that the Responsible Official was to consider all resources and uses of interest identified during the planning process. [*Id.*]. The planning rule thus requires the decision document for an Amendment to explain how plan components address the sustainability, diversity and multiple use requirements set forth in 36 C.F.R. §§ 219.8, 219.9 and 219.10. [36 C.F.R. § 219.14]. The narrow focus on timber industry transition alternatives in the Purpose and Need statement resulted in a plan amendment that does not meet the planning rule’s requirements that forest plans provide for ecological and social and economic sustainability.

The Administrative Procedure Act (APA) requires that an agency “examine the relevant data and articulate a satisfactory explanation for its action, including a “rational connection between the facts found and the choice made.” [*Motor Vehicle Manufacturers Ass’n v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 43 (1983)]. An agency action is “arbitrary and capricious if the agency ... entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” [*Id.*].

The draft ROD is arbitrary because the FEIS failed to consider important and ongoing socio-economic changes. The FEIS insists that the Forest Service identified factors that led to the need for change, [FEIS, Appx. I at I-13, I-17], and justifies the narrow purpose and need for the Amendment based on the 2012 planning rule, and the identification of a need to preserve the timber industry. [*Id.* at Appx. I, I-12; I-9]. Nowhere does the FEIS describe what the Forest Service perceives to be a “viable timber industry” and it implausibly assumes that the industry is a significant component of the regional economy. The FEIS also arbitrarily failed to consider a number of socio-economic factors relevant to the need for change, and focused narrowly on only the timber industry directives from the Secretary’s memorandum and Alaska Region planning on the Transition Framework, resulting in the development of an overly narrow purpose and need for the amendment.

b. Statement of supporting reasons

The FEIS acknowledges that the Plan amendment is narrow, and asserts that the Forest Service states that the Purpose and Need responds to “a need for change” as explained in the FEIS. [FEIS, Appx. I at I-12]. The FEIS states that the roadless rule, litigation, collaboration, the 2012 planning rule, a five year review of the plan, and Secretary’s

memorandum form the basis of the need for change. [FEIS at 1-5-1-7]. Then the “change determination” ignored the numerous socio-economic considerations raised during the review of the 2008 TLMP. [Cf. FEIS at 1-8; PR 769_02_000002 at 4-39, 4-52-4-63].

i. The narrow focus on the timber industry mischaracterizes the Secretary’s memorandum which envisioned a broader amendment

The Secretary’s 2013 Memorandum provided a primary basis for the need to change. [FEIS at 1-8]. It cites a “goal” of making the transition occur over a 10 to 15 year period but also directed the Forest Service to consider ways to “effect a more rapid transition.” [PR 763_01_00046 at 1, 3 (adding that the purpose of a timeframe is to “conserve old growth forests while allowing the forest industry time to adapt”); see also FEIS, Appx. I at I-21 (explaining that the Forest Service “did commit” to a quick transition in 2010)]. Specifically, the Secretary anticipated that “within 10 to 15 years ... the vast majority of timber sales on the forest will be young growth” meaning that Department of Agriculture anticipated the end of old-growth logging by 2028. [PR 763_01_00046 at 1]. The Forest Service was also to consider ways to accelerate this transition. [*Id.* at 3].

The FEIS instead delays the transition until after 2030, and the Draft LRMP offers no assurance that Viking and Alcan would actually reduce their take of old-growth over the fifteen year transition period. [FEIS at 2-40; 3-508, Table 3.22-15; Draft LRMP at 5-2-5-3, 5-13]. Instead, the Draft LRMP sets aspirational goals for second-growth timber sale offerings, and the FEIS makes clear that the “relative speed of the transition” depends on voluntary business choices made by Viking and Alcan. [FEIS at 3-511]. Thus, despite the Secretary’s actual direction, the stated purpose of establishing a projected timber sale quantity (PTSQ) does nothing to accelerate the transition, but instead establishes or allows for status quo old-growth timber sale volumes for the next decade and non-binding aspirational reductions by 2030. [*Id.* at 3-509]. This approach thus ignores the Secretary’s directive to conserve old-growth forests. The other stated timber purposes – to review the suitability of recovering forests for timber harvest and establish plan components for that harvest – simply allow for, but do not require, a transition from dependence on old-growth logging.

The purpose and need statement further cherry picks one narrow portion of USDA direction for the region and arbitrarily excludes broader purposes, such as recreation management and infrastructure investments. The Secretary’s Memorandum insists that USDA “has increased investments in alternative economic development opportunities for communities across the region in the recreation, tourism, fishing and renewable energy sectors, while initiating a transition away from a historical reliance on old growth timber harvests.” [PR 769_01_000_46 at 2].

Indeed, the Alaska Region’s intent for the “Transition Framework” was to encourage economic diversification and “develop a region-wide job creation platform” that emphasized current resource assets and current *key economic sectors*.” [PR 769_05_000028 at pdf 3](Pendleton 2010)]. Regional Office direction to the Tongass National Forest was thus that the Transition Framework “will also invest in facilities, trails, and other activities to attract increased recreation and tourism use and jobs.” [*Id.*]⁵ The LRMP directs the Forest Service to “[p]rovide a range of recreation opportunities consistent with public demand, emphasizing locally popular recreation places and those important to the tourism industry,” [TLMP at 2-

⁵ As pointed out in our previous comments, the Forest Service has not invested in other sectors, but instead slashed its recreation budgets by more than 50% in some ranger districts, and will not fund the recreation program at sustainable levels. See e.g. www.kbrd.org/2014/04/21/niche-budgets-on-the-way-for-usfs-trails-cabins

4], but the narrow purpose and need forgo any direction that would meet that goal. Indeed, the record shows that the transition plan included options for recreation contracts and road storage/fish passage contracts that would provide both jobs and increase fishery harvests, but the narrow purpose and need forecloses these options. [Ref041 at pdf 19 (Alexander et al. 2010)].

In sum, the purpose and need statement reflects an overly narrow focus on one sentence from the Secretary's memorandum – to preserve a viable timber industry – while ignoring other needs, such as downscaling old-growth forest removals for conservation goals, and the Secretary's and Regional Office's assurances that the transition would include a reasonable consideration of other, more important regional economic sectors.

ii. The FEIS fails to consider socio-economic factors relevant to the need for change

Indeed, the FEIS concedes that “the scope of the plan amendment is narrow.” [FEIS, Appx. I at I-12]. The decision to proceed with a narrow amendment reflected an arbitrary emphasis on the timber industry and an inadequate review of broader socio-economic changes in the region. The FEIS treats various and significantly different economic sectors as equal, and asserts that “communities of Southeast Alaska depend on the Tongass National Forest in various ways, including employment in the wood products, commercial fishing and fish processing, recreation, tourism and mining and mineral development sectors. [FEIS at 3-477]. It insists that “[t]he purpose and need does not respond to changed conditions and circumstances in terms of other multiple uses because changes that have occurred and will occur in these areas are generally well within the range of changes anticipated by the 1997 Revision and the 2008 Amendment.” [*Id.*, Appx. I at I-16].

The FEIS relies primarily on the five year forest plan review to support the narrow purpose and need statement. [*Id.* at I-12]. That review indicated a broader need for change than suggested in the FEIS. The five-year review indicated a need to consider changed social and economic conditions through the amendment process, including a careful analysis of the role or contribution of different economic sectors. [PR 769_02_000002 at 3-5-3-6 (Forest Service 2013)]. There was a particular concern about the need to consider fisheries, recreation and tourism as major economic drivers. [*Id.* at 3-8]. Thus, the need to change forest management in recognition of changed social and economic conditions was the most important issue identified in the five year review. [*Id.* at 3-11-3-13]. Indeed, as explained in the Southeast Conference's economic development plan for 2016-2020, “[l]ogging has become a socially unacceptably business to be in.”⁶

Despite these findings, the stated purposes for the Amendment all aim at developing plan components for the timber industry without ever assessing the viability of the industry itself. Indeed, the record shows that the two entities that the Amendment seeks to preserve – Viking and Alcan – both may cease operations. [PR 763_05_000354 (Sitnews 2014)]. Although the two entities fault the Forest Service for failing to provide an adequate supply, the record shows that both entities currently have ample volume under contract. [PR 769_05-001154]. The real problem with the decision rationale and description of factors that led to the need for change is that the timber industry is a marginal, failing component of the regional economy. The description of factors that led to the need for change arbitrarily omits one of the most important factors that the Responsible Official should have considered in developing a purpose and need statement for the Amendment – declining timber demand and the changed economic conditions that influence timber demand.

⁶ Southeast Conference. 2016. Southeast Alaska 2020 Economic Plan.

The record indicates 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.” [See PR Folder 763_02_000084 (Niemi 2016, Socioeconomic Comments on Timber Demand at 12)]. The competitive disadvantage is particularly significant for southeast Alaska timber. [*Id.* at 14]. The Pacific Northwest Research Station’s own publications verify these significant downward trends. [Ref377 (Zhou 2013, PNW-RB-265); Ref380 (Zhou 2015c, PNW-RB-266)].

Yet the Forest Service’s approach to setting desired levels of timber removals ignores market factors entirely – factors that have changed considerably since the 2008 TLMP Amendment. [PR Folder 763_02_000084 (Niemi 2016, Socioeconomic Comments on Timber Demand at 15-16)]. The Tongass National Forest’s own mill production reports identify a “major reconfiguration” in the national forest products sector occurring in 2008, and show that mill production and employment in have dropped in half since the 2008 TLMP amendment. [PR 769_05_000024 at 6 (showing mill production of 31.7 MMBF in 2007 and 23.7 MMBF in 2008); 769_05_000025 at 8 (showing mill production of 13.4 MMBF in 2009 and 15.8 MMBF in 2010); PR 769_05_000036 at 3 (showing recent drops in mill production and employment)]. Thus, the rationale for change arbitrarily fails to consider that market factors rather than supply shortages are the cause of ongoing business failures for Viking and Alcan.

Further, the identification of factors that led to the need for change ignores the region’s market-based transition to dependence on the fisheries and tourism economies. Nearly a decade ago, the Forest Service projected that:

[b]ased on regional, national and international economic and demographic trends, the roles the Tongass plays as a provider of tourism and recreation opportunities and as the custodian of many of the unique natural amenities and ecosystem values that both attract tourists and enhance the quality of life for existing and potential residents, is likely to be of more importance to the economic vitality of the region. [Ref109 at 231 (Crone 2005)].

Subsequent data have verified this hypothesis during the region’s market-based transition away from federal timber dependency and toward a more diversified and sustainable economy. Over the past decade, timber employment has decreased by nearly 90%, and the industry is smaller than it was over a century ago. [PR 769_05_000340 at 10 (Southeast Conference 2014)]. Employment levels approached nearly 500 jobs per year prior to the TLMP Amendment, and have since dropped by half. [FEIS at 3-485, Table 3.22-4]. Timber removals in southeast Alaska overall at best provide 1% of total regional employment and 3% of total resource-based employment in the region. [*Id.* at 3-481, Table 3.22-3]. Federal timber was responsible for a fraction of a percent (0.2%) of regional employment in 2013. [*Cf.* 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)]. Timber worker earnings are less than 1% of total employment related earnings in the region. [PR 769_05_000340 at 3 (Southeast Conference 2014)]. The significance of these jobs relative to the overall economy is even smaller because employment data do not include the thousands of workers who are self-employed in the commercial fishing industry. [*Id.* at 4, 6].

Conversely, economic activity associated with ecosystem values, particularly values associated with wildlife, have a substantial positive impact on the regional economy. Wildlife are much more important to the economy than Alcan and Viking’s clearcuts. In 2011, wildlife hunting and viewing generated 2,463 jobs in southeast Alaska, \$138 million in labor income and \$360 million in total economic output. [PR 763-05-001116 at 24 (EcoNorthwest 2014)]. In contrast to the failed timber program, federal programs that support recreation can make positive contributions toward enhancing the visitor economy. According to a recent peer-

reviewed analysis, the National Park Service returns \$10 in direct visitor spending for every \$1 invested. [Ref334 (Thomas et al. 2014)]. This return is 2000 times as high as the ½¢ per dollar return from the timber sale program. Alaska ranks third in the nation in spending and job support, with visitors to national parks spending \$1.06 billion and supporting 16,181 jobs. [Id.]. The program supports 400 private businesses. [Id.]. Further, the record shows that overall, the visitor industry impact in southeast Alaska is massive and dwarfs the timber industry by an order of magnitude, with average visitor industry spending in excess of \$1 billion per year, providing between 10,200 and 10,900 jobs, with labor income impacts ranging from \$370 million to \$407 million. [PR 765_05_000334 at 8 (McDowell Group 2015)].

The other major private sector employer, commercial fishing, generated \$219 million in ex-vessel value alone (meaning direct fishing revenue exclusive of processing jobs and other economic outputs) in 2013. Lands managed by the Forest Service provide slightly more than half of southeast Alaska's salmon catch. [Ref040 at 11 (Alexander 2011b)]. Salmon hatcheries provide an additional 22 percent of the statewide salmon value, and are the largest agricultural industry in Alaska, providing hundreds of jobs. [Id. at 13]. Thus, the record shows that commercial fishing, the visitor industry and the maritime sector are the "bright points in our economy." [PR 769_05_000340 at 1 (Southeast Conference 2014)]. These sectors have contributed to an overall growth in employment, population and wages following a market-based recovery from past dependence on the timber industry. [Id. at 2-3]. Overall, employment, total income, per capita income and per-capita business earnings have increased in the region since 2000. [FEIS at 3-442, Table 3-279].

The FEIS makes clear that the timber industry makes no positive economic contribution to the majority of southeast Alaska communities. Only one of the 21 smaller rural communities (those with a population of less than 700), Thorne Bay, has any substantial dependence on local mill activity while the rest depend primarily on fishing and tourism. [FEIS at 3-547-3-689]. The FEIS addresses the needs of the 12 mill employees in Thorne Bay and sole proprietorship mills in other communities such as Edna Bay separately with an old-growth set-aside for the cottage industry. [FEIS at 3-152; *see also* PR 769_05-000336 at 4 (Parrent 2014)(identifying the number of mill employees by community)].

And while the 2008 TLMP FEIS anticipated that timber activities would benefit larger communities such as Petersburg, Wrangell and Ketchikan [2008 TLMP FEIS at 3-640, 3-661, 3-705], the updated analysis shows that the 2008 TLMP's projection was in error because those communities have fully transitioned toward economies based on tourism and fishing. [FEIS at 3-613, 3-639, 3-684-685; *see also* PR 769_05-000336 at 4 (Parrent 2014)(identifying one mill job in those three communities)]. Viking's mill, which operates in the communities of Craig and Klawock, is the only timber industry presence that provides more than ten jobs. [FEIS at 3-558, 3-617; 769_05-000336 at 4]. Hoonah does have a small mill, but its economy has "undergone a major transformation" due to investments in the tourism industry. [FEIS at 3-586]. Indeed, Hoonah's largest employer in the tourism industry, Icy Strait Point, provides nearly as much direct employment in that community as the entire federal timber sale program provides across the entire region. [Cf. FEIS at 3-586 (124 jobs in Hoonah, mostly local residents); *id.* at 3-483, 3-485 (showing that federal timber provides an average of 137 jobs, with substantially more than half of the employees consisting of non-Alaska resident or non-local workers)].

Hoonah's market-based transition exemplifies how communities with some level of past timber activity have recovered from their historical dependence on federal timber. Over the past decade, the Prince of Wales Island area similarly has redefined its economy around small proprietorships in specialty wood mills, fishing and seafood and hospitality businesses. [Ref294 (SitNews 2012); Ref031 (Ak Economic Trends Aug. 2012)]. Population levels have

rebounded over the past five years. (*Id.*) Nature-based tourism generated more than \$30 million in gross revenues to Prince of Wales Island in 2007 – mostly from sport fishing. (Big Thorne FEIS at 3-454). There were population increases throughout the region including in Ketchikan and Wrangell and nearly all Prince of Wales Island communities from 2010 – 2013. [PR 769_05_000340 at 5 (Southeast Conference 2014)]. Wrangell also has experienced a market-based transition that includes increased participation in fisheries and the development of a maritime service sector that mirror’s Hoonah’s major transformation by providing another economic development model in the region. [Ref295 (SitNews 2013); Ref399 (UFA 2014)].

iii. The FEIS failed to identify the need for changes in the Tongass National Forests’s Wildlife Conservation Strategy

The FEIS failed to recognize significant changes and new scientific information relevant to the need to update the Wildlife Conservation Strategy. [FEIS, Appx. I at I-53]. Instead, it arbitrarily relied on recent and anticipated declines in the overall levels of old-growth forest removals across the entire planning area, ignoring site-specific and species-specific concerns that should have precipitated a significant update to the Conservation Strategy. [*Id.* at I-50]. The FEIS arbitrarily determined that changes to the Conservation Strategy or to species-specific guidelines were outside the scope of the amendment. [FEIS, Appx. I at I-42, I-84, I-89].

The record shows that the five year review included concerns about the inadequacy of TLMP standards and guidelines for deer, particularly deer winter range habitat generally and specifically deer habitat on Prince of Wales Island. [PR 769_02_000002 at 4-69]. The status of deer populations bears significantly on the viability of Alexander Archipelago wolves. The 2008 TLMP FEIS described “stable” wolf populations in GMU 2 (Prince of Wales Island) described by the Forest Service as supporting “some of the highest wolf densities in the state” based on 2003 data from ADF&G. [2008 TLMP FEIS at 3-238]. But as explained by the Fish and Wildlife Service (FWS), the GMU 2 population declined from an estimated population of 350 wolves from the early 2000s to 89 wolves in 2014. [FEIS, Appx. I, Att. A, FWS 2016 at 4]. Thus, the FWS echoed the concerns stated during the five-year review:

Implementation of existing standards and guidelines intended to protect wolves from unsustainable harvest and habitat loss appears to be inadequate for the wolves on Prince of Wales, given the population’s documented decline. [*Id.*].

The five year review also identified a need for strengthened conservation measures for Queen Charlotte goshawks, especially on Prince of Wales Island, and for endemic species such as the northern flying squirrel. [PR 769_02_000002 at 4-73, 4-166-171, 4-174-175]. Additionally, there is new scientific information bearing on the ability of the Forest Plan to ensure the viability of these species. [*Id.* at 4-183, 4-186; *see also* FEIS, Appx. I, Att. A, FWS 2016 at 5; PR 763_05_000465 (Smith et al 2010); _000478 (Smith et al. 2010); _000530 (Smith 2013); _000531 (Smith & Person 2011)]. The FWS identified a need to update the conservation strategy for Queen Charlotte goshawks so as to reflect ongoing scientific reviews. [FEIS, Appx. I, Att. A, FWS 2016 at 5]. Dr. Winston Smith’s 2013 analysis of conservation measures for the Queen Charlotte goshawk explained that it was inadequate to ensure the viability of the species, [PR 763_05_000530], and he reiterated that flaws with the conservation strategy in subsequent comments on the DEIS. [Ref298 (Smith 2016a, white paper on Conservation Strategy); Ref299 (Smith 2016b, white paper on endemic small mammals; Ref300 (Smith 2016c, white paper on northern goshawks)].

In sum, the Responsible Official arbitrarily ignored the need to include an update to the Conservation Strategy as part of the scope of the plan amendment.

iv. The FEIS arbitrarily identified collaboration and litigation as factors influencing the need for change

Finally, the FEIS identifies collaboration and litigation as factors influencing the need for change. The 2008 TLMP did specifically respond to a court order identifying programmatic flaws with the 1997 TLMP, [2008 TLMP ROD at 3], but there is no such factor present here. It is unclear how the Forest Service believes the Proposed LRMP reflects a collaborative process or how it will reduce litigation. The FEIS suggests that the Tongass Advisory Committee – dominated by timber industry interests - “honor[ed] the suite of economic, ecological, social and cultural values inherent in the Forest.” [FEIS, Appx. I at I-13, I-17]. But six of the 21 TAC members, including two of the “conservation” representatives, were from the Forest Service’s Forest Products Cluster Work Group – an advisory body charged with developing strategies to promote the timber industry and another five members are from the timber industry. [Cf. FEIS at 5-3 (identifying TAC members) and Ref186 at 4-5 (JEDC 2011) at 4-5 (identifying Maish, Nichols, Rush, Rushmore, Thoms and Nichols as Forest Products Industry Cluster members); see also, TAC member applications: Ref307 (Araujo, Sealaska Corporation); Ref310 (Jungwirth, California timber operator); Ref311 (Hyatt, lumber company); Ref321 (Mills, logger and timber corporation administrator); Ref325 (Cronk, timber stevedoring)]. There were an additional two members from the mill communities of Thorne Bay and Coffman Cove – a mayor and a graduate assistant. [Ref319 (Benner); Ref306 (Steinkruger)]. There was thus no meaningful representation from the recreation or commercial fishing sectors affected by the plan Amendment. [Ref309 (Hardcastle, showing that Hardcastle is a fish processor who operates solely out of Juneau and thus is not affected by lost economic outputs in the fishing industry caused by logging central and southeast Alaska islandic ecosystems)].

The identification of litigation as influencing the need for change is also arbitrary; the Forest Service did not appoint any representatives from conservation groups who enforce national environmental laws but instead appointed two “conservationists” who have a significant financial relationship with the agency. [Ref223 through 227 (990 forms for NFF for 2011, 2012, 2013, 2014 & 2015)].⁷ The failed representation of the conservation community is evident in the strong opposition to the Selected Alternative by all organizations that participate in the timber sale planning process. [Ref167 (Greenpeace, Cascadia, GSACC, The Boat Company, Center for Biological Diversity); record Letter #23856 (Alaska Wilderness League, Center for Biological Diversity, Defenders of Wildlife, EarthJustice, Geos Institute, Natural Resources Defense Council, Sierra Club and Southeast Alaska Conservation Council)]. Indeed, the record shows that conservation groups believe that the Tongass Advisory Committee’s alternative will “perpetuate the destruction of Tongass old-growth.” [PR 769_02_000129 (EarthJustice 2016)]. The Forest Service’s chosen “conservation” representatives voted to support the removal of at least another half billion board feet of timber over the next fifteen years. [FEIS at 3-508, Table 3.22-15]. It is unreasonable to assume that the agreement to this level of logging by two individuals who work most closely with the Forest Service and timber industry could reduce the number of citizen law enforcement actions.

c. Conclusion and suggested resolution

The purpose and need for the LRMP Amendment has overly narrow focus on providing a future timber supply for a failing industry. The Responsible Official ignored important and

⁷ Additionally, conservation member Rush was a former Forest Service employee, and married to then Deputy Forest Supervisor Tricia O’Connor.

relevant changes in timber economics and socio-economic conditions in identifying factors relevant to the need to amend the Forest Plan. Neither the five year review nor the Secretary's memorandum justify the narrow focus on timber supply. Instead, the analysis wrongly assumes that federal timber supply can maintain the industry, and wrongly assumes that maintaining the existing industry would somehow benefit a broader region that has experienced significant and positive economic changes because of the market-based transition toward recreation and fishery-based economies. Given these changes, many of them subsequent to the 2008 Amendment, the perceived need to develop an LRMP around the two entities that purchase larger volumes of federal timber was overly narrow.

Further, the Responsible Official ignored significant ecological considerations associated with the wildlife conservation strategy and at-risk wildlife species identified in the five year review, in updated scientific literature, and in events occurring subsequent to the 2008 TLMP Amendment such as the decline in the GMU 2 wolf population. Finally, the reference to collaboration and litigation do not support the narrow need for change determination in light of the timber industry's dominant presence on the TAC, and the close relationship between timber industry interests, the Forest Service and the collaborators purportedly appointed by the agency to represent conservation interests.

For the above reasons, we request that you order the development of a *new* purpose and need statement that reflects the broader economic and ecological needs of southeast Alaska residents and wildlife as reflected in significant changes since the 2008 amendment and is consistent with the agency's multiple use mandate and the planning rule's requirements that forest plans provide for ecological and social and economic sustainability. [36 C.F.R. §219.8].

2. Objection Point 2: The viable timber industry need is arbitrary because it unreasonably aims at supporting timber exporters

Our scoping and DEIS comments requested that the Forest Service clarify and re-evaluate the meaning of a "viable timber industry." But neither the FEIS nor the Secretary's memorandum defines or explains this purported need for the Amendment. In context it is clear that the "viable timber industry" component of the need statement narrowly aims at providing for two companies that rely primarily on raw log exports. As explained in the following subsections, the two companies may provide jobs for at best between 55 and 65 actual southeast Alaska residents. But the Amendment purpose and need forgo including any purposes that would reduce logging in order to mitigate climate change or benefit the thousands of residents employed in other forest-dependent economic sectors. These benefits could flow from adding purposes that the Forest Service excluded from the process, such as revising the conservation strategy for wildlife, shifting agency resources toward recreation management and providing additional jobs through commitments to fix fish-killing components of the transportation system.

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments explained that the purpose and need for the Amendment reflect an overly narrow focus on the stated need to maintain a "viable timber industry." [Ref167 at 11]. Also, our DEIS comments explained that neither the analysis nor the record adequately shows how the emphasis on maintaining Viking's and Alcan's access to federal timber is related to the goal of providing jobs for southeast Alaska residents. [Ref167 at 13].

In this context, the Amendment aims exclusively and narrowly at supplying two private entities that export most of their timber as unprocessed logs. Because the FEIS independently provides for cottage industry mills, [FEIS at 3-512], the need for the

Amendment aims solely at supplying two entities - Alcan Forest Products LLP in Ketchikan (Alcan) and Viking Lumber Company (Viking) in Craig - the primary purchasers of federal timber. [FEIS at 3-490]. Alcan is a timber broker and does not harvest or process federal timber in southeast Alaska. [*Id.* at 3-488 (showing that Alcan does not have a mill and is thus not part of the industry); Ref118 at 2 (D. Alaska 2013)].

The Forest Service cannot allow the needs of private entities to narrowly define the scope of a proposed project, let alone an entire LRMP. [*National Parks Conservation Ass'n v. Bureau of Land Management*, 606 F.3d 1058, 1070 (9th Cir. 2010)]. Instead, federal agencies must look to other relevant factors, including the views of Congress as expressed in the agency's statutory authority and other congressional objectives. [*Id.* citing *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991)]. In enacting NFMA, Congress indicated that timber production was not to be a sole objective of management planning. [S. Rep. 94-893, reprinted in 1976 U.S.C.C.A.N. 6662, 6671]. NFMA thus requires that forest plans provide for multiple uses, including recreation, watershed, wildlife and fish. [16 U.S.C. § 1604(e)]. Similarly, in enacting ANILCA, Congress intended to "provide the opportunity for rural residents engaged in a subsistence way of life to continue to do so." [16 U.S.C. § 3101(c)]. Finally, with reference to at-risk populations of wolves and goshawks, Congress determined that depleted fish and wildlife species "are of esthetic, ecological, educational, historical, recreational and scientific value to the Nation and its people." [16 U.S.C. § 1531(a)(3)].

But here, the timber sale purposes of the Amendment aim exclusively at providing a timber supply to two private entities. While the stated need for the Amendment is to provide opportunities for southeast Alaska residents in the timber "industry," the FEIS never analyzes how many actual southeast Alaskans work in the industry, nor does it show how the two private entities would provide significant local employment. [FEIS at 1-9]. Thus, the purpose and need are arbitrarily narrow because the perceived needs of Viking and Alcan defined the scope of the Amendment, and the analysis further violated NEPA because the FEIS never took a hard look at whether Viking and Alcan would meet the stated local employment need.

b. Statement of supporting reasons

i. The timber industry consists of two private entities, one of which is not even part of a manufacturing industry

Nowhere in the FEIS does the Forest Service explicitly define a "viable timber industry." As defined in the dictionary, an "industry" refers to "systematic labor especially for some useful purpose or the creation of something of value" or a "department or branch of a craft, art, business or manufacture; especially one that employs a large personnel or capital especially in manufacturing."⁸ It is beyond dispute that there is very little timber manufacturing employment in the region. [FEIS at 3-485, Table 3.22-4].

The Secretary's memorandum that provides the basis for the need statement repeatedly contemplates local processing of federal timber. [PR 763_01_00046 at 2-4 (referring to processing second-growth trees)]. Similarly, forest plan timber goals and objectives imply that the plan amendment would provide for a timber processing industry. The plan goal for timber directs the Forest Service to "[m]anage the timber resource for production of saw timber and other wood products from lands suitable for timber production." [2015 Proposed LRMP at 2-5]. The amended objective similarly directs the Forest Service to "[m]anage young

⁸ www.merriam-webster.com/dictionary/industry

growth to provide commercial timber products” and to supply volume to “local mills.” [*Id.*]. It is thus clear that the Secretary’s memorandum and forest plan reasonably interpret “timber industry” to involve local manufacturing.

The timber industry in southeast Alaska has become very small since the 2008 TLMP Amendment. There have been no new sawmills established since 2000 and the overall number of sawmills declined by half since 2000, to ten active operations. [FEIS at 3-487]. The Forest Service’s mill capacity reports show that the industry has declined by significantly more than half since 2008 in terms of both production and employment. [PR 765_05_000336 at 3 (Parrent 2014)]. Indeed, the forest products sector as a whole experienced a “major reconfiguration” in 2008 and local industry production dropped from 31.7 MMBF in 2007 to 13.4 MMBF in 2009. [PR 765-05-000024 at 6, 14 (Parrent 2008)].

Industrial outputs then declined further as the actual industry processed 11.5 MMBF of timber in 2011, or roughly a quarter of the projected timber sale quantity of 46 MMBF proposed under all alternatives. [FEIS at 2-9, 3-488]. Table 3.22-6 in the FEIS displays timber industry activity in 2013. Federal timber provided 13.8 MMBF of a total 17.6 MMBF of the locally processed timber in 2013. [*Id.*]. Nine of the ten sawmills essentially comprise a very small cottage industry and processed a total of 2.6 MMBF in 2013. [*Id.*, Table 3.22-6]. Viking processed only 11.5 MMBF of federal timber in 2013, and marginally processed nearly a third of that volume. [*Id.*; PR 769_05_000336 at 6, 8 (Parrent 2014) (3.5 MMBF sawn into cants)]. It employs a mere 34 mill workers. [*Id.* at 4]. Thus, the range of demand for federal and non-federal timber for use by actual industry is between 12.9 MMBF and 16.9 MMBF over the next 15 years. [FEIS at 3-492, Table 3.22-8]. The Forest Service would dispose of remaining federal timber set aside for Alcan and Viking – roughly 30 MMBF per year – by authorizing raw log exports, or leaving low-value timber (utility logs) fallen in the logging units. [*Id.* at 3-491-3-493].

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. [FEIS, Appx. H at H-4-5]. The authorization to export 50 percent of the sawlog volume operates as a floor rather than a ceiling Forest Service then allows Viking and Alcan exceed the 50 percent floor on a case-by-case basis. [*Id.*, Appx. I at I-169]. Thus, the viable timber industry need for the pending amendment primarily benefits corporations outside the region rather than the southeast Alaska economy, while residents of the region are left with very consequential resource damage and environmental impacts. It is unreasonable and arbitrary to focus an entire Plan Amendment on satisfying the perceived needs of two timber exporters at the expense of social, economic and ecological sustainability.

ii. The FEIS never analyzes how the “timber industry” contributes to regional employment goals

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 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. [FEIS at 3-492-3-493, Tables 3.22-8, 3.22-9]. Indeed, between 2008 and 2009 the ratio of federally supported mill jobs per MMBF of federal timber dropped to nearly one-half after the Alaska Region developed and liberalized its export policy. [See *id.* at 3-486-3-488, Tables 3.22-4, 3.22-5, 3.22-6]. Overall, the FEIS shows a clear decline in actual “industry”/mill employment relative to federal timber removals over time, with pre-export policy federal timber (2002 – 2007) supporting 2.2 processing jobs per MMBF, and post-

liberalized export policy federal timber (2009 – 2014) supporting 1.5 processing jobs per MMBF. [*Id.*]. This job transfer to foreign timber processors may be worse under the Amendment, but the FEIS never considers this issue – which should be critical to ascertaining whether the amended LRMP would meet even the very narrow need of providing a forest products industry that provides jobs for southeast Alaska residents.

Implementation of the policy shows that the Forest Service allows Viking and Alcan to export much more than half of their federal timber. The FEIS asserts that Alcan must “sell logs that cannot be exported to a processing facility in the state.” [FEIS at 3-454]. Actual data show the Forest Service routinely waives these requirements, and allows Viking and Alcan to ship an ever-increasing proportion of timber out of the region as unprocessed logs. For example, Viking entered into a contract in December 2009 for the 24.5 MMBF Diesel sale authorized under the Logjam ROD and FEIS. [See Forest management reports and accomplishments, volume under contract and cut and sold reports].⁹ In 2010 and 2011 Viking shipped 13.6 MMBF out-of-state unprocessed, or roughly 55% of the purchased volume. [Ref359 through 365 (USFS export report summaries for CY-2009 through 2014)]. Viking purchased the Slake sale from the Logjam project one year later, [See Forest management reports and accomplishments, volume under contract and cut and sold reports],¹⁰ and shipped 13.6 MMBF unprocessed, or nearly two-thirds of the sale volume. [Ref 359 through 365].

Similarly, by 2014, Alcan had exported 7,477 MMBF of Sitka spruce and western hemlock, and 2,081 MMBF of Alaska yellow cedar out of the 12.7 MMBF cut from the Skipping Cow project – or over three-quarters of the total volume. [Exhs. 5a – 5f]. Alcan has no local markets for smaller logs and has only one buyer for domestic logs, Viking Lumber, and thus is not able to sell large amounts of timber to Viking, resulting in exports in excess of the Alaska Region’s export policy. [Ref229 (Nichols 2013)]. Thus, although the Alaska Region admits that its practice of waiving the policy is “inconsistent” with policy, it readily grants waivers so that the 50% out-of-region processing policy is a floor rather than a ceiling. [Ref099 and Ref239 through 242 (Corresp. between Pendleton & Cole on 100% export, 2013-2014)]. Indeed, the Forest Service now plans to authorize 100% export for the North Kuiu timber sale. [Ref243 (Pendleton 2016); Ref132 (Enriquez 2016)].

Also, the record does not show that there are high levels of local employment in logging, raising further questions about whether the amended LRMP would support jobs for southeast Alaska residents. The FEIS acknowledges that non-resident employment accounts for a significant amount of jobs in southeast Alaska’s resource-dependent sectors. [FEIS at 3-483]. The number of actual timber workers is so small that reports by the Alaska Department of Labor lump logging jobs with other natural resource-based job categories, such as fishing, mining and agriculture. [PR 769_05_000344; -000314; -000318; - 000319]. The record 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. [PR 769_05_000329 at 16-18, 22 (ADOL 2015)].

Since the 2008 TLMP Amendment, federal timber has supported 110 jobs per year. [FEIS at 3-485, Table 3.22-4]. Are half of those jobs then actually held by reality TV show “Axe Men” from Oregon? Federal timber provides such a small amount of jobs that it would not be difficult to answer this question, but the FEIS ignores it. Further, second-growth logging

⁹ Available at www.fs.usda.gov/detail/r10/landmanagement/resourcemanagement/?cid=fsbdev2_038785

¹⁰ Available at www.fs.usda.gov/detail/r10/landmanagement/resourcemanagement/?cid=fsbdev2_038785

is likely to employ fewer workers because of the operational feasibility of increased use of mechanized equipment. [See Ref118 at 2 (D. Alaska 2013)(describing Alcan’s use of a feller-buncher in a second-growth logging project to reduce the number of logging employees)]. The FEIS never considers or answers these questions, making it impossible to evaluate whether the amended LRMP’s timber volume goals align in any way with its regional employment rationale.

c. Conclusion and suggested resolution

The draft ROD is arbitrary because the FEIS violated NEPA by establishing a purpose and need aimed in large-part at providing a timber supply for export as raw logs by two private entities. The LRMP and Secretary’s memorandum clearly anticipate that the “industry” involves local processing and manufacturing. Further, the FEIS does not show how offering a timber supply to the two entities would meet the stated local employment need in any substantive way. The Reviewing Officer should direct the Responsible Official to prepare a much broader Amendment based on a full assessment of changed economic conditions for the timber industry, and for the economic sectors such as tourism and fishing that provide the overwhelming majority of resource-dependent employment for southeast Alaskans.

3. Objection Point 3. The Purpose and Need is overly narrow because it ultimately aims at an arbitrary volume goal that increases old-growth logging and drives project alternatives

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments explained that the stated purposes for the LRMP Amendment were superfluous in light of the actual purpose – which was to establish a timber volume goal for Viking and Alcan. [Ref167 at 14]. The LRMP Amendment Purpose and Need statements include a purpose “to transition [the] forest management program to be more ecologically, socially and economically sustainable” and to “expedite the transition away from old-growth timber harvesting.” [FEIS at 1-7]. But in order to supply these two companies, the Forest Service developed a new demand scenario which established an arbitrary number to unreasonably narrow the programmatic alternatives, resulting in them being contrary to those other purposes.

b. Statement of supporting reasons

The FEIS lists three specific purposes aimed at a timber supply for Viking and Alcan. The second stated purpose is to identify the projected timber sale volume (PTSQ), and the first purpose (make a timber suitability determination) restates the agency’s NFMA obligations that flow from the timber sale quantity determination. [FEIS at 1-8]. The third purpose – to establish plan components for selling timber from recovering forests – similarly flows from the timber sale volume determination because where and how the agency authorizes logging in recovering forests depends on how much timber it wants to supply to Viking and Alcan.¹¹ In other words, after eliminating the superfluous purpose statements, the *entire* reason for the Amendment and related plan components and suitability determination purposes boils

¹¹ We recognize that the third purpose also considers a renewable energy component – but this too is not particularly compelling as most of the renewable energy analysis pertains to and describes streamlining the Forest Service’s permitting authority for hydropower development that is ultimately under the primary authority and control of other agencies and entities.

down to achieving one simple number, the PTSQ, which the Forest Service has determined to be 46 MMBF. This *actual purpose* – to get to 46 MMBF – is overly narrow.

Ironically, the 46 MMBF does not meet the need to transition away from old-growth timber removals. The FEIS fails to provide a rational explanation for how the preferred alternative would meet this need because it authorizes an *increase* in old-growth logging relative to the actual baseline volume. Over the past decade, the average annual removal of federal sawlogs and utility logs has averaged 33.1 MMBF. [FEIS at 3-486, Table 3.22-5]. The Forest Service’s preferred alternative would actually result in a slight increase in old-growth logging, to 34 MMBF per year over the next decade. [*Id.* at 2-34]. But nonetheless, all of the alternatives in the DEIS correspond with the PNW Research Station demand projections and seek to produce a projected timber sale quantity of 46 MMBF per year. [*Id.* at 3-508, Table 3.22-15]. In other words, the actual, 46 MMBF purpose of the Amendment as quantified by the agency, is *inconsistent* with the need to “expedite the transition away from old-growth logging.” [*Id.* at 1-9]. The Forest Service needs to reconcile this inconsistency, and, as described in the following section, develop and re-scope a revised purpose and need statement that more broadly addresses the region’s socio-economic needs.

As previously explained, an agency “cannot define its objectives in unreasonably narrow terms.” [*City of Carmel-by-the-Sea v. U.S. Dep’t of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997)]. As explained by the 7th Circuit:

One obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing “reasonable alternatives out of consideration (and even out of existence). The federal courts cannot condone an agency’s frustration of Congressional will. If the agency constricts the definition of the project’s purpose and thereby excludes what truly are reasonable alternatives, the EIS cannot fulfill its role. Nor can the agency satisfy [NEPA]. 42 U.S.C. § 4332(2)(E). [*Simmons v. U.S. Army Corps of Eng’rs*, 120 F.3d 664, 666 (7th Cir. 1997)].

The PTSQ purpose of 46 MMBF is overly narrow, and violates NEPA.

b. Statement of supporting reasons

Because the timber “industry” supported by the Amendment consists of two entities (only one of which is technically an industry), the Amendment essentially seeks to grant them a license or permit to utilize public lands through subsequent timber sales. *Simmons* explains that “[a]n agency cannot restrict its analysis to those alternative means by which a particular applicant can reach *his* goals.” [*Id.* at 669 (emphasis in original)]. Here the Forest Service rigged the purpose so that only the selection of a single PTSQ could meet the stated need for the plan amendment. The FEIS never considered a local utilization alternative, or even how the industry could operate under a range of timber volume scenarios. [*See, e.g.* 2008 TLMP ROD at 6, 11 (considering a range of volume alternatives in setting the ASQ)].

Simmons confronted a similar scenario. A municipality sought permission to build a dam and water reservoir to address local water shortages. [*Simmons*, 120 F.3d at 666-67]. The Corps of Engineers and project applicant then identified only one potential water source, and defined the project purpose as “finding or creating a single source” to meet water supply needs. [*Id.* at 667-68]. The court recognized that the single source alternatives may be an appropriate solution. [*Id.* at 669]. But the court faulted the Corps for relying on one alternative without “testing its presumption” that only a single source could meet the purpose and need. [*Id.* at 670]. The court explained that “supplying Marion and the Water District from two or more sources is not absurd - which it must be to justify the Corps’ failure to examine the idea at all,” particularly since another source through a shorter pipeline from a different lake was feasible. [*Id.*]

c. Conclusion and suggested resolution

The FEIS considered only one narrow way to maintain the timber industry – by setting the PTSQ at 46 MMBF. The Reviewing Officer should direct the Responsible Official to prepare an additional NEPA analysis to determine other feasible approaches, such as a downscaled, local utilization PTSQ or a small-mill only alternative in light of new information showing that Viking and Alcan may cease operations.

B. The Forest Service must produce a new NEPA analysis that considers a reasonable range of alternatives

The overly narrow purpose and need precluded the analysis of alternatives that enhance recreation opportunities on federal lands as well as alternatives that focus on mitigating damage to salmon habitat through an emphasis on completing deferred road maintenance. Additionally, objectors have requested throughout the process that the NEPA analysis include an alternative that ends old-growth logging immediately. Our DEIS comments explained that alternatives which would continue extensive clearcutting of old-growth forests would fail to address other legal obligations to protect clean water, to maintain habitat for sensitive and subsistence species and to manage forest for multiple uses. The failure to include a genuine no-old-growth logging alternative was a major flaw.

The Forest Service received “many” comments requesting an immediate end to old-growth logging, or at least a 2 – 5 year transition. [FEIS, Appx. A at A-18-A-21]. But the FEIS does not consider or provide the public with meaningful opportunities to comment because it unreasonably restricted the range of alternatives to those that would provide 46 MMBF or at least 22 – 37 MMBF of old-growth timber over the next ten years. It also failed to provide for alternatives or even alternative components that would support jobs and opportunities for the majority of southeast Alaskans who participate in market-based economic sectors such as fishing and tourism. The Amendment’s limited purpose and need, aimed at timber industry objectives, resulted in a failure to meet the NEPA obligation to “[r]igorously explore and objectively evaluate all reasonable alternatives.” [40 C.F.R. § 1502.14(a); *see also Barnes v. U.S. Dep’t. of Transp.*, 655 F.3d 1124, 1131 (9th Cir. 2011)(“Congress created NEPA to protect the environment by requiring that federal agencies carefully weigh environmental considerations and consider potential alternatives to the proposed action before the government launches any major federal action”)]. Further, even the overly narrow purpose and need does not excuse the agency from considering reasonable alternatives – an agency must “consider such alternatives to the proposed action as may partially or completely meet the proposal’s goal.” [*City of New York v. U.S. Dep’t of Transp.*, 715 F.2d 732, 742-742 (2nd Cir. 1981)].

A “reasonable” range of alternatives includes alternatives “that are practical or feasible” and not just those alternatives preferred by the agency. [Council on Environmental Quality (CEQ), *Forty Most Asked Questions*, Questions 2A and 2B; 40 C.F.R. §§ 1502.14, 1506.2(d).¹² NEPA requires a discussion of the alternatives “in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public.” [40 C.F.R. §§ 1502.14]. The key criterion for determining whether a range of alternatives is reasonable “is whether an EIS’s selection and discussion of alternatives fosters informed decisionmaking and informed public participation.” [*Westlands Water Dist. V. U.S. Dep’t of Interior*, 376 F.3d 853, 872 (9th Cir. 2004)(citations omitted). While an EIS need not

¹² available at <http://ceq.hss.doe.gov/nepa/regs/40/40p3.htm>;

include every conceivable alternative, [*Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 551 (1978)], “[t]he existence of a viable but unexamined alternative renders an environmental impact statement inadequate.” [*Westlands Water Dist.*, 376 F.3d at 868]. The exploration of alternatives to an agency’s preferred course of action is critical, because “[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of an EIS to inform agency deliberation and facilitate public involvement would be greatly degraded.” [*New Mexico ex rel. Richardson*, 565 F.3d 683, 708 (10th Cir. 2009)(citations omitted)].

The range of alternatives in the FEIS fails these standards. Objectors DEIS comments explained that the four action alternatives all drive at the same result with some variation in how and where the Forest Service would implement experimental second-growth timber removals through logging in non-development LUDs - areas zoned for wildlife connectivity, salmon habitat, and other protected areas. The alternatives provide no clear basis for choice and no means for the public to compare and provide comments on alternatives that would accelerate the end of old-growth logging and reduce the overall volume of total forest removals relative to the status quo. Thus, the alternatives are not sufficiently distinctive to sharply define the issues and allow for informed decisionmaking.

1. Objection Point 4. A range of alternatives should have meaningful, quantitative distinctions and not be similar and aimed at one end result

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Objectors DEIS comments explained that Alternatives 4 and 5 both increase old-growth logging above the status quo, and the increased volume of second-growth removals under Alternatives 2 and 3 offsets the reduced level of old-growth removals under those alternatives. [Ref167 at 17, 19]. Notably, the 9th Circuit has indicated that an agency *need not* analyze “alternatives which are not significantly distinguishable from alternatives actually considered, or which have substantially similar consequences.” [*Westlands Water Dist.*, 376 F.3d at 868 (citations omitted)]. But here the FEIS analyzes only alternatives which do have substantially similar consequences, and then improperly excludes alternatives which would generate different results and allow for a more meaningful comparison between different courses of action.

The CEQ’s “Forty Questions” explains that a range of alternatives should include quantitative differences in how an agency analyzes a proposal:

For some proposals there may exist a very large or even infinite number of possible reasonable alternatives. For example, a proposal to designate wilderness areas within a National Forest could be said to involve an infinite number of alternatives from 0 to 100 percent of the forest. When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS. An appropriate series of alternatives might include dedication of 0, 10, 30, 50, 70, 90 or 100 percent of the Forest to wilderness. What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case. [CEQ 40 Most Asked Questions, Question 1b].¹³

The Ninth Circuit case law mirrors this statement in identifying a need for alternatives that provide for meaningful quantitative distinctions. In *State of Cal. v. Block*, the Forest Service prepared a programmatic EIS for designating roadless areas and analyzed 8 action

¹³ <https://ceq.doe.gov/nepa/regs/4011/1-10.HTM> (last accessed 1.15.2016; question 1b).

alternatives that would allocate roadless acreage between wilderness and non-wilderness designation. [*State of Cal. v. Block*, 690 F.2d 753, 766 (9th Cir. 1982)]. The court concluded that the range of alternatives was unreasonable in large part because the Forest Service limited its consideration of the amount of acreage available for Wilderness designation to no more than 33% of the roadless acreage. [*Id.* at 766-768]. The court explained that:

... without any explanation, the Final EIS seriously considered only those alternatives that allocate more acreage to Nonwilderness than to Wilderness. Moreover, with the sole exception of Alternative I, Nonwilderness acreage allocations exceed Wilderness allocations by a substantial margin, ranging from five-to-two for Alternative D, to nineteen-to-one for Alternative E. See Table # 1, *supra*. While nothing in NEPA prohibits the Forest Service from ultimately implementing a proposal that allocates more acreage to Nonwilderness than to Wilderness, it is troubling that the Forest Service saw fit to consider from the outset only those alternatives leading to that end result. [*Id.* at 768].

Similarly, in *Center for Biological Diversity v. Nat. Highway Traffic Safety Admin.*, the 9th Circuit reviewed a range of alternatives that would regulate vehicle emissions through fuel economy standards. [*Center for Biological Diversity v. Nat. Highway Traffic Safety Admin.*, 538 F.3d 1172, 1218 (9th Cir. 2008)]. The court characterized the alternatives as “hardly different” from the agency’s selected alternative and noted that none of the alternatives would achieve anything more than a small decrease (1.8 to 2.6%) from baseline emission levels. [*Id.*]. The court explained that the agency considered “a very narrow range of alternatives” with a minimal range of impacts. [*Id.* at 1218-1219]. All of the alternatives derived from a single study - NHTSA’s cost-benefit analysis. [*Id.* at 1218]. The court concluded that NHTSA’s excuses for failing to consider more stringent standards that would allow for increased conservation benefits were flawed. [*Id.* at 1219].

Finally, in an analogous Tenth Circuit case, *New Mexico ex rel. Richardson*, the state of New Mexico and a coalition of environmental organization challenged a BLM land management plan amendment that would determine which public lands in the planning area would be open to oil and gas leasing. [*New Mexico ex rel. Richardson*, 565 F.3d 683, 688-689 (10th Cir. 2009)]. The BLM eliminated alternatives that would have heightened environmental protections relative to the existing plan and considered only two alternatives despite extensive public comment requesting alternatives that would protect environmentally sensitive areas. [*Id.* at 709]. The court noted that there were “powerful” environmental values associated with eliminated alternatives that provided for more significant reductions in lands open to development, and concluded that multiple-use principles required the BLM to include a conservation-oriented alternative in its NEPA process. [*Id.* at 710-11; *see also Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 812-813 (9th Cir. 1999)(ruling that the Forest Service “failed to consider an adequate range of alternatives [where t]he EIS considered only a no action alternative along with two virtually identical alternatives”)].

Taken together, *New Mexico ex rel. Richardson*, *Center for Biological Diversity*, and *State of Cal.* all demonstrate that a reasonable range of alternatives must include alternatives that provide for meaningful comparison of courses of action that will generate conservation benefits – particularly when there are significant environmental values that counter the agency’s development interests. Here, the Forest Service has only considered a group of similar alternatives that will lead to a single result – 46 MMBF of timber – all based on a single analysis without consideration of alternatives that would increase and enhance conservation of multiple use resources.

b. Statement of supporting reasons

The FEIS contemplates only four action alternatives. All alternatives involve taking 46 MMBF of timber over the next decade. [FEIS at 2-16, 2-22, 2-28, 2-34]. Alternatives 2 and 3 split this volume roughly in half between old-growth and recovering, second-growth forests. Alternative 2 would take 24 MMBF of old-growth per year, and Alternative 3 would take 26 MMBF of old-growth per year. [*Id.* at 2-16, 2-22]. Both alternatives project reducing old-growth harvests to small sales in 12 – 13 years. [*Id.*]. The main difference between these two alternatives is that Alternative 2 is more aggressive in terms of young-growth logging in non-development LUDs. [*Id.* at 2-15, 2-21].¹⁴ Alternative 3 would remove only a slightly larger amount of remaining productive old-growth. [*Id.* at 2-45]. The only significant difference between the two alternatives is that Alternative 3 entails large scale removals of old-growth timber from Inventoried Roadless Areas – a proposal that the agency acknowledges is prohibited by law. [*Id.*; PR 769_05_000924; 763_05_001060]. But the FEIS states that “[h]owever, in the future, this could change.” [FEIS at 2-41]. In other words, the only possible distinction between the two alternatives unreasonably relies on the agency’s future and unlikely hoped-for-result – that a District of Columbia court would depart from the Ninth Circuit’s decision to uphold the application of the Roadless Rule in Alaska. [PR 763_05_001060]. In sum, there are no *reasonably* distinctive significant differences between Alternatives 2 and 3.

Alternatives 4 and 5 differ from Alternatives 2 and 3 primarily by taking a larger proportion of old-growth (35 and 34 MMBF, respectively) out of the total volume over the next ten years. [FEIS at 2-28, 2-34]. The primary difference between these two alternatives is that the Preferred Alternative, Alternative 5, would allow for more second-growth removals in non-development lands. [*Id.* at 2-44].¹⁵ Both alternatives would require 16 years before old-growth removals would drop to 5 MMBF per year. [*Id.* at 2-28, 2-34]. Both alternatives would remove nearly identical amounts of old-growth and recovering forests. [*Id.* at 2-31, Table 2-12 (23,255 acres of old-growth and 40,760 acres of young growth for Alternative 4); 2-37 (23,813 acres of old-growth and 43,316 acres of young growth for alternative 5)].

Thus, in reality, the DEIS contemplates only one alternative in terms of total timber removals – 46 MMBF - and two alternatives – Alternative 2/3 and Alternative 4/5 that provide for a slightly different timeline, a different but non-binding mix of old-growth and second-growth, with options to log second-growth in non-development lands. *None* of the alternatives reduce the overall volume of timber removals below the ten-year historical average of 33.1 MMBF from 2005-2014. [*Id.* at 3-486, Table 3.22-5]. Alternatives 4 and 5 thus maintain existing removals of old-growth forest relative to the status quo, and whether Alternatives 2 or 3 actually result in a different mix of old and young growth depends on future offerings and Alcan and Viking’s prospective interest in those offerings. [Draft LRMP at 5-13 (explaining that the Forest Service could provide old-growth instead of young growth to achieve the 41 MMBF target). In other words, it is unclear whether Alternatives 2 and 3

¹⁴ The FEIS acknowledged that “Alternative 3 is similar to Alternative 2 in that it identifies lands as suitable for young-growth timber production in both development and natural setting LUDs” with the main difference being that Alternative 3 precludes clearcutting in beach and estuary fringe, and reduced scenery standards by one level (2-20), while Alternative 2 allows beach fringe clearcutting for 15 years, and reduces scenery standards to Very Low (2-14). Both alternatives would allow for logging in the IRAs but the authority for that would occur through different procedures.

¹⁵ Alternative 4 does not change scenery standards; Alternative 5 would reduce them to “very low” in development LUDs. Alternative 4 allows second growth logging only in development lands, with commercial thinning only in the beach fringe

would actually differ in implementation from Alternatives 4 and 5 given the lack of binding commitment to the transition in the plan itself.

Additionally, this is a programmatic EIS, heightening the need to consider alternatives that would reduce old-growth logging to a greater extent. Ninth Circuit case law has demonstrated the necessity of including alternatives that reduce old-growth logging in programmatic analyses. In *Resources Limited Inc. v. Robertson*, the 9th Circuit reviewed and approved the range of alternatives in an EIS that considered 17 alternatives, including five timber removal alternatives that were more than 18% lower than existing levels. [*Resources Limited Inc. v. Robertson*, 35 F.3d 1300, 1307 (9th Cir.1993)]. In *Seattle Audubon Society v. Moseley*, court determined that the inclusion of an alternative that would have protected all old-growth timber satisfied NEPA's requirements. [*Seattle Audubon Society v. Moseley*, 80 F.3d 1401, 1404 (9th Cir. 1996); *see also Westlands Water Dist.* 376 F.3d at 868 – 872 (concluding, in a non-programmatic context, that a Department of Interior EIS evaluating six alternatives, including two endpoints for maximum and minimum instream water flows and mid-range alternatives was sufficient under NEPA)].

The Tongass National Forest has previously recognized NEPA's requirement to consider alternatives that reduce logging beyond those levels preferred by the agency. The existing, 1997 Forest Plan, as amended in 2008, considered a no-logging alternative in its range of ten alternatives. [*Natural Resources Defense Council v. U.S. Forest Service*, 421 F.3d 797, 814 (9th Cir. 2005)]. Two of the eleven alternatives in the 2008 TLMP FEIS provided for lower levels of timber removals than the volume perceived necessary by the Forest Service to meet market demand. [*See, e.g.* 2008 TLMP FEIS at 3-532]. This approach reflected the Forest Service's recognition under the previous planning rule that NEPA requires alternatives that reflect a range of minimum and maximum resource potentials to reflect a full range of resource values uses and values produced from public forests. [*See, e.g. Natural Resources Defense Council*, 421 F.3d at 813 (citing 36 C.F.R. § 219.12)].¹⁶

c. Conclusion and suggested resolution

The range of alternatives aims at one end result – 46 MMBF - and does not provide a broad enough range of courses of action to allow for meaningful public comment or sharp distinctions. This flaw is of heightened importance in the context of a programmatic document. The Reviewing Officer should direct the Responsible Official to rescind the draft ROD and FEIS and provide a broader range of alternatives that includes a no-old-growth removal alternative, a no-export alternative, and other downscaled alternatives that better address the need to conserve old-growth forests as explained in the Secretary's memorandum as well as the significant socio-economic changed conditions in the region described in Section I.A.

2. Objection Point 5. The range of alternatives is inadequate to allow for the reasonable identification of an environmentally preferred alternative

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Objectors' DEIS comments questioned whether the action alternatives were sufficiently distinctive to enable the determination of an environmentally preferred alternative. [Ref167

¹⁶ Although the new planning rule does not carry over alternative development requirements from §219.12(f), the exclusion was because the requirements were duplicative of NEPA's requirements. *See* 77 Fed. Reg. at 21,203.

at 21]. The Record of Decision must “specify[] the alternative or alternatives which were considered to be environmentally preferable.” [40 C.F.R. § 1505.2(b)]. The Draft ROD identified Alternative 4 as the environmentally preferred alternative without providing a reasonable explanation. [Draft ROD at 11].

As explained by the CEQ,

The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA’s Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources. [CEQ, Forty most asked questions, question 6a].

Thus, the Forest Service needs to develop alternatives that address the policy purposes enunciated in Section 101:

(b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—

- (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- (2) assure for all Americans safe, healthful, productive and esthetically and culturally pleasing surroundings;
- (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
- (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life’s amenities; and
- (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources. [42 U.S.C. § 4331(b)].

The Administrative Procedure Act (APA) requires that an agency “examine the relevant data and articulate a satisfactory explanation for its action, including a “rational connection between the facts found and the choice made.” [*Motor Vehicle Manufacturers Ass’n v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 43 (1983)]. An agency action is “arbitrary and capricious if the agency ... entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” [*Id.*]. The unexplained identification of Alternative 4 as the environmentally preferred alternative is arbitrary under these standards – that alternative allows Viking and Alcan more old-growth volume and more time to remove that volume.

b. Statement of supporting reasons

The FEIS does not provide any alternatives that meet NEPA’s policy purposes or fit within the CEQ’s description of an environmentally preferred alternative. The no-action alternative in a *project-specific* NEPA analysis would entail doing nothing harmful to the environment, and would be the environmentally preferred alternative. Moreover, a no harvest alternative would serve as a “benchmark” that would enable the public and decisionmaker to “compare

the magnitude of environmental effects of action alternatives.” [USDA 2015 at 2-30].¹⁷ But *here*, the no-action alternative references the 2008 TLMP, which, as a practical matter, entails similar levels of timber removals as all the action alternatives. [FEIS at 3-493-495].

Alternatives 2 and 3 may result in a quicker transition and slightly lower removals of old-growth forest and thus indicate that the Responsible Official’s identification of Alternative 4 as the environmentally preferred alternative was implausible and based on an arbitrary consideration of relevant factors. [FEIS at 2-16, 2-22, 2-44-2-45]. Alternative 4 would degrade 7,000 – 8,000 acres more of old-growth forest – clearly, it is not environmentally preferable to Alternatives 2 and 3 should the Forest Service actually implement those alternatives as envisioned in the FEIS. [*Id.* at 2-45]. But then Alternatives 2 and 3 also allow for timber entries into IRAs and heightened impacts from second-growth logging in non-development LUDs relative to Alternatives 4 and 5. [*Id.* at 2-44]. Alternatives 4 and 5 though also share those impacts, but to a lesser degree. [*Id.*]. Thus, while the identification of Alternative 4 as an environmentally preferred alternative, it is difficult – if not impossible - to characterize any of the alternatives as environmentally preferable. The absence of an alternative that would minimize environmental harm to a significant degree more than any of the others is a critical and significant error.

c. Conclusion and suggested resolution

NEPA requires the identification of an environmentally preferred alternative, and none of the alternatives provide for either a sufficiently rapid end to old-growth logging or appropriate limitations on the scale and impacts of second-growth logging. Alternatives 2 and 3 would appear to be environmentally preferable based on potential reductions in the scale and duration of old-growth logging, but the other components of those alternatives increase adverse impacts to conservation areas, making it impossible to distinguish between the alternatives based on environmental harms. The Reviewing Officer should direct the Responsible Official to prepare an environmentally preferred alternative. Such alternative would: accelerate the transition by ending old-growth logging immediately or under an expeditious time frame; downscale the amount of proposed removals of recovering forests and eliminate timber removal opportunities in conservation areas and IRAs.

3. Objection Point 6. The FEIS failed to provide a reasonable explanation for the refusal to include a no-old-growth harvest alternative

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Objectors DEIS comments requested an alternative that ended old-growth logging immediately, and explained that climate change mitigation, economic sustainability, and obligations to meet multiple uses all warranted the inclusion of this reasonable alternative. [Ref167 at 23-25].

A no-old-growth removal alternative was necessary to meet NEPA’s requirement to “foster informed decision-making and informed public participation.” [*California v. Block*, 690 F.2d at 767]. Only by studying a reasonable *range* of alternatives can the agency adequately compare the environmental impact of its proposed action, and allow the public to weigh in on alternative courses of action. [See 42 U.S.C. § 4332]. The alternatives requirement is critical to serving NEPA’s primary purposes of ensuring fully informed decisions and providing for

¹⁷ USDA 2015. Saddle Lakes Timber Sale; Final Environmental Impact Statement. R10-MB-740a. Forest Service, Alaska Region. Ketchikan, Alaska: September 2015.

meaningful public participation in environmental analyses. [See 40 C.F.R. § 1500.1(b), (c)]. By examining both the environmental impacts of the desired path and the impacts of other reasonable alternatives, NEPA enables an agency, and the public it serves, to evaluate whether the government has other options it could take that might be less damaging to the natural environment. [*Headwaters, Inc. v. Bureau of Land Mgmt.*, 914 F.2d 1174, 1180 (9th Cir. 1990); *California v. Block*, 690 F.2d at 767].

Here, the agency's exclusion of the no old-growth alternative deprived the public and the decisionmaker this fundamental exercise required by NEPA. [*California v. Block*, 690 F.2d at 768 (“While nothing in NEPA prohibits the Forest Service from ultimately implementing a proposal that allocates more acreage to Nonwilderness than to Wilderness, it is troubling that the Forest Service saw fit to consider from the outset only those alternatives leading to that end result.”)].

b. Statement of supporting reasons

i. A no old-growth logging alternative is reasonable to mitigate climate change impacts

Climate change “represents an urgent and potentially irreversible threat to human societies and the planet.” [Ref340 at 1 (UN 2015)]. Article 5 of the 2015 Paris Agreement states that “[p]arties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases, ... including forests.” [*Id.* at 22]. The Secretary's Memorandum notes that The Tongass National Forest is “important to the climate; while the Tongass comprises about 2 percent of the Nation's forests ... it contains the equivalent of 8 percent of the carbon sequestered in the forests of the coterminous United States.” [PR 769_01_000046 at 1 (USDA 2013)]. As we explain in Section III., *infra*, there is a scientific consensus that only a no-harvest scenario prevents a carbon flux deficit from federal forests in southeast Alaska. Again, NEPA's broad purposes clearly set forth a requirement to consider intergenerational equity, the clear public health and safety dangers associated with climate change, and other related factors. [42 U.S.C. § 4332(b)(1), (2), (3), (6)]. As part of this responsibility, NEPA requires agencies to “study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” [42 U.S.C. § 4332(2)(E)].

As the CEQ explains in its draft guidance on climate change in NEPA analyses:

The requirement to consider alternatives is meant to ensure that agencies consider approaches with no, or less, adverse environmental effects as compared to the proposed action or preferred alternative. This requirement seeks to ensure that each agency decisionmaker has the information needed to take into account possible approaches to a particular project (including the no-action alternative) that would alter the environmental impact or the balance of other factors considered in making the decision. Consideration of alternatives provides an opportunity to make the best informed, and potentially, most beneficial decision. Such decisions are aided when there are comparisons among preferred and other reasonable alternatives in GHG emissions and carbon sequestration potential, in trade-offs with other environmental values, and in the risk from and the resilience to climate change inherent in a proposed design. [Ref092 at 19 (CEQ 2014b)].

Thus, it was necessary for the agency to consider an alternative that would mitigate climate change by lowering CO₂ emissions and maximizing carbon storage. [40 C.F.R. §§ 1508.20, 1508.25 (mitigation means that the agency must consider ways to avoid the impacts, minimize or limit impacts, reduce or eliminate them over time, and compensate for them)]. Only a genuine programmatic no harvest alternative would achieve this result.

ii. A no old-growth harvest alternative is reasonable under the agency's obligations to biodiversity under the NFMA

An agency's NEPA analysis must be informed by the laws driving the action being reviewed. *See Or. Nat. Des. Ass'n v. U.S. BLM*, 625 F.3d 1092, 1109 (9th Cir. 2010). Here, NFMA and its implementing regulations provide the substantive duties with which the agency must comply in amending the Forest Plan. As described above, NFMA requires that forest plans provide for multiple uses, including recreation, watersheds, wildlife, and fish. [16 U.S.C. § 1604(e)]. NFMA also sets a hard floor with respect to managing flora and fauna populations: the agency must provide for the "diversity of plant and animal communities." *Id.* § 1604(g)(3)(B).

Regulations in place at the time the 1997 TLMP was adopted, and when it was amended in 2008, provided that the Forest Service must provide sufficient habitat to support "at least a minimum number of reproductive individuals and that habitat must be well-distributed so that those individuals can interact with others in the planning area." 36 C.F.R. § 219.19. Regulations adopted in 2012 require the agency to determine whether plan components "provide the ecological conditions necessary to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern within the plan area." 36 C.F.R. § 219.19 (2012).

The Forest Service ignored its substantive duties under NFMA with respect to wildlife and plant populations in developing its narrow set of alternatives. The alternatives proposed by the Forest Service are entirely driven by the selection of timber industry goals set forth in the Secretary's Memorandum, which expresses not the intent of Congress, but the desires of the executive branch. It is the former that carries more weight for the purposes of the NEPA analysis. *See Or. Nat. Des. Ass'n*, 625 F.3d at 1109 (explaining that the considerations made relevant by the substantive statute driving the proposed action must be addressed in the NEPA analysis).

Plainly, plant and wildlife viability are a central purpose of NFMA and its implementing regulations. This should have been a driving feature behind the development of alternatives. *Cf. id.* A no old-growth harvest alternative would elevate substantive viability considerations. And it would give the agency the opportunity to effectuate NFMA's mandate to meet multiple use objectives—not just intensive timber harvest. The agency's dismissal of the no old-growth timber harvest alternative on grounds that it did not facilitate the narrow commercial timber harvest goals announced by the Secretary's Memorandum failed to reconcile the agency's substantive obligations. *See id.* (explaining that the "statutory objectives underlying the agency's action work significantly to define its analytic obligations"); *cf. id.* at 1124 (where BLM in amending management plan considered no alternative that proposed closing more than a fraction of the planning area to ORV use, agency violated NEPA because it "uncriticall[y] privilege[d] one form of use over another").

iii. The excuses provided for rejecting the no old-growth alternative are arbitrary

The FEIS declined to consider an immediate end to old-growth because it "does not meet the purpose and need...for maintaining a viable timber industry that provides jobs and opportunities for Southeast Alaska residents." [Draft ROD at 10]. The FEIS writes that:

[s]uch an abrupt change would result in substantial adverse effects on the timber industry of Southeast Alaska for two reasons: (1) the abrupt change would make it difficult or impossible for mills to quickly re-tool so they could process young growth; and (2) the availability of economically viable young growth is currently limited, and as

a result, the Forest Service would likely offer substantially less timber volume than the projected demand (Table 2-1). [FEIS at 2-6].

First, by relying on an arbitrary number to determine projected timber demand, the Forest Service improperly failed to utilize the FEIS to evaluate issues of resource demand, and “instead shrouded the issue from public scrutiny behind the claim of administrative expertise.” [State of Cal. v. Block, 690 F.2d at 768]. Why does an “abrupt”¹⁸ end to federal old-growth offerings make re-tooling of mills any more or less possible? Indeed, how and why are “re-tooled” mills a factor at all? What would be the result to the local timber economy if the Viking mill were to close down? The supposition is exactly the kind of arbitrary decision-making that NEPA is designed to remedy. After all, the agency cannot know whether an immediate end to old-growth logging would or would not cause an end to a “viable timber industry” in the region without analyzing it. The APA, NEPA and NFMA set up a structure for analyzing it efficiently and rationally, and it was error for the agency to dismiss the alternative out of hand.

Second, the agency is unclear, inconsistent and irrational with regard to the definition of what a “timber industry” is, and particularly what role in-state *processing* of logs at manufacturing facilities (e.g. mills) plays in that industry. On the one hand, the old-growth offerings are anticipated to go primarily to the export market, with only a fraction filling the local processing “need.” The FEIS sets a 41 MMBF threshold for overall timber “industry” needs. [Id. at 2-7], at the same time it anticipates processing less than half that amount - roughly 15 MMBF of timber per year. [Id. at 3-492]. In other words, local processing is only a minor part of the timber industry. Yet on the other hand, there seems to be an unspoken *assumption* that a “viable timber industry” necessarily includes not only logging, but also local *processing* of logs into finished products. That assumption is not disclosed or explained in the FEIS or ROD, and it is not supported by the record.

The Viking mill is not essential to a “viable timber industry” that provides jobs and opportunities to local residents. Obviously a close to the Viking mill would result in a direct loss of perhaps 34 Alaska jobs (assuming all of its mill workers are indeed Alaska residents), but it is far from obvious that it would result in an end to viable opportunities for residents in the timber industry. It not even clear whether there would be a net job loss because those workers would likely find employment in market-based economic sectors as has happened throughout the region. And freed from the need to feed Viking’s mill, Wrangell Island for example would be able to provide economic small and roadside sales to local operators. Or, if Viking’s mill is sufficiently important to the local economy, then private and University timberland owners may start selling some of their logs to Viking. There is no warrant for the Forest Service to engage in crony capitalism by presuming that the free market is not capable of adjusting to new circumstances, or by trying to micro-manage the local economy in this way.

The plain, ordinary meaning of “timber industry” is as a synonym for “logging,” which generally excludes and is a different thing from *milling*. The American Heritage Dictionary, 5th Ed. (2011) defines logging as “The work or business of felling and trimming trees and transporting the logs to a mill.” Collins English Dictionary (12th Ed. (2014)) defines logging as “(Forestry) the work of felling, trimming, and transporting timber.” Indeed, milling logs is generally considered not to be forestry, but rather a type of manufacturing. The Forestry and Logging industry has a NAICS Code of 113, with variations for timber tract operations (1131,

¹⁸ The industry for processing Tongass old-growth has been dying a slow, steady death for the last two decades, so an immediate end to old-growth logging federal forests now could hardly be called “abrupt.”

113110); Forest Nurseries and gathering of forest products (1132, 113210); and logging (1133, 113310). The U.S. Census Bureau official description of the Forestry and Logging industry refers to growing and harvesting timber, with industries in the subsector specializing in stages of the production cycle; reference to mills is notably absent. See <http://naics-codes.findthedata.com/1/23/Forestry-and-Logging>. Viking's mill probably falls under NAICS Code 321, wood products manufacturing.¹⁹ The former Pulp and paper mills would have been NAICS Code 3221, also a subset of the manufacturing sector. Sellers of lumber products are found in a different category, 42, which covers varieties of wholesalers.

Further, as previously explained, the FEIS never identifies how many southeast Alaskans participate in the timber industry relative to non-local workers. The inability to identify the characteristics of the workforce is a significant flaw. How many southeast Alaskan entry workers are seeking logging and timber jobs? According to the Southeast Conference, the existing timber workforce is in decline, and the younger, new workforce has no interest in logging jobs. [Ref304 (Southeast Conference, 2016)]. Nor does it recognize that, as described in Part I.A., market-based economic sectors are likely to fill those employment gaps as has happened in other communities.

Even the re-tooling rationale is an unsupported assumption; the FEIS never considers the availability of equipment in the Pacific Northwest or discusses the cost and time frame for installation. The FEIS sets up a giant roadblock in suggesting that an entire industry must retool. This is disingenuous – Viking is the only entity that must retool given the old-growth set-aside for smaller mills. The FEIS itself admits that “it is unclear how fast industry will be able to ‘retool’ mills and harvesting equipment and how markets will react to switching from old-growth to young-growth products; thus this criterion is associated with a relatively high degree of uncertainty.” [FEIS at 2-38]. Using an uncertain, unsupported, and undefined criterion for dismissing the reasonable alternative of ending old-growth logging now was arbitrary.

The record identifies a retooling cost of \$12 million for Viking, and shows that it can be done over a period of a few years. [PR 763_05_000320 at 16 (pdf 22)(Alexander 2010); PR 763_05_000321 at 25, 28, 60 (Beck Group 2009); PR 769_04)000002 (Mater 2013)]. Viking may not even have to bear all of these costs based on the TAC's recommendation that the taxpayers subsidize the purchase of manufacturing facilities and new harvesting equipment. [LRMP, Appx. B at 27]. In light of the fact that the retooling rationale – and any other obstacles – apply to only one small business, the FEIS should have disclosed and analyzed realistic costs. Capital investments are not a major obstacle for successful businesses. Tour operators and commercial fishing businesses in the region routinely make large capital investments; if Viking is unable to do so, it is simply not competitive enough to participate in a market economy.

¹⁹ The Census Bureau description reads: “Industries in the Wood Product Manufacturing subsector manufacture wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, manufactured homes (i.e., mobile home), and prefabricated wood buildings. The production processes of the Wood Product Manufacturing subsector include sawing, planing, shaping, laminating, and assembling of wood products starting from logs that are cut into bolts, or lumber that then may be further cut, or shaped by lathes or other shaping tools. The lumber or other transformed wood shapes may also be subsequently planed or smoothed, and assembled into finished products, such as wood containers. The Wood Product Manufacturing subsector includes establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products. With the exception of sawmills and wood preservation establishments, the establishments are grouped into industries mainly based on the specific products manufactured.” Available at <http://naics-codes.findthedata.com/1/39/Wood-Product-Manufacturing>.

Additionally, incredibly, this rationale directly contradicts the repeated public statements of Viking lumber, to the effect that they have no wish or desire to “re-tool” to become a second-growth operation.

Finally, a no old-growth removal alternative would meet even the narrowly stated purposes of the Amendment process. It would enable a transition to a program that is more ecologically, socially and economically sustainable. [FEIS at 1-7]. Such an alternative would not prevent the Forest Service from establishing a PTSQ, reviewing the plan area for suitability of lands for second growth logging or developing standards and guidelines for second growth logging. [*Id.* at 1-8]. Further, a no-old-growth harvest alternative would also meet the need “to expedite the transition away from old-growth timber harvesting.” [*Id.* at 1-7].

This failure to analyze a range of alternatives infects the FEIS issues analysis with arbitrary assumptions. By failing to consider any alternative that ends old-growth logging operations immediately (or in fact even any that end old-growth logging within the time-period set by the secretary), the FEIS misses the opportunity to draw valuable comparisons that would have helped address some of the controversial uncertainties. Even if the alternative was not ultimately selected, it is critical to consider what effect an end old-growth logging from the Tongass will have on the industry.

c. Conclusion and suggested resolution

The stated reasons for rejecting a no-old-growth harvest alternative were arbitrary. The references to obstacles for the industry refer to only one small business, and the FEIS exaggerates the cost of capital investment and job losses as a major obstacle. The Forest Service’s other responsibilities – to consider climate change and biodiversity – clearly support the development of a no old-growth alternative. The Reviewing Officer should rescind the draft ROD and FEIS and direct the Responsible Official to prepare an additional NEPA analysis that considers a no old-growth harvest alternative.

IV. The Forest Service needs to prepare an additional NEPA analysis to correct the flawed evaluation of climate change impacts

One of the primary purposes of the new planning rule was to “[c]ontribute to ecological, social and economic sustainability by ensuring that all plans will be responsive and can adapt to issues such as the challenges of climate change.” [77 Fed. Reg. at 21,164]. Our DEIS comments requested that the Forest Service take a “hard look” at carbon storage and climate change impacts on ecosystem services. The FEIS instead violated NEPA because it failed to state the relevance of the proposed Amendment’s logging program and climate change to reasonably foreseeable adverse impacts and summarize existing, relevant scientific evidence. [40 C.F.R. §§ 1502.22; 1502.24; *Center for Biological Diversity v. Nat. Highway Traffic Safety Admin.*, 538 F.3d 1172, 1216 (NEPA analysis must not only quantify CO₂ emissions; it must “evaluate the ‘incremental impact’ that these emissions have on climate change or on the environment more generally” and discuss the actual environmental impacts); *see also* Ref092 (CEQ 2014) (agencies should project greenhouse gas emissions, and assess potential changes in carbon sequestration and storage)].

The few pages of analysis in the FEIS falsely portray a very simple issue as complex. The analysis relied on flawed assumptions and skirted the need to quantify impacts, and then concluded that logging in southeast Alaska may or may not affect climate change. The critical issue that the analysis evades, as explained in the following discussion, is simple.

Logging results in a net transfer of CO₂ to the atmosphere, exacerbating climate change. Conserving forest results more carbon storage, mitigating climate change. The suggestion in the FEIS that carbon storage in wood products, thinning, and future forest regeneration alters this balance lacks any support in credible scientific analyses.

We also noted that the 2008 TLMP Amendment conclusions on climate change arbitrarily characterized the impacts of forest management activities and climate change as unknowable and/or minute:

Even at the Forest Plan level, differences between alternatives in terms of the effects of climate change on the Tongass - and in the effects of land management activities on climate change - are uncertain, unquantifiable, and likely to be small (especially when compared to other routine human activities). For these reasons, information on climate change was deemed not essential to a reasoned choice among the alternatives considered in the 2008 Forest Plan EIS

Since the 2008 Amendment, climate change has continued “with new records being set for a number of climate indicators such as global average surface temperatures, Arctic sea ice retreat, CO₂ concentrations, and sea level rise. [Ref133 at 64,683 (EPA 2015)]. Additionally, updated scientific assessments have improved understanding of the climate system. [Id.] Yet eight years later, following a series of years with record high temperatures – particularly in Alaska, [Id. at 64685-64687] – this next Amendment again deems climate change irrelevant to the range of alternatives. The FEIS states that “[w]hile there is general agreement among scientists that the climate is warming, there is considerable uncertainty concerning the exact scope of effects of climate change on the forests of southeast Alaska and how best to deal with possible changes to the many resources on the Tongass.” [FEIS at 3-24]. As a result, the Amendment process, by omission, again deems climate change to be irrelevant in terms of the purpose and need, significant issues and range of alternatives considered for the Amendment. [Id. at 1-1 – 2-43]. The only measure it proposes is the Tongass National Forest’s “priority approach” to climate change which involves increasing logging in order to supply a hypothetical market that relies on wood combustion as a heating alternative to fossil fuels and electricity. [PR 769_05_000325 at 1 (Deering 2014)]. The FEIS notes a broad need to reduce CO₂ emissions, but then never considers or discloses the extensive body of science showing that the amended LRMP and TAC alternative (Alternative 5) will likely result in an increased concentration of CO₂ in the atmosphere in the near and long term due to:

- (1) emissions from logging;
- (2) lost carbon storage in old-growth forests;
- (3) lost carbon storage associated with short-rotations for recovering forests and
- (4) near- and long-term emissions from woody biomass combustion.

Current atmospheric concentrations of greenhouse gases in the atmosphere are likely to endanger public health and welfare, making emission reduction choices made today critical in determining impacts in the immediate future and in the coming centuries. [Ref133 at 64,682 (EPA 2015)]. It is widely recognized that old-growth logging in particular and also second-growth logging contribute to global carbon emissions and that climate change has significant ramifications for forests and biodiversity. Both the U.S. Supreme Court and Ninth Circuit have recognized that climate change is “an issue of national importance.” *Massachusetts v. EPA*, 549 U.S. 497, 521 (2007); *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin. (“NHTSA”)*, 538 F.3d 1172, 1221-24 (9th Cir. 2008). Despite the FEIS’s characterization of climate change effects as “uncertain” the courts have found that the evidence “shows that global warming will have an effect on public health and safety.”

NHSTA; see also *Mass. v. EPA*, 549 U.S. 497 (2007) (describing evidence demonstrating that “[t]he harms associated with climate change are serious and well recognized”).

President Obama’s climate action plan recognizes that “America’s forests play a critical role in addressing carbon pollution.” [Ref232 at 11 (Obama 2013)]. Thus, it is important “to ensure our forests continue to remove carbon from the atmosphere.” [*Id.*]. The U.S. is also working internationally to reduce CO₂ emissions caused by forestry in other countries. [*Id.* at 18 (identifying a reduction of 140 million tons of CO₂ in 2012 alone through U.S. Agency for International Development.)]. The 2015 Paris Agreement reflects these efforts, and demonstrated international recognition of the importance of forests in mitigating climate change:

... policy approaches and positive incentives for activities related to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches. [Ref340 at 23 (UN 2015)].

NEPA’s purpose is to “help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore and enhance the environment.” [40 C.F.R. § 1500.1(c)]. NEPA requires that an agency must provide a level of analysis that is proportionate to the significance of an issue. [*Id.* §§ 1500.4(b), 1500.4(g), 1501.7]. High quality information and accurate scientific analysis are essential to implementing this mandate. [*Id.* § 1508.1(b)]. Similarly, the new planning rule requires the Forest Service to utilize the best available science – i.e. to review information that “is the most accurate, reliable and relevant to the issues being considered.” [36 C.F.R. § 219.3]. In order to meet these requirements, the FEIS needed to state the relevance of the reasonable and foreseeable adverse impacts of climate change and federal logging, and summarize existing, relevant scientific evidence. [40 C.F.R. §§ 1502.22; 1502.24]. However, the FEIS failed to provide quality information about carbon storage and carbon accounting. It also ignored an extensive body of recent scientific studies concluding that the preservation of coastal temperate rainforests – particularly southeast Alaska’s forests – is essential to mitigating climate change in the immediate future.

A. Further NEPA analysis is necessary to consider the effects of federal logging on climate change

Federal logging will result in substantial carbon dioxide (CO₂) emissions with corresponding direct, indirect and cumulative effects on forest carbon stores and sequestration rates. The Amendment process will decide whether to manage the region as either a carbon sink that mitigates climate change, or as a net emitter of CO₂ that will exacerbate climate change.

1. Objection Point 7. The FEIS arbitrarily concludes that the direct and indirect and cumulative effects of logging under the Amendment are uncertain and arbitrarily fails to quantify emissions

The Forest Service’s National Roadmap for responding to climate change recognizes the value of intact forests as carbon sinks. It explains the importance of managing public forests to “mitigate the effects of a changing climate and to compensate for fossil fuel emissions through carbon storage in healthy forests.” [PR 769_05_00047 at 2]. Thus, forest management “will play a critical role in ensuring that forests remain a net carbon sink” and

further, “[k]eeping forests as forests is one of the most cost-effective carbon storage measures.” [*Id.*].

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments were highly critical of the analysis of climate change impacts, and questioned the direct and indirect effects conclusions, choices of scale, unsupported assumptions about carbon storage, and failure to disclose the social costs of the federal timber sales program’s contributions toward accelerating climate change. [Ref167 at 29-34 (GSACC et al. 2016c)]. The FEIS failed to provide an adequate analysis of the effects of federal logging on climate change, making it impossible to determine how or if the amended Plan would meet the sustainability requirements of the new planning rule relative to ecosystem services, which specifically include regulating services such as long-term carbon storage and climate regulation. [36 C.F.R. §§ 219.8(a), (b), 219.19].

NEPA further imposes a duty on federal agencies to gather information and do independent research when missing information is “important,” “significant,” or “essential” to a reasoned choice among alternatives. *Oregon Environmental Council v. Kunzman*, 817 F.2d 484, 495 (9th Cir. 1987) (citing *Save our Ecosystems v. Clark*, 747 F.2d 1240, 1244 n. 5, 1248-49 (9th Cir. 1984)). But the FEIS did not consider climate change to be relevant to the range of alternatives considered or to adverse impacts analyzed in the Amendment process. This approach ignored national and international policy commitments aimed at conserving forests for climate change mitigation, [see Ref340 (UN 2015) & Ref232 (Obama 2013) and expert scientific opinion concluding that globally significant carbon sinks such as the Tongass National Forest are critical to mitigating climate change. [See, e.g. Ref116 (Dellasala 2015)]. Under these circumstances, it was arbitrary for the Forest Service to utilize available tools that would allow for the development of a quantitative analysis of climate change impacts arising from the proposed LRMP. [Ref092 at 15 (CEQ 2014b)].²⁰ The FEIS instead relies on a qualitative analysis, but does not provide a reasonable explanation for failing to quantify climate change impacts resulting from federal timber removals. [See *id.* at 16 (“[w]hen an agency determines that a quantitative analysis is not appropriate, an agency should complete a qualitative analysis and explain its basis for doing so”).

NEPA requires agencies to consider the effects, including the cumulative effects, such as any action that has “individually insignificant but cumulatively significant impacts.” (40 C.F.R. § 1508.27(b)(7)). The CEQ defines a “cumulative impact” as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency . . . or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” *Id.* § 1508.7. An EIS is “deficient if it fails to include a cumulative impact analysis.” (*Center for Biological*

²⁰ The CEQ explains that:

If tools or methodologies are available to provide the public and the decision-making process with information that is useful to distinguishing between the no-action and proposed alternatives and mitigations, then agencies should conduct and disclose quantitative estimates of GHG emissions and sequestration. For example, tools exist that can provide estimates of GHG emissions and sequestration for many of the sources and sinks potentially affected by proposed land and resource management actions. . . . When considering tool options, it is important to consider the size of the project, spatial and temporal scale, and the availability of input data.

Diversity, 538 F.3d at 1215; also see *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 895 (9th Cir. 2002)].

In *Center for Biological Diversity v. NHTSA*, the Ninth Circuit concluded that the “impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” [538 F.3d at 1217]. There is no scientific question that incremental increases in greenhouse gases can have a cumulatively “significant” effect on climate change. [*Id.* at 1222]. Further, “the fact that climate change is largely a global phenomenon that includes actions that are outside of [the agency’s] control . . . does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming.” (*Id.* at 1217 (internal citations omitted); see also *id.* (“[w]e cannot afford to ignore even modest contributions to global warming. If global warming is the result of cumulative contributions of myriad sources, any one modest in itself, is there not a danger of losing the forest by closing our eyes to the felling of the individual trees” (citing *City of Los Angeles v. NHTSA*, 912 F.2d 478, 501 (D.C. Cir. 1990)(Wald, C.J. dissenting); *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016, 1032 (9th Cir. 2006)(“[n]o provision of NEPA ... allows [agencies] to eliminate a possible environmental consequence from analysis by labeling the risk as ‘unquantifiable’”)).

The CEQ’s draft guidance on how to consider greenhouse gas emissions and climate change impacts under NEPA mirrors the Ninth Circuit’s conclusion in *Center for Biological Diversity*:

CEQ recognizes that many agency NEPA analyses to date have concluded that GHG emissions from an individual agency action will have small, if any, potential climate change effects. Government action occurs incrementally, program-by-program and step-by-step, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, including decisions made by the government. Therefore, the statement that emissions from a government action or approval represent only a small fraction of global emissions is more a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether to consider climate change impacts under NEPA. Moreover, these comparisons are not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations. This approach does not reveal anything about the climate change challenge itself: the fact that diverse individual sources of emissions each make relatively small additions to global atmospheric GHG concentrations that collectively have a huge impact. [Ref092 (CEQ 2014)].

In light of the serious and well-recognized harms associated with climate change, and the Tongass National Forest’s global importance as a carbon sink, [Ref116 at 1 (DellaSala 2015)], the FEIS needed to provide detailed information about direct and indirect forest management effects to carbon storage and sequestration, incremental and cumulative effects, and rigorous information gathering and/or research in order to adequately consider and disclose the significance of environmental effects that may result from the federal timber sale program.

b. Statement of supporting reasons

i. The FEIS failed to take a hard look at quantifying lost carbon storage capacity by refusing to prepare a quantitative analysis

The CEQ recommends that “NEPA analyses should include a comparison of net GHG emissions and carbon stock changes that would occur with and without implementation of the anticipated vegetation management practice.” [See Ref092 at 13, 18 (CEQ 2014)]. The

FEIS failed to provide this comparison, which was particularly important for a programmatic LRMP. [*Id.* at 18 (explaining that analysis of climate change impacts and GHG emissions is “most important in analyses at a forest or landscape scale, including programmatic NEPA reviews supporting policy or programmatic decisions”). It never provides the public with a quantifiable frame of reference to assess the impacts of federal logging relative to the emitting sector (forest degradation), or national or international emission reduction goals, or the 25,000 metric tons of CO₂ annual emissions threshold set by the CEQ. [*Id.* at 14, 18].

The FEIS does acknowledge that the Tongass National Forest’s carbon storage capacity provides a “critical ecosystem service” in that it “stores more forest carbon than any other national forest in the United States.” [FEIS at 3-13; *see also* PR 769_05_00062 at ii (Barrett 2014)(determining that the Tongass National Forest stores massive amounts of forest carbon, more than any other forest in the United States)]. However, annual CO₂ emissions from logging and mortality in federal forests in southeast Alaska nearly offset the amount of carbon annually removed from the atmosphere and nearly nullify this important ecosystem regulating service. [FEIS at 3-14].

The direct, indirect and cumulative effects conclusions in the FEIS concedes that logging can release greenhouse gases and affect the rate and amount of carbon sequestration. [*Id.* at 3-19-3-20, 3-24]. But then the analysis goes astray, and provides a brief and misleading discussion that reflects what forest carbon experts describe as “dubious carbon accounting” in order to justify the refusal to prepare a quantitative analysis. [*Id.* at 3-21]. The analysis describes the estimation of the effects of the TLMP Amendment on carbon storage as feasible but then refuses to undertake the appropriate level of analysis because of perceived uncertainties based on leakage (whether other timber producing countries would increase logging to fill perceived market gaps from reduced outputs of Tongass federal timber) or the actual amount of federal timber removed under the plan. [*Id.*]. The FEIS further asserts that the literature pertaining to the effects of logging on carbon storage presents “widely different conclusions about net sequestration” based on different assumptions about the relevant time frame, utilization, future growth rates, and other issues. [*Id.* at 3-19]. The FEIS states that “[e]ach of the harvesting alternatives has the potential to either increase or decrease the amount of stored carbon, depending on the time scale of consideration” and other factors such as the amount of old-growth taken and the total amount of logging. [*Id.* at 3-20].

The above discussion does not provide a reasonable basis for failing to provide a quantitative analysis. It is irrelevant whether or not other timber producers increase their removals due to reduced take on the Tongass – the agency needs to quantify its emissions. The market leakage rationale is nonsense; the study relied on in the FEIS addresses the effect of subsidies paid to developing nations to protect tropical timber. [PR 769_05-000855 (Jonsson 2012)]. The other study relied on in the FEIS does not suggest that the Forest Service should decline to produce a quantitative analysis, it simply identifies some uncertainties – some of them as low, and still makes clear that “forest carbon loss poses a significant climate risk” and “avoiding forest loss ... should receive high priority.” [PR 769_05_000857 at 14-17 (McKinley et al. 2011)]. Nor can the FEIS rely on uncertainty about the actual amount of emissions – the FEIS sets forth specific timber volumes so that the numbers are known to the agency. These excuses are arbitrary.

Further, the analysis does not recognize or review the numerous studies concluding that logging, or even thinning, causes a net loss of carbon to the atmosphere at any relevant temporal scale regardless of wood product utilization or future growth. Although the record shows little effort to research this important problem, one of the few studies included in the record shows that it has been known since 1990 that the reduction in carbon storage caused

by logging is considerable and re-growth will not restore this capacity “for at least 200 years” even when accounting for carbon storage in wood products. [PR 769-05_000073 at 699]. As explained in more detail in the following subsections, the FEIS does not meet NEPA’s standard for ensuring the professional and scientific integrity of the discussion and analysis in an EIS. [40 C.F.R. § 1502.24]. It neither identifies the methodology used to support its conclusions nor discloses the policy and scientific points of view that undercut the Forest Service’s position that the climate change impacts from action alternatives are complex and fraught with uncertainty.

The relationship between carbon flux and forestry is not complex as suggested in the FEIS. Ref172, Ref203 and Ref204, submitted with our DEIS comments, synthesize the findings of more detailed studies in summaries that illustrate the simplicity of forest carbon accounting. As explained by one of the leading experts on carbon flux in coastal temperate rainforests, the “*basic ecosystem science is relatively straightforward.*” [See Ref172 at 2-3 (Harmon 2014)]. The issue is simple – old-growth forests store and sequester massive amounts of carbon for centuries – ten times as much as regenerating forests, leading experts to reach a simple solution: “[t]he low hanging fruit is to allow these forests to continue to store and accumulate carbon.” [Ref204 at 1 (Law 2014b); Ref116 at 5 (Dellasala 2015)]. The best way to achieve this result is also simple: reduce the intensity of logging and lengthen the rotations. [Ref203 at 3 (Law 2014a)].

The FEIS failed to review or respond to expert opinions and the initial record failed to include the extensive body of scientific literature addressing carbon flux and forests that has developed since the 2008 Amendment. We had submitted numerous peer-reviewed scientific studies on carbon accounting and logging to the Forest Service during the implementation of the 2008 Amendment through specific logging projects and through the scoping process for this Amendment. But the list of references in the DEIS considered only two older studies on carbon storage in forests from 1990 and 1993. [See e.g. DEIS at 6-8, 6-21; see also PR 769_05_000062 at 41-44 (Barrett 2014)(providing a reference list that fails to include the best available science)].

The FEIS does briefly discuss a few of these studies and acknowledges that the proposed LRMP would result in net carbon dioxide emissions. But then the LRMP and FEIS provide no articulable criteria to determine what level of emissions and lost carbon storage capacity from federal forests would adversely impact the environment and simply provide a “qualitative evaluation” of the differences between alternatives without developing the actual number that the FEIS itself concedes is feasible to do. [FEIS at 3-21].

Scientists produced four important studies immediately after the 2008 Amendment showing that:

- (1) Removal of forest biomass removes carbon stored in trees and in soils, reducing carbon inputs to soils and stimulating soil respiration, resulting in both reduced soil sequestration and near-term emissions; [Ref185 at 257-258 (Jandl et al 2007)];
- (2) Forests remain net sources of carbon emissions for more than a decade after logging, in significant part due to increased soil respiration; [*Id.*];
- (3) Logging further reduces carbon sequestration potential of forests by removing trees that otherwise would have continued to draw CO₂ from the atmosphere; [Ref117 (Depro et al. 2008)];
- (4) A study of the world’s most carbon-dense forests, including North American coastal conifer forests, showed that the greatest accumulations of carbon

biomass occur in the absence of anthropogenic land-use disturbances; [Ref194 (Keith et al 2009)] and

- (5) Old-growth forests accumulate carbon for centuries and contain large quantities of it, but forest disturbances emit this carbon back into the atmosphere. [Ref210 (Luyssaert 2008)].

Then, over the past five years, scientific experts have produced a number of similar studies, many of them specific to coastal temperate forests in the Pacific Northwest and Alaska. [See, e.g. 204 at 3 (Law 2014b, providing a reference list)]. Dr. Dominick Dellasala's analysis reiterates the findings of other scientists and points out that the Forest Service and Tongass Advisory Committee alternative would produce massive CO₂ emissions, even when considering wood product storage and forest regrowth. [Ref116 at 1-2 (DellaSala 2015)]. Specifically, Dr. Dellasala's review of estimated net carbon flux from federal logging in southeast Alaska showed that "*only a no-logging scenario maintains carbon stores through time.*" [Id. at 4 (emphasis in original)].

Yet, despite the availability of means to calculate lost carbon storage and CO₂ emissions caused by the federal timber sale program, the FEIS refuses to quantify the direct and indirect effects. [FEIS at 3-21]. Thus it never discloses that the preferred alternative fails to meet national reference points established by the Council on Environmental Quality (CEQ) for minimizing CO₂ emissions caused by federal agencies. [Ref116 (Dellasala 2015)]. Total CO₂ emissions would average in excess of 4 million tons per year and cumulatively exceed 100 million tons over a 25 year period. [Id. at 14, Appx. II]. This emission level is equivalent to 4 million vehicles annually, and more than 175 times as high as the CEQ reference point. [Id. at 8, 14].

In light of the global importance of federal public lands in southeast Alaska as a carbon sink, the conclusion that a plan to log over 300,000 acres of old-growth and regenerating forests did not merit a quantitative analysis was arbitrary, and therefore the significant direct and indirect effects discussion was arbitrary. The Ninth Circuit has already determined that scientific evidence "demonstrates, overwhelmingly, the environmental significance of CO₂ emissions and the effect of those emissions on global warming." [*Center for Biological Diversity*, 538 F.3d at 1226]. Thus, without further analysis, it would be "impossible to know" whether a shift in emissions from a particular sector of even a fraction of a percent "will be a significant step toward averting the 'tipping point' and irreversible climate change." [Id. at 1221].

ii. The FEIS fails to provide carbon cycle accounting at an appropriate temporal scale

Our scoping and DEIS comments referenced scientific studies showing that it is critically important to minimize greenhouse gas emissions in a very compact time frame in order to meet applicable emission reduction and corresponding temperature threshold targets. The CEQ recommends that "agencies should take into account *both the short-term and long-term* effects and benefits based on what the agency determines is the life of a project and the duration of the generation of emissions." [Ref092 at 12]. The analysis must consider the net change in carbon balance that is "relevant in light of the proposed action and time frames under consideration." [Id. at 13]. The approval of this plan, which may provide short-term economic benefits to two timber operators, will at the same time have potential long-term climate impacts. But the FEIS failed to identify a relevant time frame in its climate change analysis – all it did was to note the obvious – that the temporal scale strongly influences the carbon calculus. The failure to take a hard look at the temporal relationship between present carbon emissions and the future effects of climate change was arbitrary.

As we explained in the preceding section, the FEIS and LRMP establish no quantifiable criteria for measuring whether emissions and lost carbon storage from federal logging is significant. The FEIS also provides no temporal criteria to assess when mitigation of CO₂ emissions through reduced and deferred timber take is relevant. More importantly, it never addresses the critical factor of how eliminating old-growth logging and reducing or deferring second-growth logging would reduce or mitigate near-term emissions from forestry and other sources. Because overall greenhouse gas emissions must be reduced in the very near term in order to avoid the worst impacts of climate change, [Ref340 (UN 2015)], the immediate release of carbon from logging and lost sequestration capacity will have significant impacts compared to the much longer-term release of biomass from the death and decomposition of live trees in decades or centuries. Short-term CO₂ emissions and lost sequestration capacity that directly, indirectly or cumulatively result from the proposed LRMP are critical in the context of efforts to avoid the worst impacts of climate change.

The FEIS, however, refers to the temporal scale of analysis as a complicating factor. However, there are some simple principles that are relevant. [See Ref172 at 13 (Harmon et al. 2014, explaining that some scales are more relevant than others)(Harmon 2014)]. In general, logged forests are net emitters of CO₂ for at least 5 and as many as 50 years, releasing up to half of the stored carbon into the atmosphere. [*Id.*, Ref113 at 4 (Dellasala 2014); Ref116 at 6 (Dellasala 2015)]. Old-growth forests in particular are champions in terms of long-term carbon storage. [*Id.*; Ref113 at 4 (DellaSala 2014)]. Experts agree that it will take at least a century to make up carbon loss caused by logging old-growth forests. [*Id.*; Ref172 at 6 (Harmon 2014); Ref203 at 4 (Law 2014a)].

Thus, a major problem under NEPA is that the analysis failed to establish some temporal threshold or benchmark to support its conclusions in relation to a clear environmental danger. But the Forest Service never takes the necessary step of identifying the importance of a net storage gain in a compact time frame, nor does it even make an effort to quantify the deficit that would occur under the proposed LRMP in the interim.

iii. The FEIS relies on unsupported assumptions in concluding that logging can increase carbon storage

The FEIS also attempts to excuse the refusal to prepare a quantitative analysis by referencing carbon storage in wood products. [FEIS at 3-20-21]. The Forest Service's assumptions about ways to offset emissions from logging are flawed – as shown in Harmon's presentation on "dubious carbon science," the suggestions that carbon storage in wood products and thinning can offset emissions are wrong. [See Ref172 at 17-21, 27-34 (Harmon et al. 2014)]. First, federal agency accounting errors tend to overestimate carbon storage in wood products. [*Id.*; Ref116 at 5-6 (DellaSala 2015)]. There is a substantial loss of CO₂ to the atmosphere even when timber operators utilize most timber in lumber production. [PR 769-05_000073 at 699-700 (Harmon et al. 1990)]. Thus, carbon storage in wood products does not offset CO₂ emissions from logging. [Ref113 at 4 (DellaSala 2014); Ref204 at 15 (Law 2014a, explaining that carbon stored in wood products returns to the atmosphere more quickly when removed from forests)]. Further, federal logging leaves "a relatively high amount of dead wood after harvest" and timber operators will ship roughly two-thirds of overseas for processing, further reducing any marginal offset from wood products. [DEIS at 3-19, FEIS 3-492].

iv. The cumulative effects determination needed to reflect a quantitative analysis

Overall, conservative estimates show that forestry (i.e. logging) is the third largest source of global emissions behind energy and industry, but contributing more emissions than the entire global transportation networks. [Ref113 at 3 (DellaSala 2014); Ref116___ at 6 (DellaSala 2015)]. The record identifies the removal of old-growth forests as “a significant source” of atmospheric carbon. [PR 769_05_000073 at 701]. It explains that even when considering old-growth forests as a small portion of the earth’s land surface, “old-growth forest conversion appears to account for a noteworthy 2% of the total [carbon] released because of land use changes in the last 100 years. [Id.]. The transition to removing recovering forests is also a problem because it will continue to add carbon to the atmosphere “in moist forests in which the age of harvest is less than the age required to reach the old-growth stage of succession.” [Id.].

According to the EPA, forests in the United States “play a critical role in addressing carbon pollution, removing more than 13 percent of total U.S. GHG emissions each year.” [Ref133 at 64,885]. National forests store one-fourth of the total carbon stored in U.S. forests, and coastal temperate forests in southeast Alaska and the Pacific Northwest over all have the highest carbon density in any national forest per acre, by all relevant measurements – carbon stored in soil, in standing trees, on the forest floor and below ground. [PR 769_05_00047 at 5, 34 - 41]. The Tongass National Forest is thus significant both nationally and globally as a carbon sink, but will only remain a sink under a no harvest scenario. [Ref113 at 6, 10 (DellaSala 2014)]. Indeed, hundreds of the leading resource scientists in the United States urged the Forest Service to protect forest carbon stores, including the Tongass National Forest, as integral to stabilizing global climate change. [Ref113 at 6 & n. 16 (DellaSala 2015)]. EPA inventory data show that carbon storage in forests is critical to offsetting emissions from other sectors. [Ref133 (EPA, 80 Fed. Reg. at 64688, Table 3)].

The Tongass National Forest’s timber sale program is highly relevant to the cumulative effects of global climate change. Indeed, the U.S. Supreme Court agrees that federal agencies must meet their relevant statutory obligations with regard to climate change regardless of the myriad of global greenhouse gas sources. (*Massachusetts v. EPA*, 127 S.Ct. at 1463 (rejecting the EPA’s argument that regulating vehicle emissions would be “an inefficient, piecemeal approach”). Thus, the issue is not whether Tongass sequestration capacity by itself will reverse climate change, but whether it can play a role in ameliorating the impacts. [See, e.g. *id.* at 1458]. Quantitative analysis was necessary – particularly since southeast Alaskan forests are no merely minor part of the climate change issue *but rather a nationally and globally significant carbon sink* where management choices bear directly on the global climate system.

c. Conclusion and suggested resolution

In sum, given the significant carbon stored in the trees and soil in public lands in southeast Alaska, the certain release of such stored carbon to the atmosphere and ocean if the proposed old and second growth logging goes forward, along with the loss of future sequestration by removing the trees and disturbing the soil, the proposed Amendment will have very significant adverse impacts related to climate change. The DEIS failed to consider these impacts by basing its direct, indirect and cumulative effects conclusions in outdated and flawed assumptions, and by ignoring scientific evidence and policy commitments reflecting the broad awareness that maintaining forests as net carbon sinks is essential to mitigating climate change impacts in the near term.

The FEIS did not provide a reasonable explanation for refusing to prepare a quantitative analysis of lost carbon storage capacity and greenhouse gas emissions caused by the federal

timber sale program, violating NEPA. The draft ROD is thus arbitrary because it relies on an FEIS that failed to demonstrate an appropriate analysis of this significant issue. The Reviewing Officer should direct the Responsible Official to rescind the draft ROD and FEIS with instructions to prepare a quantitative analysis of climate change impacts and identify an appropriate scale.

2. Objection Point 8. Logging for biomass increases CO₂ emissions, harms public health and diverts resources from zero-emitting renewable energy technologies

The Tongass National Forest’s “priority” approach to addressing climate change is to shift the region from heating with fossil fuels to heating through wood combustion. [PR 769_05_000325 at 1 (Deering 2014)]. In their September 2015 publication, “Community Biomass Handbook,” Biomass Roadmap Coordinator Robert Deering and Region 10’s Forest Stewardship/Biomass Coordinator Daniel Parrent assert the conversion would reduce the region’s carbon footprint relative to fossil fuels. [PR 769_05_000804 at 61]. Their assertion that biomass should be treated as a “carbon neutral” fuel reflects a misinterpretation of outdated accounting mechanisms – an interpretation that “is inconsistent with the best science of forest carbon accounting.” [Ref173 Harmon et al 2011]. Instead, experts have found that a reliance on forest biomass “makes it likely that greenhouse gas emissions will increase for many years where biomass replaces or displaces fossil fuels.” [*Id.*].

But the FEIS failed to consider any scientific literature rebutting Deering and Parrent’s conclusory assertions. Over the past five years, a number of scientific studies have addressed the particular issue of logging for the purpose of generating combustible wood. [See, e.g. Ref179 at 1 (Holtmark 2012)]. These studies have shown that burning wood emits substantial amounts of carbon dioxide – in some (if not all) cases, more than burning coal and substantially more than burning natural gas. [*Id.*; Ref287 at 2 (Searchinger et al 2015); Ref203 at 17 (Law 2014a)(explaining that the CO₂ emissions per unit of energy is as high as coal and larger than oil and gas); Ref173 at 1 (stating that replacing or displacing fossil fuels with biomass will increase greenhouse gas emissions for many years)]. Additionally, wood combustion emits at least five known carcinogens and numerous hazardous air pollutants at levels that exceed emissions from coal and oil combustion. [*Id.*; Ref152 at 28 (Greenpeace 2011)]. Finally, the biomass heat conversion will be expensive and divert resources from zero-emitting renewable energies. The FEIS fails to address the myth of carbon neutrality: biomass combustion increases, rather than reduces, CO₂ emissions.

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments requested an analysis of the life-cycle greenhouse gas emissions associated with the federal biomass conversion program. [Ref167 at 36 (GSACC et al 2016c)]. The Forest Service has never provided a NEPA analysis of the environmental impacts its biomass conversion program for southeast Alaska, and the omission of such an analysis in this programmatic DEIS is a major flaw. [See 40 C.F.R. § 1508.18 (explaining that a “major federal action” includes “new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated or approved by federal agencies; new or revised agency rules, regulations, plans, policies, or procedures”)].

We thus requested that further NEPA analysis evaluate the Forest Service’s “carbon-neutral” assumption about biomass energy, [Ref167 at 36-39 (GSACC et al. 2016c)], and review the substantial body of scientific literature which shows that it requires decades, or even centuries, before carbon lost through combustion is recaptured by regenerating forests. [See, e.g. Ref179 at 1 (Holtmark 2012); Ref219 at 819 (Mitchell et al. 2012); Ref283 at 611-

612 (Schulze et al. 2012)]. Thus, it is necessary to account for CO₂ emissions caused by logging, transportation and combustion to determine the extent to which biomass burning would add to near-term atmospheric CO₂ concentrations. [*Id.*; Ref219 at 826 (Mitchell et al. 2012)]. Scientific studies from different regions (Europe, Canada and the United States) have all shown that wood biomass combustion would result in higher carbon emissions than fossil fuels, and exacerbate climate change for decades – or even centuries. [*Id.*; Ref134 (Ernsting 2012)].

The FEIS violated NEPA and the APA by avoiding the issue entirely. [FEIS, Vol. II, Appx. I at I-117, I-132-133]. The Administrative Procedure Act (APA) requires that an agency “examine the relevant data and articulate a satisfactory explanation for its action, including a “rational connection between the facts found and the choice made.” [*Motor Vehicle Manufacturers Ass’n v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 43 (1983)]. An agency action is “arbitrary and capricious if the agency ... entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” [*Id.*]. The renewable energy purpose for the amendment seeks to reduce fossil fuel dependence and lower carbon emissions. [FEIS at 1-9, 1-14]. Yet the FEIS identifies biomass as a renewable energy without ever analyzing carbon emissions from biomass burning or disclosing that biomass burning would be contrary to that purpose. [*Id.* at 3-322, 3-324-326]. The adoption of biomass as a renewable energy in an amendment that seeks to reduce carbon emissions is a relevant factor counter to the evidence before the agency – yet the FEIS ignores the increased carbon emissions from biomass burning.

b. Statement of supporting reasons

The projected level of federal logging would increase significantly – by more than 20 MMBF per year over the next decade – based on the federal goal to convert 30% of current regional heating oil use to biomass. [FEIS at 3-494, Table 3.22.10]. One of the major flaws with the FEIS is that it fails to address the simple and significant issue related to increases in CO₂ emissions associated with the federal biomass program. The impacts of CO₂ emissions from biogenic sources such as wood on air quality, the environment and human health are the same (or worse) as the environmental impacts from burning other fossil fuels. The federal biomass conversion program will result in biogenic carbon dioxide emissions, which the EPA defines to include emissions “directly resulting from the combustion ... of biologically-based materials other than fossil fuels” such as wood and wood waste. [76 Fed. Reg. at 43,439].²¹ Additional logging for biomass will exacerbate the emissions from the logging and loss of sequestration capacity, and further accelerate climate change because regenerating forests are net carbon emitters for an extended period of time.

But the FEIS never addresses this adverse environmental impact, although a Forest Service “Issue Paper” in the record states, without any analysis or support, that emissions from woody biomass would be 90% less than fossil fuels. [PR 769_05_000349; *see also* PR 769_05_000804 (Parrent et al. 2015)(asserting that biomass burning lowers carbon emissions)]. The Forest Service’s position reflects the assumption that future re-growth will offset CO₂ emissions. [Ref283 at 611 (Schulze et al. 2012)]. This assumption reflects a “baseline error” because it fails to consider tree growth and carbon sequestration that would

²¹ Deferral for CO₂ Emissions from Bioenergy and Other Biogenic Sources under the Prevention of Significant Deterioration (PSD) and Title V Programs (“Deferral Rule”), 76 Fed. Reg. 43,490, 43,493 (July 20, 2011).

occur if the government does not remove trees for combustion in the first place and omits the amount of fossil fuels needed to manage, log and process the trees. [*Id.*].

Thus, the best available science evaluates wood biomass combustion in terms of “carbon sequestration parity” which considers the amount of time needed for the total carbon storage and fossil fuel substitution to exceed the carbon storage that would occur in the absence of timber removals. [Ref219 at 819-820 (Mitchell et al. 2012)]. It is clear that substituting biomass fuels for fossil fuels delays environmental benefits for two simple reasons. First, logging increases the carbon losses beyond losses caused by mortality and decomposition. [*Id.* at 824]. Second, because biomass fuels are less efficient than fossil fuels, biomass conversions do not result in an equivalent amount of energy per unit of CO₂ emissions. [*Id.*]. Thus, logging for wood combustion produces the same result as logging in general - the no-harvest scenario is the “more ambitious climate change mitigation strategy.” [*Id.* at 820]. The DEIS never considers a scale that is relevant to climate change

The FEIS cites no scientific literature that would show that wood biomass combustion is carbon neutral in any time frame that is meaningful to climate change – yet the carbon neutral assumption is essential to the Forest Service’s biomass program. The NEPA analysis failed to consider compact temporal scales when analyzing net emissions arising from logging for biomass – an analytic horizon of 10 – 20 years is essential to align biogenic emissions with efforts to avert the worst consequences of climate change. It is possible that re-growth may, some day, offset the carbon released from the initial burning of the trees – but the payback period “will nearly always take many decades, and in some cases, centuries.” [Ref173 at 4 (Harmon et al 2011)]. As explained in a 2012 study:

Recent studies of the differences in timing of CO₂ emissions from bioenergy production and forest carbon uptake ... suggest that the ‘upfront’ CO₂ emitted during biomass harvest and combustion stays in the atmosphere for decades before the CO₂ is removed by the growing forest. It results in a ‘pulse’ of warming the first decades of bioenergy implementation. This contrasts calls for a rapid reduction of the growth rate of climate forcing. [Ref283 at 612 (Schulze et al. 2012)].

Thus, any “forest management that reduces the current biomass pool is unlikely to result in the envisioned savings at all, and certainly not over the next decades. [*Id.*]. Importantly, forests in the United States in general are in a positive sequestration trend. [*Id.*]. The conversion to biomass “will likely reverse this trend or at least reduce the carbon sink strength of forests.” [*Id.*]. The result is that:

... on areas currently forested, any fast rotation management and use for fossil fuel substitution is reducing forest carbon sequestration. At regional scales, a permanent increase in annual wood harvest results in a permanent reduction in the amount of carbon stored in forests at the regional scale due to a lower average stand age. [*Id.*].

The amended LRMP and the federal biomass conversion will rely on short rotations and permanently increase the removal of trees – permanently reducing carbon storage as explained by Schulze et al. Additionally, the biomass conversion will result in significant adverse environmental impacts to the ecosystem by increasing logging, and maintaining forests in second growth condition that would otherwise attain old-growth forest characteristics. [*Id.*].

Further, the FEIS does not provide a methodology for comparing fossil fuel emissions to potential CO₂ emissions from the biomass conversion program. A major premise of the biomass conversion is that a conversion to biomass would reduce CO₂ emissions by displacing fossil fuels. However, experts have explained that:

Biomass has a lower energy density than fossil fuels, and is inefficient because its generally high moisture content requires that energy be expended to evaporate water before useful energy can be obtained. Because wood burns at a lower temperature than fossil fuels, the efficiency of electricity production is also lower. This means that in practice, burning biomass emits 150 percent of the carbon dioxide of coal, and 300 – 400 percent the CO₂ of natural gas, per kilowatt-hour of electricity generated. [Ref173 at 1-2 (Harmon et al 2011); *see also* Ref219 at 819 (explaining that “[s]ince biomass harvesting reduces [carbon] storage but does not produce the same amount of energy that would be obtained from an equal amount of [carbon] emissions from fossil fuel combustion, recouping losses in [carbon] storage through bioenergy production may require many years” [Ref218 Mitchell et al 2011]).

Other experts agree that reductions in forest carbon stocks caused by logging will at a minimum offset any benefits from lowered fossil fuel consumption over decadal time frames. [Ref283 at 611 (Schulze 2012)]. One recent study concluded that biomass conversions:

...will result in shorter rotations, younger forests, lower biomass pools and depleted soil nutrient capital. This strategy is likely to miss its main objective to reduce GHG emission because depleted soil fertility requires fertilization that would increase GHG emissions, and because deterioration of current biomass pools requires decades to centuries to be paid back by fossil fuel substitution, if paid back at all. . [Id. at 615].

c. Conclusion and suggested resolution

The FEIS neither discloses nor considers whether substituting wood biomass combustion for fossil fuels would result in increased emissions – violating NEPA. The biomass conversion is a federal policy and is integral to the Proposed LRMP and its logging goals. It was arbitrary to wholly dismiss scientifically informed public comment on the biomass issue. The Reviewing Officer should direct the Responsible Official to rescind the draft ROD and FEIS and prepare an additional NEPA analysis that discloses the serious scientific concerns about the biomass conversion.

3. Objection Point 9. The FEIS failed to distinguish between zero-emitting renewable energies and dirty energies such as biomass combustion

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments requested that further NEPA analysis review the evolving regulatory status of biomass combustion in light of the recent decision in *Center for Biological Diversity v. EPA*, which required the EPA to re-evaluate its current approach of regulating biomass combustion differently than other greenhouse gas emission sources. [Ref167 at 40 (GSACC et al 2016c); *See Center for Biological Diversity v. EPA*, 722 F.3d 401 (D.C. Cir. 2013). CO₂ is an air pollutant under the Clean Air Act and thus subject to regulatory performance standards implemented by the EPA. [*Massachusetts v. EPA*, 127 S.C. at 1458; 42 U.S.C. §§ 111(d), 302(a)]. The D.C. Circuit has observed that “the atmosphere makes no distinction between carbon dioxide emitted by biogenic and fossil fuel sources.” [*Center for Biological Diversity*, 772 F.3d at 406]. But the FEIS and proposed LRMP then arbitrarily distinguish between emissions by the two combustible fuel sources. The analysis suggests, and plan dictates, that biomass combustion is a substitute for fossil fuels and would fall within the same regulatory context as zero-emitting renewable energies such as solar, wind and hydropower.

The FEIS and Proposed LRMP list biomass among the six renewable energy resources available in southeast Alaska. [FEIS at 3-322; LRMP at 7-49]. The LRMP defines a renewable energy as “[e]nergy resources that are naturally replenishing but flow-limited.”

[LRMP at 7-55]. This definition is inadequate because it does not make the critical distinction between emitting and zero-emitting renewable energies. . If the agency will be increasing air pollution in the form increased CO₂ emissions, this goal irreconcilable with the Forest Plan objective for compliance with the Clean Air Act “is to maintain or improve National Forest air quality by preventing significant deterioration from Forest activities or other sources.” [LRMP at 4-3].

b. Statement of supporting reasons

The EPA approach to logging for biomass is an evolving process,²² but it is clear that the federal biomass conversion program does not satisfy the definition of a “qualified biomass.” The EPA defines a “qualified biomass” as “a biomass feedstock that is demonstrated as a means to control increases of CO₂ levels in the atmosphere.” [Ref133 at 64,691 (EPA, Fed. Reg., emphasis added)]. Not all forms of biomass will meet this standard. [*Id.* at 64,886]. The combustion of all solid biomass feedstocks, such as whole trees and other large-diameter woody biomass, will increase carbon emission in the atmosphere relative to burning coal for 35 to 100 years, or even more. [Ref096 (Clark, J. et al 2011, impacts of thinning on carbon stores in the PNW: A Plot Level Analysis); Ref219 (Mitchell et al. 2012)].

The EPA characterizes biomass feedstocks in general are “non-zero-emitting” renewable energy resources and recognizes that there are different types of biomass, and sourcing and the carbon cycle are important considerations relevant to whether biomass utilization can achieve carbon benefits. [Ref133 at 64,757]. The EPA’s analysis reflected a peer-reviewed scientific analysis showing that “it is not scientifically valid to assume that all biogenic feedstocks are ‘carbon neutral, but that the net biogenic CO₂ atmospheric contribution of different biomass feedstocks can vary and depends on various factors, including ... in some cases, the alternative fate of the feedstock.” [*Id.* at 64,884]. In other words, the key issue is “what would happen to that feedstock and the related biogenic emissions if not used for energy production.” [*Id.* at 64,885].

c. Conclusion and suggested resolution

Neither the FEIS nor LRMP makes this important distinction between zero-emitting real renewable energies and “renewable” energies that are dirtier than fossil fuels. The federal biomass conversion plan for southeast Alaska thus has significant implications not just for emissions, for the evolving regulatory scheme and the ability of the state to meet applicable standards and access federal funds for renewable energy development. The Reviewing Officer should direct the Responsible Official to remove biomass from its list of renewable energies in the Proposed LRMP, and prepare additional NEPA analysis that takes a hard look at correcting the Forest Service’s assumption about wood biomass combustion and the carbon cycle.

²² We recognize that the EPA’s final rule for regulating greenhouse gas emissions is stayed pending judicial review. But the Forest Service must still explain and consider under NEPA the relationship between its renewable energy/wood combustion program and regulation under the Clean Air Act.

4. Objection Point 10. The FEIS fails to disclose or evaluate health risks caused by pollutants released by wood combustion

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments requested that further NEPA analysis evaluate health risks associated with increased utilization of biomass for energy and heat. [Ref167 at 41 (GSACC et al 2016c)]. Our primary concern was that the development of a publicly funded biomass heat program under the Transition such as the public subsidies recommended by the Tongass Advisory Committee will result in significantly adverse health impacts to the human environment, particularly to health care facilities and schools. Region 10's Biomass/Forest Stewardship Coordinator Dan Parrent has proposed to implement the Forest Service's biomass conversion by placing biomass boiler facilities in schools, hospitals, health clinics and office buildings. [Ref186 at 177 (JEDC 2011)].

The biomass conversion plan poses substantial risks to human health, particularly children and at-risk adults. NEPA requires the Forest Service to consider the health effects of federal actions. [40 C.F.R. § 1508.8]. Further, Draft LRMP goals and objectives would seek to “[m]aintain the current air resource condition to protect the Forest’s ecosystems from on- and off- Forest air emission sources” and “[a]ttain national and state ambient air quality standards Forest-wide.” [Draft LRMP at 2-3]. Despite these directives, the FEIS never addresses the issue of air pollution caused by wood combustion. The record suggests, without any scientific support, that the Forest Service believes that wood fuel particulate emissions “are controllable.” [PR 769_05_000349]. The analysis of biomass impacts – or more particularly, the failure to disclose those impacts – violated NEPA. [40 C.F.R. §§ 1502.1; 1502.24].

b. Statement of supporting reasons

The analysis of air quality effects in the FEIS is conclusory, misleading and fails to consider the adverse health impacts caused by wood combustion. It states that federal logging “historically had little direct effect on air quality” in the region but notes that cruise ship emissions in some locations and greenhouse gases generally “are a growing concern.” [FEIS at 3-16]. It notes that Mendenhall Valley in Juneau is the only area in southeast Alaska that has exceeded National Ambient Air Quality Standards (NAAQS) but remarkably, does not explain the linkage to wood combustion. [*Id.* at 3-17]. The DEIS identifies stationary sources of air pollution in southeast Alaska that require permits and notes that there are mobile sources of pollution (cars and boats, planes). [*Id.*]. The discussion as a whole leaves the misleading impression that the greatest risk to air quality in the region arises from cruise ship emissions in Wilderness.

The FEIS does not identify any significant risks to air quality associated with the TAC's alternative or other alternatives. It states that direct effects “would be temporary and limited in nature, resulting from dust and vehicular emission from logging operations, administrative and harvest-related use of Forest roads, and facilities and equipment required to support energy development.” [*Id.* at 3-18]. It discloses indirect effects on air quality arising from timber processing or firewood which have “indirect effects on air quality [which] can be aesthetically displeasing or have potential health risks to both humans and the Forest.” [*Id.* at 3-19]. But the FEIS defers to the EPA and ADEC regulatory responsibility under the Clean Air Act to address any potential adverse impacts and ensure that no significant indirect effects to air quality would occur from the federal logging program. [*Id.*]. The cumulative effects analysis states that the TNF does not expect TLMP alternatives “to contribute significantly to cumulative effects on air quality” but air pollution “could increase

somewhat” if the Amendment increases the amount of wood burned in the area. [*Id.* at 3-21; see also Ref228 at 23 (Nicholls et al. 2010, acknowledging that an increase in wood burning could adversely impact air quality, but noting that the Forest Service has not analyzed those impacts)]. Ultimately, the FEIS concludes that there would be no significant direct, indirect or cumulative effects on air quality. [FEIS at 3-18 to 21].

The conclusion in the FEIS is arbitrary. An actual review of literature pertaining to wood combustion determined that even technological improvements have not alleviated concerns about the health impacts of wood combustion. [Ref152 at 28 (Greenpeace 2011, Fuelling a Biomess)]. In addition to the emissions of hazardous air pollutants and carcinogens, wood combustion emits small particulate matter that is most damaging to public health. [*Id.*] These emissions have prompted the medical community throughout the nation to object to the development of wood combustion facilities. In June 2015, the American Lung Association published its “Public Policy Position” on energy that recommended federal policies that avoided energy production from wood combustion and instead promoted non-combustion renewable energy such as wind, solar and geothermal sources. [*Id.*; Ref042 at 1, 3 (Amer. Lung Ass’n. 2015)]. In particular:

The American Lung Association recognizes that *pollution from the combustion of wood and other biomass sources poses a significant threat to human health*, and supports measures that to transition away from using these products for heat production. The American Lung Association calls for effective enforcement of existing laws and regulations governing the combustion of wood and other biomass sources, as well as the expanded regulation of air pollution emissions from these sources. In particular, the American Lung Association calls on the U.S. Environmental Protection Agency to significantly strengthen its woodstove certification standards. *The American Lung Association encourages individuals to avoid burning wood in their homes where less polluting alternatives are available, and supports programs to replace residential woodstoves with cleaner heating options*, particularly for low-income persons. The American Lung Association strongly opposes the combustion of wood and other biomass sources at schools and institutions with vulnerable populations. The American Lung Association strongly opposes the use of outdoor wood-fired boilers for heating and other purposes, and supports measures to greatly reduce emissions from or eliminate outdoor wood-fired boilers. The American Lung Association recommends continuing research on the health effects of burning wood and other biomass sources, and the technologies to reduce the emissions associated with the combustion of these fuels. [*Id.* at 5-6].

The reason for this opposition is that “[b]urning biomass could lead to significant increases in emissions of nitrogen oxides, particulate matter and sulfur dioxide and have *severe impacts on the health of children, older adults, and people with lung diseases.*” [*Id.*; Ref367 at 5 (Vick 2011)]. Specifically,

Burning wood ... releases toxic chemicals and particles into the air which affect both the environment and respiratory health. Biomass, even biomass comprised of wood, sounds benign, but it is not. A recent review of available research in Inhalation Toxicology summarized some of the reasons why it is not:

Wood smoke contains thousands of chemicals, many of which have well-documented adverse human health effects, including such commonly regulated pollutants as fine particles, CO, and nitrogen oxides as well as ciliotoxic respiratory irritants such as phenols, cresols, acrolein, and acetaldehyde; carcinogenic organic compounds such as benzenes, formaldehyde, and 1, 3, butadiene and carcinogenic cyclic compounds such as PAHs. Wood-smoke contains at least five chemical groups classified as known human carcinogens by the International Agency for Research on Cancer, others categorized by IARC as probably or possible human carcinogens, and at least 26 chemicals listed by the U.S. EPA as hazardous air pollutants.

[*Id.* at 5-6; *see also* Ref222 (Naeher et al. 2007)].

Additionally, our comments requested that the analysis review public safety concerns with biomass combustion facilities and disclose the risk of explosions to the public. The FEIS cites the conversion of the U.S. Coast Guard facility in Sitka as one of the “successful installations” that are “presently operating” in southeast Alaska. [FEIS at 3-498; *see also* PR 769_05_000349]. However, a biomass boiler in that facility exploded shortly after installation, causing serious injury, and was decommissioned. It has been three years since that explosion, yet the FEIS still refers to the facility as functional, and, more importantly, never takes the necessary step of considering whether heating systems that burn oil (or better yet, heat pumps) will pose fewer risks to public safety than wood combustion.

c. Conclusion and suggested resolution

The FEIS arbitrarily failed to consider health and safety risks associated with the Forest Service’s biomass conversion. The Reviewing Officer should direct the Responsible Official to rescind the draft ROD and FEIS, and prepare an additional NEPA analysis that discloses the increase in hazardous air pollutants, carcinogens and other risks associated with biomass burning.

5. Objection Point 11. Alternative energy sources and cost-efficiencies: the FEIS failed to analyze lost opportunities for zero-emitting renewable energies caused by biomass facility subsidies

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments requested that further NEPA analysis needs to consider alternatives that redirect the public investment in alternative energies to cleaner and real renewable energy sources. [Ref167 at 43 (GSACC et al. 2016c)]. But the FEIS never considers the extent to which Forest Service policies that promote biomass combustion as a renewable energy diverts progress toward furthering the development of zero-emitting renewable energies such as wind, solar, energy efficiency or alternative heating options such as heat pumps. In particular, it is critical to “fully quantify direct and indirect GHG emissions associated with energy alternatives and associated consequences pro to making policy commitments that have long-term effects on global forests.” [Ref283 at 615 (Schulze et al 2012)]. NEPA requires agencies to inform the public of reasonable alternatives which would avoid or minimize adverse impacts, and yet the FEIS lumps different alternative energies together despite very different environmental impacts associated with biomass. [40 C.F.R. § 1502.1].

NEPA requires federal agencies to disclose sufficient information as need to ensure “informed decisionmaking and informed public participation.” [*State of Cal. v. Block*, 690 F.2d 753, 767 (9th Cir. 1982); *see also Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)(explaining that an EIS serves two functions: (1) to ensure that agencies take a hard look at the environmental impacts of proposed projects and (2) to ensure the availability of information to the public so as to enable public participation in the decisionmaking process)]. An EIS cannot serve these functions if it reflects misleading economic assumptions. [*Hughes River Watershed Conservancy v. Glickman*, 81 F.3d, 437, 446 (4th Cir. 1996)]. This includes an obligation to disclose any uncertainties surrounding a project. [*Friends of the Earth v. Hall*, 693 F.Supp. 904 (W.D. Wash. 1988)(noting that by “relying on its conviction that the project would be successful, the Corps failed to assess the environmental impact of a technological failure)]. As explained by the Fourth Circuit:

Misleading economic assumptions can defeat the first function of an EIS by impairing the agency's consideration of the adverse environmental effects of a proposed project. NEPA requires agencies to balance a project's economic benefits against its adverse environmental effects. The use of inflated economic benefits in this balancing process may result in approval of a project that otherwise would not have been approved because of its adverse environmental effects. Similarly, misleading economic assumptions can also defeat the second function of an EIS by skewing the public's evaluation of a project. [*Hughes River Watershed Conservancy*, 81 F.3d at 446; *see also Columbia Basin Land Protection Ass'n*, 643 F.2d at 594-95 (explaining that NEPA requires an EIS to balance the environmental costs of a project against its economic and technological benefits)].

NEPA requires a cost-benefit analysis where relevant to a decision. [40 C.F.R. § 1502.23]. The required analysis can be a formal analysis that quantifies costs and benefits in monetary terms or an informal analysis that balances costs and benefits. [*Id.*]. While the form of the analysis may vary, “[a]t a minimum, the Environmental Impact Statement should at least include those considerations, including factors not related to environmental quality, which are likely to be relevant and important to a decision.” [*City of Sausalito v. O’Neill*, 211 F.Supp.2d 1175, 1196 (N.D. Cal. 2002)(citing *Sierra Club v. Sigler*, 695 F.2d at 976, n. 15)]. The FEIS trumpets the benefits of the biomass conversion program without ever addressing the cost-feasibility of the conversion, violating NEPA.

b. Statement of supporting reasons

Federal investment in biomass facilities is a lost opportunity cost that will divert funds from energy alternatives that can better meet the region's needs. Unmerited diversions of public money to biomass combustion facilities will have significant effects as there is a compelling need for a low-carbon source of electric generating capacity in the mid to long term. The federal program will have a negative impact on productive investment since biomass development will be falsely attractive relative more cost-effective technologies.

The National Research Council recently concluded that oil prices would have to exceed \$191 per barrel for bio-genic fuels to become cost-competitive. [Ref283 at 612 (Schulze et al. at 612)]. Thus, subsidies or favorable tax policies that incentivize short rotation logging are necessary to develop the industry. [*Id.*; *see also* PR 769_05_000028 at 12 (concluding that mill residues but not logging residues may be feasible, and that logging for biomass would require “extensive public investments” (Alexander 2010)]. The FEIS indicates that public subsidies from the Alaska Energy Authority (AEA) Renewable Energy Fund and from USDA grants have been, at least in part, needed to support the biomass conversion. [FEIS at 3-322]. Federal and state funds financed 42 biomass conversion feasibility studies in 2012 and 2013, and grant applicants have then pursued public funds for design and/or construction. [PR 769_05_000349 at 2]. The Tongass Advisory Committee, which includes several members such as Andrew Thoms and Keith Rush who collaborate with the government on the biomass conversion program, [Ref186 (JEDC 2011; PR 769_05_000804)], recommended public subsidies for the biomass industry, including, but not limited to utilization research, market development, energy subsidies and tax credits for timber operators and subsidies for biomass facilities. [Draft LRMP, Appx. B at 24 – 27]. But the FEIS never provides any information about how much the Committee's recommendations will cost the public, nor does it analyze how the Committee's recommendations will divert public resources from the development of zero-emitted renewable energy development.

This failure is critical because southeast communities are pursuing different options. Juneau energy managers are pursuing district heating systems that use sea water to provide “clean, cheap heat.” [Ref191 (Juneau Empire 2016)]. This type of system is already working

in Alaska, and used throughout northern European cities. [*Id.*]. The City of Sitka incentivizes residential heat pump installation as a means to promote energy efficiency. [*Id.*; Ref293 (Sitka – City & Borough 2014)]. Wrangell is also converting to air source heat pumps for both residential and municipal needs. [*Id.*; Ref025 (ADN 2014)]. Conversely, there have been very few actual installations of wood combustion facilities in the region, with nearly all of those conversions driven by federal spending. [PR 769_05_000349 at 1].

The FEIS identifies the ongoing conversion from using fossil fuels for heat to space heating with electricity as a problem in the region because growth in electric loads has stressed the generation capacity from hydropower. [FEIS at 3-320]. But the analysis never considers whether converting electric resistance heating systems to heat pumps would result in a net reduction of hydropower consumption. Even at a low cost of \$250 per ton project in the state of Alaska’s 2012 Southeast Alaska Integrated Resource Plan, wood pellet combustion would only be competitive with a conversion to heat pumps if power costs were 21¢ per kilowatt hour (KWh). [Ref153 (Greenpeace 2012)]. This amount is roughly double the current cost per KWh in all of southeast Alaska’s larger communities. [FEIS at 3-321 (showing the highest cost, in Juneau, of 12¢ per kilowatt hour)]. Further, the actual cost of pellets delivered to Juneau is higher (\$300 per ton) than the state’s estimate, thus increasing the relative cost-efficiency of heat pumps.

Also, the FEIS never contemplates the effect of declining oil prices on the biomass conversion program. Because heating with diesel is safer, produces fewer pollutants, including greenhouse gases, than wood combustion, potential cost savings would be the only possible justification for the conversion. Indeed, the Forest Service assumes that a biomass conversion would reduce energy costs, but provides no support for this assumption. [PR 769_05_000325 (Deering 2014); PR 769_05_000349 at 1]. It cites the Sealaska project in Juneau as an example of a successful conversion. [FEIS at 3-322]. But an independent review of that project determined that the Net Present Value (NPV) was negative at low and medium oil price projections. [Ref236 at 5 (Pathan 2013, ISER economic report)]. The analysis explained that:

In order for a similar project ... to be cost effective, the initial capital cost needs to be lower or the local cost of fossil fuel needs to be higher than demonstrated. The high cost of converting the existing building to make it suitable for use of wood pellets, the low cost of fossil fuel in Juneau, and high pellet cost have all contributed to a low benefit-cost ratio and high payback period. [*Id.* at 9].

But the FEIS arbitrarily failed to disclose the cost of converting federal buildings in Ketchikan even though that data should be readily available. More importantly, it failed to consider the relationship between declining oil prices relative to the costs of biomass. Oil companies expect a “deep and sustained plunge in the price of oil.” [Ref026 (Demarban 2016)]. This decline was apparent well before the release of the DEIS, as prices dropped below \$40 per barrel by August 2015. [*Id.*; Ref046 (AP 2015)]. Those prices have now fallen to less than \$30 a barrel on the west coast – the lowest level since 2003. [*Id.*; Ref026 (Demarban 2016)]. Further, Region 10’s own analysis indicates that to date, the costs of producing biomass are at least several times the value of the product. [Ref041 at 11 (Alexander et al. 2010)]. Alexander cites a need for fuel prices to increase in order to cover the costs of removal and transport, and notes that there has not been an adequate analysis that compares the relative costs of biomass with other heat sources. [*Id.* at 11]. Additionally, another Forest Service analysis found that oil prices of \$4.00 - \$5.00 were a threshold for Alaskans to merely consider a wood combustion conversion. [Ref228 (Nicholls et al. 2010)].

c. Conclusion and suggested resolution

The FEIS failed to consider the public costs of the biomass conversion, violating NEPA. The Reviewing Officer should direct the Responsible Official to prepare an additional NEPA analysis that includes a cost-benefit analysis for the biomass program.

6. Objection Point 12. The FEIS failed to adequately analyze the cumulative effects of LRMP alternatives and climate change

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments requested that further NEPA analysis needed substantial improvement in order to fully consider the cumulative effects of federal logging and climate change on planning area fish and wildlife resources and the communities that depend on those resources. [Ref167 at 45 (GSACC et al. 2016c)].

NEPA's purpose is to "help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore and enhance the environment." [40 C.F.R. § 1508.1(c)]. High quality information and accurate scientific analysis is essential to implementing NEPA. [40 C.F.R. § 1508.1(b)]. As part of this mandate, the analysis needs to describe the affected environment in a way that compares the current and future state of the environment pending implementation of the proposed LRMP. [40 C.F.R. § § 1502.6, 1508.9]. This guidance necessarily entails consideration of climate change impacts based on available information. [Ref092 at 21 (CEQ 2014)]. The analysis also needs to consider means to monitor mitigate climate change impacts to specific resources. [40 C.F.R. § 1505.3]. The CEQ explains that:

The analysis of impacts on the affected environment should focus on those aspects of the human environment that are impacted by both the proposed action and climate change. Climate change can affect the environment of a proposed action in a variety of ways. Climate change can increase the vulnerability of a resource, ecosystem, human community, or structure, which would then be more susceptible to climate change and other effects and result in a proposed action's effects being more environmentally damaging. For example, a proposed action may require water from a stream that has diminishing quantities of available water because of decreased snow pack in the mountains, or add heat to a water body that is exposed to increasing atmospheric temperatures. Such considerations are squarely within the realm of NEPA, informing decisions on whether to proceed with and how to design the proposed action so as to minimize these impacts, ultimately enabling the selection of smarter, more resilient actions. [Ref092 at 22 (CEQ 2014)].

This level of analysis is especially critical for broad scale planning because it will inform future specific actions. [*Id.* at 29]. But the FEIS concludes that "there is considerable uncertainty concerning the exact effects of climate change on the forests of Southeast Alaska and how best to deal with possible changes to the many resources on the Tongass." [FEIS at 3-23]. This approach is inconsistent with expert recommendations to explicitly incorporate climate change into forest management planning and address specific vulnerabilities into Tongass National Forest plan components. [See, e.g. PR 769_05_000054 at 97 (EcoAdapt 2014); PR 769_05_000051 (Haufler 2010) ("[a]nticipating, planning and mitigating impacts of climate change are necessary to minimize their potential consequences. For this reason, the Alaska Region should take serious and concerted actions to address this complex but imperative challenge")].

b. Statement of supporting reasons

The 2010 Climate Change Assessment for the Alaska Region notes that “climate change has been affecting the Alaska Region more than any other [Forest Service] region of the U.S., with Alaska recording the most rapid temperature increases over the last century.” [769_05_000051 at 2]. The Climate Change Assessment notes that “[v]arious impacts ... have already been documented” and that “[c]limate change poses threats to numerous ecosystem services” including, but not limited to terrestrial changes: warming stream temperatures; glacial retreat; changing precipitation patterns and amounts, changed species distributions, insect outbreaks, changed fire regimes and changes to ecosystem productivity.” (*Id.*). Thus, “these effects will need to be accounted for and addressed in future forest plans and management actions.” (*Id.*).

For example, Bryant’s 2009 article, “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. [See, e.g. Ref072 (Bryant 2009)]. The article noted that the “most pervasive anthropogenic effect” on salmon habitat is timber extraction. [*Id.* at 182]. Habitat conservation 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.” PR 769_05_000051 at 15 (Haufler 2010)]. 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.” [*Id.* at 15 -16]. Bryant’s conclusions are consistent with expert findings that anticipate major hydrological changes, with significant consequences for ecosystem productivity. [Ref375 (Wolken et al. 2011)].

The FEIS acknowledges, briefly, some watershed effects but relies on uncertainty to dismiss further analysis or an appropriate management response., including increased flooding and rain-on-snow events, changes in timing and magnitude of stream flow, freshwater thermal regimes and nutrient exports and shifts in anadromous salmon distribution and productivity. [FEIS at 3-23, 3-87, 3-141]. The failure to consider climate change effects on stream flow, temperature and other key components of freshwater habitat was clearly arbitrary and capricious in light of the findings of the southeast Alaska-specific article and other studies. (See: *South Yuba River Citizens League v. National Marine Fisheries Service*, 723 F.Upp.2d 1247, 1273-74 (E.D. Cal. 2010)).

Similarly, climate change significantly alters the conservation strategy’s ability to maintain the viability of endemic species which have increased vulnerability to climate change. Climate change poses an increased risk of extirpation, and would “add additional stressors to these populations due to their isolated distributions and inability of some species to shift their distributions.” [PR 769_05_000049; PR 769_05_000051 at 31 (Haufler 2010)]. The FEIS discloses that “some species or individuals will be more sensitive and vulnerable than others” to warmer temperatures associated with climate change. [FEIS at 3-25 (also noting “adverse effects on species with rare ecological niches or limited ‘dispersibility’”)]. And there is no meaningful analysis at all of cumulative effects of climate change and logging in the species-specific section. [FEIS at 3-290-291]. Additionally, climate change may impact subsistence use of deer and other subsistence resources and increase the spread of invasive species. [PR 769_05_000049 at 11; PR 769_05_000051 at

25]. But again, the FEIS relies on uncertainty to excuse the lack of analysis or management response to these resource effects or entirely omits climate change from its cumulative effects analyses of impacts to deer and subsistence. [FEIS at 3-171-172, 291, 430-431].

c. Conclusion and suggested resolution

In light of these problems, the FEIS needed to address and disclose real threats to planning area fish, wildlife and vegetation resources that result from scientifically recognized changes in climate. The FEIS failed to provide an adequate analysis of climate change impacts on the planning area and consider the interplay between action alternatives and climate change in its analyses of direct, indirect and cumulative effects. [PR 769_05_000048]. The Reviewing Officer should direct the Responsible Official to prepare an additional NEPA analysis that evaluates and considers reasonably foreseeable effects of climate change on seasonal soil moisture, frequency and intensity of storms, landslides, and changes to precipitation patterns and evaluate the cumulative habitat loss from natural forces combined with those from past, proposed, and planned future federal and non-federal logging. [40 C.F.R. § 1502.22(b)].

V. The Forest Service needs to revise LRMP components for old and second-growth timberland suitability and second growth logging in conservation areas

Given the climate change impacts described above, it was unreasonable for the proposed LRMP to fail to consider major changes to the scale of logging – both in terms of reducing the amount of suitable lands available for timber development and the scale and intensity of second-growth logging. The following discussion addresses other major problems, including disproportionate past high-grading of high volume forests, particularly on southern and central Alexander Archipelago islandic ecosystems, in combination with the proposal to log recovering forests in areas previously protected under the conservation strategy.

A. Protecting multiple use values in heavily logged biogeographic provinces

1. Objection Point 13. the Forest Service needs to revisit proposed LRMP timber production LUDs to account for multiple use values in heavily logged biogeographic provinces

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our scoping comments requested that timber suitability decisions under the new planning rule require consideration of multiple use values, including habitat conditions for fish and wildlife, water quality, ecosystem services, climate change, and reasonably foreseeable risks to ecological, social and economic sustainability. [36 C.F.R. § 219.10(a)]. In our view, these factors warrant a substantial reduction in lands currently deemed suitable for timber production.

b. Statement of Supporting Reasons

i. The LRMP suitability determinations failed to respond to multiple use values in heavily logged biogeographic provinces

We requested that the EIS evaluate timber land suitability in light of the need to end high-grading, particularly in biogeographic provinces where logging has already disproportionately degraded habitat values. Lands are not suitable for timber production

when incompatible with other LRMP multiple use goals and objectives. [36 C.F.R. § 219.11(a)]. The cumulative impacts of this geographic and high-volume POG highgrading have substantial, adverse, and long-term environmental impacts. The Forest Service never analyzed the trend toward intensive timber development on the southern and central Tongass in NEPA analyses done for the 1997 TLMP revision or the 2008 Amendment. Timber operators have removed disproportionate amounts of high-volume and large tree POG from the North-Central POW, Kupreanof/Mitkof, Etolin Island and vicinity, and Revilla Island biogeographic provinces. As a consequence the lower classes of old-growth forest have become more important as habitat (although tenuously so, because of their lower quality) because the logging has diminished the higher classes, and because the impact of habitat loss is non-linear. [Concerning non-linearity, *see e.g.*, Ref252 (Person 2001)].

Because of these impacts, we recommended that the Forest Service determine that North-central Prince of Wales Island in particular is not suitable for further timber production. Timber operators have already extracted nearly half of the old growth and nearly 60% of the high value old growth in less than half a century. [Big Thorne FEIS at 2-23]. Implementation of that project would result in the cumulative loss of as much as 73% of winter deer and winter marten habitat capability in some WAAs and a cumulative loss of as much as 85% of goshawk habitat in some VCUs. [*Id.* at 2-24]. Road densities and watershed harvests already exceed threshold levels for fish and wildlife. [*Id.* at 2-24-25]. Similarly, heavily logged VCUs in the Ketchikan/Misty Fjords, Petersburg and Wrangell Ranger Districts also merit consideration in the determination of lands that are unsuitable for timber development.

The timberland suitability determinations arbitrarily failed to consider this cumulative loss of habitat. Further logging, especially of the remaining highest quality old-growth forest, is inconsistent with other plan objectives for air quality, biodiversity, fish, karst resources, plants, scenery, subsistence and wildlife. [LRMP at 2-3 – 2-6].

ii. The DEIS and LRMP failed to consider plan components that reduce the scale and size of old-growth clearcuts

The new planning rule requires the development of plan components that prevent irreversible damage on soil, slope and watershed conditions and ensure the protection soil, watershed, fish, wildlife, recreation and aesthetic resources. [36 C.F.R. § 219.11(d); 16 U.S.C. § 1604(g)(3)(F)(i), (v)]. We explained that the Amendment process must revisit, in particular, plan components that allow clearcutting and plan components that allow for clearcuts larger than 100 acres. [LRMP at 4-67]. Economic considerations alone do not justify clearcut prescriptions. [16 U.S.C. § 1604(g)(3)(E)(iv)]. NFMA's directives on clearcutting mean that it is only acceptable in "exceptional circumstances" or, at a minimum, the Forest Service "must proceed cautiously in implementing an even-aged management alternative and only after a close examination of the effects that such management will have on other forest resources." *Sierra Club v. Thomas*, 105 F.3d 248 (6th Cir. 1997); *Sierra Club v. Espy*, 38 F.3d 792, 799 (5th Cir. 1994).

Thus, LRMP standards and guidelines for clearcutting needed to reflect and balance the following impacts: (1) creation of young-growth forests that are poor habitat for wildlife and understory plant species; (2) reduction of plant biodiversity; (3) diminishment of old growth stand structural components; (4) reduction of slope stability, increased landslide activity and accelerated erosion and sediment production leading to degraded fish habitat and loss of forest productivity (regarding all resources).

The EIS identifies NFMA requirements to limit clearcutting, and national directives to limit clearcutting except when essential to meet Forest Plan objectives, but then it arbitrarily

picks out timber economic objectives from the LRMP to the exclusion of multiple use objectives.

c. Conclusion and suggested resolution

A revised DEIS must revisit the justification for clearcutting, and the public should have the opportunity to comment on an alternative LRMP standard and guideline that limits clearcut sizes.

B. Second-growth plan components confound the conservation strategy and a revised EIS needs to analyze adverse impacts of short rotation forestry

One of our most important concerns pertains to the proposed LRMP components that would authorize large-scale clearcutting of second growth stands that are nearing the understory re-initiation structure and would otherwise, in time, develop old-growth characteristics. Additionally, the LRMP authorizes second-growth logging in conservation areas – and significantly weakens critical conservation strategy components - based on a flawed analysis.

1. Objection Point 14. The EIS fails to address controversy, uncertainties and risks associated with logging second growth, particularly in protected areas

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

One of the important features of the LRMP is that it authorizes logging of second-growth in places that ought not to have been logged in the first place, namely old-growth habitat LUD, riparian management areas, and the beach fringe. [See LRMP at 5-6; FEIS at App.D; Draft ROD at 21]. The LRMP assumes that this logging will *both* provide economic timber to help meet supply, and also “improve or maintain fish and wildlife habitat by accelerating old-growth characteristics.” [Id.]. These “improvements” will occur through “patch [clear]cuts” of up to 10 acres removing up to 35% of the forest in the beach and estuary fringe, and commercial thinning (removing up to 33% of the stand volume) in the beach fringe, riparian management areas and old-growth reserves.

As explained in the following discussion, there is no scientific support for the assumptions used to justify logging in these important areas. As an initial matter, however, the Forest Service has already withdrawn these areas as unsuitable for timber production and there is no reasonable basis for determining that conditions have changed in a way that makes them now suitable for logging. [36 C.F.R. § 219.11(a)(2)]. The Forest Service must eliminate any LRMP components that allow for timber entries in these areas in future iterations of the plan.

In our DEIS comments, we raised concern regarding the need to address controversy, uncertainty and risks associated with second-growth logging, particularly in environmentally sensitive areas that are protected under the current plan. [Ref167 at 49 – 55]. We wrote:

LRMP plan components authorize logging in old-growth habitat, riparian management areas and the beach fringe. [LRMP at 5-6]. The LRMP assumes that logging will “improve or maintain fish and wildlife habitat by accelerating old-growth characteristics.” [Id.]. These “improvements” will occur through “patch [clear]cuts” of up to 10 acres removing up to 35% of the forest in the beach and estuary fringe, and commercial thinning (removing up to 33% of the stand volume) in the beach fringe, riparian management areas and old-growth reserves. [DEIS at 3-309]. As explained in the following discussion, there is no scientific support for the assumptions used to justify logging in these important conservation areas. As an initial matter, however, the

Forest Service has already withdrawn these areas as unsuitable for timber production and there is no reasonable basis for determining that conditions have changed in way that makes them now suitable for logging. [36 C.F.R. § 219.11(a)(2)]. The Forest Service must eliminate any LRMP components that allow for timber entries in these areas in future iterations of the plan.

[*Id.* at 49]. As we indicated in the DEIS comments, failure to properly address uncertainty and risk in proposed treatments is a violation of NEPA's hard look mandate, as has been held by the court many times. [See *id.* at 50; *Sierra Club v. Bosworth*, 510 F.3d 1016, 1031-32 (9th Cir. 2007); *Ecology Center v. Austin*, 430 F.3d 1057, 1061 (9th Cir. 2005).] "An action is "highly controversial" if there is "a substantial dispute [about] the size, nature, or effect of the major Federal action rather than the existence of opposition to a use." [*Sierra Club v. U.S. Forest Serv.*, 843 F.2d 1190, 1193 (9th Cir.1988)]. See § 1508.27(b)(4)." See also *Cascadia Wildlands v. Woodruff*, 151 F. Supp. 3d 1153, 1165 (W.D. Wash. 2015)].

"a substantial dispute exists when evidence, raised prior to the preparation of an EIS or FONSI casts serious doubt upon the reasonableness of an agency's conclusions." *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 736 (9th Cir. 2001), abrogated on other grounds by *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 157, 130 S. Ct. 2743, 177 L. Ed. 2d 461 (2010) (internal citations omitted).

[*Or. Wild v. BLM*, 2015 U.S. Dist. LEXIS 32584, *17-20, 45 ELR 20055, 2015 WL 1190131 (D. Or. 2015).] "The purpose of an EIS is to obviate the need for speculation by insuring that available data are gathered and analyzed prior to the implementation of the proposed action the 'hard look' must be taken before, not after, the environmentally-threatening actions are put into effect." [*Nat'l Parks & Conservation Ass'n*, 241 F.3d at 732-33].

The proposed LRMP would implement silvicultural treatments on a programmatic scale without scientific support for its assumptions and conclusions, without forthrightly addressing uncertainty and risk, and without taking stock of the scientific controversy surrounding the proposed treatments. The analysis thus failed to demonstrate a methodology that meets the agency's substantive obligations to ensure species diversity and viability under NFMA. The EIS also ignores the agency's analytical obligations under NEPA to consider the significant uncertainties and risks associated with plan components for commercial thinning and patch clearcuts in protected areas. Finally, the ROD does not, and could not, have any reasonable basis for approving these LRMP components, in violation of the APA.

b. Statement of Supporting Reasons

i. The agency fails to address silvicultural and ecological uncertainty and scientific controversy regarding proposed second-growth logging

The proposed LRMP's components for logging recovering (ie. second-growth) forests are, at best, highly experimental. This is *particularly* so on the targeted second-growth in reserved areas—riparian areas, beach fringe, and old-growth habitat LUD. The Forest Service must consider uncertain risks associated with clearcuts, gap cuts, thinning, or similar treatments given the scientific controversy and extreme uncertainty about impacts to wildlife and forest structure and effectiveness of the treatments. [see *Sierra Club v. Bosworth*, 510 F.3d 1016, 1031-32 (9th Cir. 2007)].

In *Ecology Center v. Austin*, the Forest Service proposed commercial thinning and salvage logging projects in response to fire damage in portions of national forest land in Montana. [*Ecology Center v. Austin*, 430 F.3d 1057, 1061 (9th Cir. 2005)]. The Forest Service had concluded that the treatments would be beneficial to dependent species. [*Id.* at 1064].

However, the court noted that the agency “had not yet taken the time to test its theory with any ‘on the ground analysis.’” [*Id.*]. The court explained that:

Just as it would be arbitrary and capricious for a pharmaceutical company to market a drug to the general population without first conducting a clinical trial to verify that the drug is safe and effective, it is arbitrary and capricious for the Forest Service to irreversibly “treat” more and more old-growth forest without first determining that such treatment is safe and effective for dependent species. This is not a case in which the Forest Service is asking for the opportunity to verify its theory of the benefits of old-growth treatment. Rather, the Service is asking us to grant it the license to continue treating old-growth forests while excusing it from ever having to verify that such treatment is not harmful. [430 F.3d at 1064].

Similarly here, the proposed commercial logging of young growth in environmentally sensitive areas is a silvicultural experiment with unknown effects. The reasons why logging these areas is scientifically controversial should be evident – they are the same reasons why they were placed off-limits to commercial extraction under the 1990 TTRA, and the 1997 and 2008 Forest Plans.

Contrary to the confidence of the conclusions in the EIS and ROD, there are very few scientific studies regarding the efficacy or effects of the proposed second-growth treatments. [See *e.g.* Ref104 at 1-2, 8; (McClellan 2005); Ref270 (PNW 2002); Ref034 (Alaback 2010) (explaining that thinning can be effective in improving wildlife habitat for up to a decade, but a key limitation on its effectiveness “is its relatively short longevity”)]. When Tongass forest succession was first described, it was noted there was “no data” to support thinning as a way to accelerate old-growth characteristics. [Ref034 at 3]. The 2008 TLMP regarded second-growth treatments other than pre-commercial thinning to be “experiments.” [2008 TLMP FEIS at 3-330]. Research done since that time has not provided anything like reliable scientific data in support of the proposed experimental treatments here.

The EIS, broadly speaking, fails to disclose that relative dearth of experience or data regarding the proposed second-growth logging methods. The FEIS section on timber does at least discuss some of the recent research that has been done regarding commercial thinning on the Tongass. [See FEIS at 3-334 (citing Thysell and Carey 2000; Zaborske et al 2000; Christensen et al. 2002; Hanley et al. 2005; the Prince of Wales Commercial Thinning Study; and the Tongass-wide Young-Growth Studies (TWYGS)]. But at no point does the EIS disclose that the young-growth studies are relatively few and in their early stages, that their conclusions are extremely limited and tentative, or forthrightly acknowledge the gaps in data. See 40 CFR § 1502.22 (lack of information must be addressed); §1502.24 (requiring scientific rigor). While the Forest Service has recently initiated research regarding second-growth logging, it has not published the results, and early indications are mixed. The studies themselves, without exception, emphasize that there is a need for “much more” research. [Ref104 at 1-2, 8 (Cole 2010)].

There are a limited number of peer-reviewed scientific studies regarding the efficacy of second-growth treatments. Those studies review thinning and gap treatments, but none provide any support for the proposition that ten acre patch clearcuts, or even commercial thinning, would benefit wildlife with the certainty or to the extent suggested in the analysis. The primary silvicultural studies reflect the historical focus on thinning treatments for tree growth and wood product quality, rather than wildlife benefits. [TLMP AR# 1335 (McClellan 2005)²³; PR 769_05_000506; Ref270 at 39; Ref034 at 3 (Alaback 2010) (explaining that thinning can be effective in improving wildlife habitat for up to a decade, but a key limitation on its effectiveness “is its relatively short longevity”)]; Tongass Young Growth Study (2014)

²³ This is the document number from the 2008 TLMP Amendment planning record.

(describing conflicting considerations in thinning for economics and wildlife purposes). Even in the Pacific Northwest, “[t]here is little research or operational experience, ... to validate successful outcomes of new silvicultural approaches being proposed and implemented for managing young-growth stands.” [Ref270 at 39].

The FEIS entirely fails to address the silvicultural uncertainty involved in these experimental cuts of second-growth. The timber section merely uses the standard three regeneration methods for old-growth: even-aged, two-aged, and uneven-aged systems, and only models even or uneven-aged prescriptions. [See FEIS at 3-343]. The FEIS states that in order for a young-growth stand to be economic, the majority of trees would have to produce two logs per tree, and that for high-yield sites this corresponds to a stand age of at least 65 years, and for low-yield sites 75 years. [See FEIS at 3-344.] Oddly, no scientific evidence whatever is cited for these critical assumptions. Industry commenters seem to dispute that stands of those ages will be adequate. The FEIS explains that young-growth would be harvested by predominantly even-aged methods, particularly in the first couple of decades, as well as commercial thinning and patch cuts. While the FEIS makes clear that assumptions are being made for modeling purposes, and that actual prescriptions may vary, it never discloses or addresses the massive uncertainty involved in the extraordinary, experimental nature of these prescriptions. Even the simplest, least controversial methods proposed here— regeneration harvest of second growth in timber LUD— is untested and experimental on Tongass young-growth. Harvesting second-growth before it reaches CMAI (ie. before it is ripe) is itself controversial, further complicating traditional assumptions and distinguishing the analogous studies and experience that is available. There is no reliable information suggesting that partial cutting of second-growth is viable silviculturally or economically.

Regarding growth rates for example, the FEIS correctly identifies this as a “critical” factor in developing PTSQs, at the same time noting that, there being no published yield tables for uneven-aged or two-aged managed stands, the agency has simply created its own tables. FEIS at 3-337. Further cause for doubt in the reliability of those figures is the fact that Mater and the FPS arrived at volume projections that were 40% apart. [Stewart letter to Mater, Feb. 3, 2016] The timber section of the FEIS actually suggests that thinning does not cause any improvement in growth of residual trees. [FEIS at 3-337 (citing Deal & Tappeiner 2002; Deal et al. 2002)]. Even pre-commercial thinning, which is routinely done for the express purpose of increasing volumes, only increases the projected yield of a 100 year-old stand from 56 to 60 mbf/acre. [FEIS at 3-348]. This information directly conflicts with the premise of logging second-growth in riparian areas and beach fringe, which is that thinning would cause faster tree growth and development of old-growth stand structure. The EIS and ROD allow the controversy to pass without notice.

The basic silvicultural techniques that might be used in young-growth stands are uncertain as to their basic design and feasibility. The 2008 TLMP FEIS acknowledged that “there are many unanswered questions as to how to implement thinning treatments that provide a sustainable source of high value wood products while maintaining biological diversity.” [2008 TLMP FEIS at 3-330]. The Forest Service identified considerable experience with pre-commercial thinning as the “only intermediate treatment commonly used on the Tongass.” [*Id.* at 3-329, 3-342]. There was “much less experience with other young-growth management techniques, such as pruning and commercial thinning.” [*Id.*]. Thus, silvicultural prescriptions for recovering second-growth forests other than pre-commercial thinning were described as “experiments.” [*Id.* at 3-330]. Review of the literature and study design makes clear that second-growth logging is very much a work in progress. Strip cuts, different sizes and configurations of gaps, methods for individual tree selection are all being worked out. The agency’s proposed “33%” thinning prescription, for instance, is not found

anywhere in the literature; it is not any standard prescription and does not appear to have been based on anything in particular.²⁴

It is thus clear that Forest Service has never studied the anticipated effects of these treatments in terms of mitigating impacts to wildlife or forest structure. The proposed LRMP is a plan “to act first and study later” despite uncertainty as to “whether the measures are sufficiently related to the effects they are designed to cure.” [See, e.g. *National Parks & Conservation Ass’n v. Babbitt*, 241 F.3d 722, at 734 (9th Cir. 2001)(identifying “a paucity of analytic data to support the Park Service’s conclusion that the mitigation measures would be adequate in light of the potential environmental harms”)].

Pacific Northwest forest managers have moved forward with new approaches that seek to mimic characteristics of older stands, but even then there is considerable uncertainty:

No young-growth stands, however, have been managed for an extended period under these proposed alternative regimes. Thus, estimates of relative costs and benefits are based on major extrapolations from limited data. In addition, no experimentation has focused on how various factors (i.e., understory and overstory species composition, vertical and horizontal spatial distribution of trees, snags, and coarse woody debris (CWD) within a stand, and age-size distribution of trees) independently affect plant and animal populations, or how altering these factors will impact tree growth, stand differentiation, habitat functions, or the production of forest products.

[Ref270 at 39 (PNW 2002)]. One of the most important and early reviews of forest succession in southeast Alaska noted that “there are no data at this time to suggest that silvicultural thinnings ... will measurably increase either the diversity or productivity of understory vegetation over that typically found in old-growth forests.” [Ref033 at 3 (Alaback 1984)]. Various studies since that time have generally found thinning ineffective at improving habitat conditions in clearcuts. For example, Matsuoka et al. (2012) found that thinning “had few measurable benefits to birds.” The Tongass-wide young-growth study has, despite great effort, produced only mixed results, and cannot reasonably be read to support the widespread adoption of commercial young-growth logging as being compatible with restoration of old-growth habitat.

The category of studies directed at thinning specifically for habitat needs has generally focused on less destructive logging methods than what is being proposed, and so those results need to be distinguished. [See e.g. Ref270 (finding single-tree selection can improve summer habitat for deer); Ref097 (regarding complicated goshawk-improvement prescriptions); Ref114 (variably spaced thinning); Ref034]. One study recommended creation of small, artificial canopy gaps of up to half an acre in size. [Ref233]. For example, single-tree selection can improve forage availability and summer habitat conditions relative to untreated stands in Southeast Alaska second-growth forests. [Ref270]. Studies relevant to managing second-growth for goshawks in the record recommend Individual Tree Selection (ITS) and a complicated approach that involves silviculture on a fine scale or stand thinning from below to reduce stem density and pruning to improve sub-canopy flyways. [*Id.* at 1, 9; Ref097 at 12]. Other avian studies recommend variably spaced thinning and forest retention in the matrix. [Ref114 at 1]. But implicit in their recommendation for conservation of old-growth for old-growth dependent species is the need, given the existing and prospective deficit of old-growth, for forest succession past the stem exclusion phase.

²⁴ Emails in the project record reflect confusion among IDT members about this limitation. Generally it seems to be based on a three-entry rotation for a given stand (1/3 now, 1/3 later, the last 1/3 in 100 years, then repeat). The LRMP and FEIS seem clear however that the proposal here is for only a single, one-time entry.

Experimental measures to improve wildlife habitat in Southeast Alaska's recovering forests might reasonably consider the creation of small, artificial canopy gaps up to a half acre in size – not ten acre clearcuts. [Ref034 at 2-3]. The artificial canopy gaps would likely result in stands “more similar to the patchy forest conditions that characterize old-growth forests. [Id. at 4]. This type of prescription would be much more likely to achieve wildlife objectives than an untested experiment that would maintain large areas in stem exclusion:

For typical gap treatments, where as little as 5-10% of the area of the stand is treated, we estimate there will still be a 20-50% increase in deer carrying capacity. In theory as much as a 4 fold increase in deer carrying capacity could be achieved in the winter, or a doubling of summer carrying capacity if canopy gaps were increased to 50% of the stand area. In addition to these significant gains in habitat quality, canopy gaps would be expected to also be an important means to promote connectivity, dispersal habitat and to retain pockets of understory diversity that could aid reestablishment of diversity when stands are scheduled for other treatments such as commercial thinning.

...From an ecological standpoint there is much data and theory that supports the idea that forest biodiversity is generally enhanced by increasing forest heterogeneity as we done with creation of canopy gaps [citations omitted]. It makes sense that disturbances which create irregular openings are generally going to create a variety of ecological conditions which will provide habitat for a wider range of species than what would occur with more homogenous forest conditions (or more homogenous disturbances). There is considerable evidence that canopy gap formation is a major driver of ecological diversity in temperate rainforests in general. It should not be surprising then, that by creating small canopy openings, similar in size to what occurs in old-growth forests one can enhance habitat diversity following homogeneous disturbances such as clearcut logging.

[Ref034]. Moreover, ten acre patch clearcutting does not mimic natural old-growth forest conditions where wind disturbance or small patches of tree mortality create canopy gaps, [Id. at 3], rather, clearcutting is a “major disturbance.” [Ref270 at 74].

Studies that have been done regarding second-growth treatments tend to show, at best, only minimal, transitory effects for wildlife. Ref034 at 6]. Importantly, recent research shows that improvements associated with many thinning prescriptions may not be statistically significant, and confirms previous studies showing “only transient effects of thinning treatments on wildlife habitat.” [Id.]. None of the studies in the record support the confidence in economic and ecologically sound treatments adopted by the ROD. The Tongass Young-growth Study (2014) lays out a host of considerations and barriers to young-growth logging, and reflects more than anything the tension between ecological and economic demands and dearth of experience or data. Hanley et al. (2013) is a study of *precommercial* thinning of limited relevance to commercial harvest, and it made only tentative conclusions of minimal effectiveness.

An additional confounding factor is the consideration of rotation length, because the benefits of different treatments may not accrue for long periods of time. According to Kirchoff (1987) (our DEIS comment Exh. 106 at 31):

Silvicultural treatments that promote an uneven height distribution, broad crowns, and large lateral limb development should improve the snow interception ability of individual trees. Over the short term, thinning 2nd growth will result in a more open canopy, increased snow accumulation, and a decline in winter habitat value for deer. However, over long time periods (>100 years), repeated thinning in managed stands may promote a multilayered canopy with large, dominant trees, similar to old-growth in function and appearance. Silvicultural treatments to improve snow interception capacity, therefore, should be directed at stands on productive sites that are scheduled for rotations >150 years. [Id.]

Additionally, the agency has received numerous warnings from credible scientific experts, suggesting that the proposed approach to logging second-growth, particularly in riparian areas and beach fringe, is controversial and experimental. [Ref035 (“[a]cre for acre, beach fringe and riparian are two of the most important habitats for sustaining wildlife populations on the Tongass.”) (opposing changes and urging review by scientific community)]; Ref198 (expressing that TAC rationale for rehabilitating recovering forests was “gibberish”)]. The group of scientists who addressed the TAC in May, 2015 raised several important points:

- (1) there was very little research or experience in silvicultural treatments for older second-growth stands, and none of the available studies contemplated 10 acre clearcuts;
- (2) there is “no empirical research on secondary succession following clearcutting of young-growth forests in Southeast Alaska, and there is no theoretical reason to assume that it might better for wildlife habitat than clearcutting old-growth forest;
- (3) artificial canopy gaps smaller than one acre may have some value in some applications, but these treatments “are ecologically distinct” from treatments used in timber sales;
- (4) increased use of thinned stands by wildlife is not proven and may be misleading when it does occur
- (5) there is “no empirical data to support the contention that one can log 60 – 80 year young growth in ways that ... achieve desired wildlife benefits.”

[Ref036].

ii. The agency fails to adequately consider the conservation strategy implications of proposed young-growth logging

It is well-established that riparian areas, beach fringe, and old-growth habitat LUD areas fulfill critical ecological roles. Appendix D of the FEIS focuses, for some reason, on only one role, maintaining landscape connectivity among large and medium OGRs. [FEIS at D-1. See also D-4 (“Matrix lands are critical to maintaining the connectivity of ecological flows across a landscape (e.g., flows of disturbance agents, organisms, water, and nutrients) and are also essential to the ability of protected areas to achieve their mandates for ecosystem conservation (Schmiegelow et al. 2006, Schmiegelow and Lisgo 2014).”); D-9 (“Young-growth forest stands have ecological values which contribute to the functioning of the reserve system.”)]. The second-growth harvest proposed here in those non-development LUDs directly conflicts with the conservation strategy. The EIS fails to take a hard look at the critical factors involved with that decision, and the Draft ROD is unable to provide any reasonable rationale for its choice.

The ROD makes a critical error in its assumptions regarding the importance of second-growth in non-development LUDs. The Draft ROD says

when it was developed in 1997, the Conservation Strategy was based on the assumption that it would maintain a functional and interconnected old-growth forest ecosystem without the additional habitat quality contribution of previously harvested areas, either as young growth or over time as these stands matured to old-growth condition (Final EIS, Appendix D). For this reason, and due to the spatial distribution and quantity of suitable young-growth harvest in the non-development LUDs, harvest of young growth in these areas will pose a very low risk to the function and integrity of the Conservation Strategy, which maintains old-growth associated species (e.g., marten, goshawks, flying squirrels) (Final EIS, Appendix D). Therefore, there will be no change to the functioning of this contributing element of the Conservation Strategy (Final EIS, Appendix D).

[Draft ROD at 21. *See also* FEIS at D-9]. The EIS concludes that the selected alternative presents “almost zero risk of reducing the ability of the reserve system to maintain a functional and interconnected old-growth ecosystem.” FEIS at D-9. Similarly, the Draft ROD rests on the assumption that logging of beach and estuary fringe will have no effect to the conservation strategy.

Under the Selected Alternative, due to the very local nature of effects, the beach and estuary fringe will continue to act as an ecological transition zone between interior forest and saltwater influences, maintain landscape connectivity, and provide benefits to the marine environment across the planning area, including sustaining habitats for goshawks and bald eagles (Final EIS, Appendix D). Therefore, there will be no measurable change to the functioning of this contributing element of the Conservation Strategy (Final EIS, Appendix D).

Draft ROD at 21. And, with regard to riparian areas, it says

Under the Selected Alternative, the riparian areas will continue to maintain ecological functions of aquatic and terrestrial habitats, maintain water quality, and provide connectivity across the planning area for all the alternatives due to the local and short term nature of effects to the riparian areas (Final EIS, Appendix D). Therefore, there will be no measurable change to the functioning of this contributing element of the Conservation Strategy (Final EIS, Appendix D).

[Draft ROD at 21]. These conclusions betray an unwarranted confidence in the effectiveness of young-growth treatments to meet the dueling economic and ecological objectives, as well as an erroneous assumption that the conservation strategy did not rely on matrix lands or previously harvested second-growth providing any habitat services.

The FEIS Appendix D, regarding the conservation strategy, offers only a brief, wandering and circular description of the approach to young-growth management:

The general approach to young-growth management proposed under the alternatives is to speed the transition to a young-growth timber program. Young-growth harvest activities would occur within a previously disturbed footprint in areas of past timber harvest, and would maximize the use of existing or decommissioned roads to access harvest units where possible. The associated shift away from POG forest harvest would reduce the amount of future timber harvest and associated activities within intact and/or unroaded areas. The alternatives that propose the fastest transition through more aggressive harvest strategies would result in less new road construction and less timber harvest in untouched areas; that is more timber harvest/road building would occur within previously disturbed areas, than alternatives with longer transition times. This tradeoff is the paramount difference among the alternatives.

Over half of the past timber harvest on the Tongass National Forest occurred when relatively few restrictions were in place in the 1960s and 1970s during the initial period of commercial-scale timber harvest and prior to the adoption of the first Forest Plan in 1979. Little protection was afforded to features such as the beach and estuary fringe, RMAs, and other sensitive areas identified now at the project level, such as karst and steep slopes, during this time. Future young-growth management activities would be required to comply with requirements for maintaining landscape connectivity, scenery, protecting steep slopes, high vulnerability soils, karst, and TTRA buffers under the proposed Forest Plan. Thus, young-growth harvest unit size in most cases would be smaller than the original units. Created openings within the beach and estuary fringe, RMAs, and OGRs proposed under the alternatives have the potential to reduce the functioning of these areas (discussed in detail below); however commercial thinning would enhance the habitat value of these areas by promoting the development of fewer, larger trees.

FEIS at D-7 – 8. Regarding non-development LUDs in particular, it continues

Even-aged commercial young-growth harvest in these LUDs could increase habitat fragmentation or perforation and reduce the ecological contribution of young-growth stands to the reserve system by setting back the trajectory toward late seral forest condition by delaying the development of old-growth stand characteristics such as snags, downed logs, and diverse tree canopy layers required by some POG-associated species (e.g., marten, goshawks, flying squirrels). ... Effects would be less under Alternative 5 which includes a one-time entry constraint and limits the size of created openings to less than 10 acres with maximum removal of up to 35 percent of the area of the original harvested stand, allowing the majority of each stand to mature to old-growth conditions after harvest (Tables 1 and 2). Thinning the entire stand could also be used to accelerate old-growth characteristics.

FEIS at D-8. This analysis is inadequate because it relies on an unwarranted confidence in its optimistic predictions for the result of experimental logging methods. Thinning is expected to accelerate old-growth characteristics, patch-cuts are presumed to have only local and temporary effect, and the whole thing is expected to have minimal effect on ecological function of reserved areas. Each of those conclusions is highly uncertain and controversial.

Another major error is that it is untrue that previously logged stands are not expected under the conservation strategy to contribute to habitat for old-growth dependent species. [See Ref036; Ref298; Ref299; Ref300] If that had been true, then why did the conservation strategy include protections for those areas? In the process of actual project design and implementation the riparian areas, beach fringe and old-growth LUD are expected by the agency, and by reviewing scientists, to continue their evolution towards old-growth habitat, and provide ecosystem service in the meantime as un-disturbed forest. Comments by designers of the conservation strategy make clear that scientists did work on that assumption. The current proposal to log those reserves is a controversial departure.

Even if it were true that the conservation strategy presumed zero habitat value from young-growth, there still are effects of the proposed action that should have been considered under NEPA. It is notable that the FEIS only evaluates young-growth harvest in terms of its relation to old-growth stand development (ie. how quickly it develops old-growth structure). This approach entirely ignores the ecological values of young-growth forests, which provide services like connectivity, shade, and screening in their present state. It also ignores the effects on the watershed from things like the loss of a source for large woody debris, increased sedimentation from road maintenance and use, detrimental soil disturbance (e.g. compaction, rutting) from ground-based yarding, increased peak flows and stream temperatures. New issues related to soils arise relate to young-growth yarding methods, with large amounts of slash and tricky skid trails. [See e.g. Landwehr & Silkworth (2011)]. Those issues ought to have been considered in the EIS.

Given that the EIS concludes that thinning would improve ecological function of young-growth, it is biased, arbitrary and capricious to fail to also consider the losses of ecological function that would result from young-growth harvest. Rather than take a hard look at the issue, the EIS cherry-picks its favored assumptions, disregarding the rest. The idea that second-growth thinning will accelerate old-growth development and improve habitat for species like deer, goshawk, flying squirrel and salmon is a key part of the rationale for the ROD.

“the Selected Alternative accelerates the development of old-growth characteristics in some young-growth timber stands by allowing thinning and other partial harvest prescriptions in areas where such practices have not been allowed.”

[Draft ROD at 15. See also *Id* at 18 (“The Selected Alternative includes plan components to improve habitat conditions in young-growth stands and, as part of that direction, to

mitigate effects on fish and wildlife, consistent with 36 CFR 219.11(c) and 36 CFR 219.11(d)(3).”); 20 (“To ensure the transition to predominantly young-growth harvest does not adversely affect wildlife, the Selected Alternative includes S&Gs to improve wildlife habitat conditions and long-term ecological function in young-growth stands (36 CFR 219.11(d)).”); 21 (“thinning of young-growth stands in the stem exclusion stage will also improve the forage for deer for 15 to 25 years.”); FEIS D-4 (return of young-growth stands to old-growth conditions “can be accelerated through active management such as thinning.”) I-47 (Treatment of young-growth “may assist in forage production...increase growth...accelerate the stand toward old growth characteristics...increase biodiversity...promote conditions that accelerate natural successions in order to achieve old-growth stand characteristics...faster”) (citing Caouette et al. 2000; Carey 2003)]. This assumption is a central premise on which the selected Alternative was chosen.

The Draft ROD even goes so far as to credit small clearcuts in second-growth as “provid[ing] abundant forage for deer.” [Draft ROD at 21]. The fact that such a statement would appear in the ROD illustrates the failure of the EIS to present an unbiased view of the state of the science. It is well-known to everyone who has spent any time in Alaska clearcuts in the summer that, in summer, clearcuts do indeed provide abundant forage for deer (and excellent visibility for the humans noticing them). But as a rationale for the decision, this phenomenon makes absolutely no sense. Summer forage is not a relevant limiting factor for deer. Winter habitat is well-known as the critical limiting factor; increasing summer habitat doesn’t help the population. There is no scientific support for the notion that gap clearcuts in second-growth would have any beneficial impact for the deer population. The decision-maker’s reliance on that controversial notion betrays the decision as irrational and arbitrary.

Thus, the EIS ignores the risks and significant adverse environmental impacts associated with clearcutting by relying on these second-growth clearcuts as a mitigation measure without any support for the efficacy of the treatments – a result that courts have determined to be unacceptable when a project poses, as here, a long-term risk caused by maintaining project area second-growth acres in the stem exclusion phase. [See *National Audubon Society v. Hoffman*, 917 F.Supp. 280, 289 (D. Vt. 1995)(finding a proposed mitigation measure “particularly troublesome” given the lack of support for its effectiveness and adverse project impacts on wildlife)].

Regarding logging of beach fringe, Appendix D offers only the thinnest of rationales. Somehow, the limit to 3,550 (3,903?) managed acres, 35% stand removal, and preservation of a 200-ft shoreline buffer is said to perhaps “reduce” function of the beach & estuary fringe, “but effects would be long-term and more localized.” FEIS at D-14. It is also noted that “only” up to 1.1% of the forested beach fringe in a given biogeographic province would be harvested, leading to the conclusion that “...there may be localized reductions in the ability of the beach and estuary fringe to function as intended under the conservation strategy ... but Forest-wide effects would not measurably reduce the functioning of this contributing element of the conservation strategy.” FEIS at D-15. The aggregate data masks that in places the negative impacts could be quite severe. While only 0.9% of forested acres, 815 acres of beach fringe on north POW is a substantial area. The ecological and socio-economic value of beach fringe is unparalleled.

Regarding riparian areas, the EIS says:

Young-growth stands within the riparian areas comprise lower value habitat for old-growth associated wildlife species; however, they maintain functional connectivity for the movement and dispersal of wildlife and serve as buffers between areas of suitable habitat and human activity.

...

It can be assumed that the integrity of the conservation strategy is maintained when riparian areas continue to support aquatic and terrestrial habitats, maintain water quality and provide landscape connectivity.

[FEIS at D-17]. The selected alternative would allow for clearings up to 10 acres or commercial thinning within RMAs, the most intense riparian disturbance of the considered alternatives. Self-evidently, a logged riparian area could not continue to provide connectivity, support aquatic and terrestrial habitat, or buffer habitats from human activity. Yet the FEIS admits of only minor effects from this obvious damage activity. It states only that

Young-growth harvest in the RMA has the potential to locally decrease buffer width and reduce its effectiveness in facilitating the movement of organisms across the landscape and reduce the function of riparian areas. Young-growth harvest may also delay the development of old-growth stand characteristics in RMAs.

[FEIS at D-17]. The conservation strategy is said to be intact, however, due to TTRA buffers, the “small” portion of the total RMA in each biogeographic province, and “localized” effects. [FEIS at D-17]. As with the other components, it is said that “it would be expected that there may be localized reductions in the ability of the RMAs to function as intended under the conservation strategy under each of the alternatives but Forest-wide effects would not measurably reduce the functioning of this contributing element of the conservation strategy.” [FEIS at D-17].

These conclusory statements are inadequate under NEPA. There is no way to know what the agency means by saying that, while logging will impair riparian habitats and their function under the conservation strategy, impacts will only be “localized.” The nature of migration and dispersal corridors is that, when they do not function (as the agency admits they are here), the impacts are a loss of movement and dispersal of wildlife— precisely the *opposite* of a localized effect.

Independent of the conservation strategy (and related viability concerns), the proposed methods would have unacceptable and negative impacts to watersheds. Cumulatively (including all land ownerships) the FEIS predicts 19.8% of watersheds would exceed 1 mi/mi², the “properly functioning” metric taken from the Watershed Condition Framework. This is considered acceptable based on the percentages (from 9.6 to 11% on USFS land; to 19.8% on all ownerships), and overall average road density of 0.45 mi/mi². [FEIS at I-55]. The Audubon/TNC 77 watersheds were given special attention by many commenters, who objected to the lack of substantive requirements protecting them from young-growth logging proposed under the amendment. In response to these comments, the agency punts to project-specific planning to mitigate these effects. [FEIS at I-56]. Project-specific planning and analysis is all well and good, but left lacking from the FEIS is any focused effort to analyze and describe likely impacts to watersheds, including the T77 watersheds. This information is essential to the decision, because much of the second-growth targeted by the selected alternative is concentrated in high-value fishery watersheds, where past impacts also have been concentrated. Through a host of known and predictable factor— notably sedimentation from roadwork, traffic and yarding; road-stream connectivity; increased peak flows; increased stream temperature; loss of LWD; as well as synchronistic functioning of all those factors together to impair stream structure and habitat— the proposed logging in riparian areas will without question cause degradation of those habitats. It is a critical, unexamined question whether or not young-growth can be logged in these watersheds without causing significant new negative impacts.

iii. Market Risk: Second-growth is not economic, Mills are not re-tooling

Similar to uncertainty regarding ecological impacts of second-growth management, there is a high degree of risk and uncertainty with regard to market reactions. [See Draft ROD at 27 (acknowledging “relatively high degree of uncertainty surrounding developments in Southeast Alaska,” in the market demand projections of Daniels et al. 2016)]. The proposed ramp-up in young-growth harvest here presents at least two major categories of economic risk: in the forest, and at the mill. One critical, unresolved question is: can young-growth be harvested in an economical way, and if so, how? The second critical market-related question is: what timber industry processor or manufacturer might develop in southeast Alaska to buy logged second-growth? As with the ecological consequence, the agency knows what it *wants* the answers to be, so it cherry-picks the few factors and studies supporting that view. Unacknowledged and unexplored is the deep uncertainty and profound controversy surrounding these answers.

The EIS relies on reserve young-growth to provide useable economic volume to the industry. Yet it fails to provide support for the proposition that there is good quality volume in these these stands that could be gotten at economically, while at the same time improving habitat and accelerating development of old-growth. Generally those things—economics and ecological goals of thinning—are in direct conflict. Thinning for habitat generally leaves the best trees; thinning to recover economic value generally removes them. It is irrational to assume, as the agency does, that young-growth harvest will both provide economic volume *and* improve habitat values of those stands. Put another way, there is no evidence suggesting that commercial thinning is economic in sensitive areas where additional care must be taken to improve the habitat. The Forest Service’s initial attempts at commercial thinning ended up costing about \$6,000 per acre. [*Id.*].

As the Tongass young-growth strategy (2014) puts it, “[r]esource managers must be flexible in addressing emerging issues with the economics and risk of commercial thinning so it can be a viable treatment option on the Tongass.” Tongass Young Growth Management Strategy (2014) at 20. Practical conflicts emerge when the best trees for habitat are also the best trees for timber economics.

By force-feeding commercial-thin harvest of young-growth, the Amendment, if it is to succeed in its stated goal, necessarily results in the scales in those conflicts being tilted more in favor of economics than they have been in the past. That will result in predicable problems. For example, ground-based yarding is clearly being favored by the design of the proposed amendment (ie. targeting young-growth that is on the road system, not overly steep). Ecologically, skyline or downhill cable yarding would clearly be better. Ground-based yarding particularly is more efficient where there is a minimum need to dodge around residual trees, which lends itself to wider strip cuts being more economical. Yet again, single-tree selection and not strip cuts would generally be the better prescription for habitat. Strip cuts easily get too wide, becoming the ecological equivalent of clearcuts.

The economics of logging young-growth on the Tongass are specious, at best. As numerous sources recognize, due to a variety of factors well beyond our immediate control, logging costs are higher in Alaskan than in other places, and second-growth forests are harder to profitably make use of. In response to (sensible) complaints by industry backers that young-growth units would cost more to log than they would bring in, the agency falls back on modeling that shows young-growth can appraise positive if combined with old-growth logging. [FEIS at I-142]. But that response misses the point. It may be true that a \$10 positive old-growth unit, combined with a \$9 negative young-growth unit, results in a \$1 positive appraisal. But it is completely irrational to suppose that the addition of the negative-value young-growth *adds value* to the overall project. It is of no help to anyone to ask the logging industry to *lose money* logging young-growth.

There is a total lack of evidence showing that a decrease in federal old-growth volume offerings would result in an increase in young-growth processing capacity, let alone that it is a zero-sum relationship with an exact, one-to-one ratio. If that supposition were true, then the dramatic decreases in old-growth logging on federal land over the last two decades ought to have spurred along some kind of development. Instead, the consistent reactions have been that old-growth operators either simply pull up stakes and leave, or demand ever-higher subsidies to continue their old-growth operations.

One critical area of profound uncertainty is whether (and if so, how and how fast) any existing mill operators will “re-tool” to process second-growth logs. This notion remains disturbingly vague. The administrative record does not contain factual evidence to support the major assumption of the plan, that any existing mills, mill owners or operators are or would re-tool to process second-growth logs. Available statements by Viking lumber company indicate that company has no interest in re-tooling into a second-growth operation, let alone any plan to make that happen. Comments received on the Draft suggested that young-growth will not be financially feasible until they are at least 90 years, or there is a sufficient volume of 60-year old and older trees. [See FEIS at I-140]. The agency approach does neither: young-growth is not allowed to reach a financially feasible size, and not enough of the small stuff is available to justify capitalizing a small-log facility.

The Daniels et al. study simply makes the assumption that existing mills will make machinery upgrades for a young-growth transition. This is an unwarranted assumption that is contrary to available evidence. The only major mill operator has expressed refusal to re-tool, and is pursuing new avenues to continue logging old-growth. Small-log sawmills in other places operate in a totally different context, where they are located close to both timber supplies and to markets, and where a massive long-term supply is assured. In response to comments, the agency pointed to sawmills in coastal Oregon and Washington that are comparable to Viking now, and the Vaagen Brothers mill in Colville, which processed 273 mmbf of lumber in 2014. [FEIS at I-141]. But these responses miss the point. A transition to a second-growth industry, as envisioned by the agency here, *necessarily presupposes* development of some kind of small-log mill that is different from the way Viking lumber does business. It is impossible to describe a second-growth industry otherwise. The FEIS dryly acknowledges that “[h]ow rapidly and effectively [the transition] is accomplished depends on local support from Alaska markets for young-growth forest products.” [FEIS at I-144]. Amazingly, the agency entirely fails to examine this critical factor.

There is no evidence suggesting such a young-growth processing facility is reasonably foreseeable, and there is plenty of evidence that it is not in the cards. Industry commenters have made a good point in objecting to the agency’s blind assumption that a young-growth industry will be financially viable, given the amount and location of Tongass second-growth. [See e.g. Comment Econ-5 - 9, FEIS at I-142 – 43]. This market uncertainty is compounded even further by the failure to conduct studies detailing the location and volumes of young-growth that would be available, or the market viability of young-growth products. Studies that have been done into that topic, for example the 2009 Beck report supports the opposite conclusion. The Beck group found huge subsidies would be necessary for any kind of small log manufacturing operation. On top of that, the AFA identified errors in the Beck report that resulted in understating the costs to establish and operate a small log mill in Southeast Alaska. In response to comments, the agency backs off of the Beck report, saying it is not being relied on to support economic feasibility of a young growth mill. [FEIS at I-144]. That sort of cherry-picking is arbitrary, in violation of NEPA and the APA.

The best and most pertinent fact regarding development of young-growth processing facilities is the simple fact that nobody has successfully developed any such facility. This is *in*

spite of massive and repeated efforts by many powerful, highly motivated entities to encourage such facilities. It is irrational for the agency to expect the free market to react any differently to the current proposal.

Another area of economic uncertainty and risk is with regards to harvest of second-growth prior to reaching CMAI. True, this is expressly allowed by PL 113-291, but that law did not obviate the obligation under NEPA to analyze effects. It is important to consider the implications of second-growth treatments for future stand development. [See FEIS at 3-333 - 34 (citing Zaborske et al. 2000) (finding second-growth treatments can have profound effect on stand development to produce forest products)]. The FEIS does disclose a few of the general parameters regarding these issues—for example the trade-off involved in pre-commercial thin spacing, with wider spacing having potential benefit for wildlife, but producing wood of less commercial value. [FEIS at 3-334 (citing Barbour et al: (2005); (McClellan 2005); (Julin et al. 1993; Holsten et al. 2001)].

iv. The Selected Alternative defies rational explanation

On top of, and undoubtedly at least in part because of, the failure of the EIS under NEPA to take a hard look at the controversy and uncertainty involved in young-growth treatments, the decision-maker in his ROD fails to give any rational explanation for the decision to subject the riparian areas, beach fringe and old-growth LUD to logging. For decades the agency has considered these areas to be unsuitable for timber harvest, for a raft of excellent reasons. No reason has been given to justify this dramatic change.

The Draft ROD selects a modified Alternative 5. One of the distinguishing features of this Alternative is that it allows for logging on second-growth stands in previously protected areas, including riparian areas, beach fringe buffers, and Old Growth Habitat LUD. See Draft ROD at 20 (“The Selected Alternative will change the suitability of specific young-growth stands in beach and estuary fringe, old-growth habitat LUD, and riparian areas from “not suitable for timber production” to “suitable for timber production” (Final EIS, Appendix D).”) Under the selected alternative, the FEIS projects that 35% would be patch-cut on 1,811 acres of old-growth habitat LUD, 3,903 acres on beach & estuary fringe, and 1,089 acres of RMA. FEIS at D-10, App. D. Table 2). These areas are generally focused on the southern Tongass, especially the North Central Prince of Wales biogeographic province.

In partial recognition of the controversy surrounding this step, the ROD would only allow logging of these stands in the first 15 years of the plan, and establish a removal limit of 33% of the basal area, or 35% of the stand acres with openings of up to 10 acres. Additionally, a 100 foot buffer is established around Class I and II lakes, and a 200 foot buffer along beach and estuary fringe.

While we appreciate the agency recognition of the need for mitigation, we object that these measures were selected arbitrarily and without scientific support or rationale. If thinning improves old-growth habitat function, then why would the shoreline and TTRA buffers be necessary or even desirable? Where did 35% stand removal come from? Why was that selected as a limitation, rather than some other number, or rather than a result-driven S&G that required more site-specific analysis? If logging prescriptions and their effect on the landscape are being analyzed later in any event, then why should the Forest Plan impose any percentage limitation at all? The harvest restrictions, as a method of mitigation, are vague to the point of being illusory because that sort of limitation can always be met by simply manipulating boundaries of a “stand” or a “unit.”

v. Important considerations are left to implementation phase

A great deal of site-specific information regarding young-growth in protected areas is being left to project development. In response to comments, the FEIS reiterates that these elements of the conservation strategy are dealt with generally, then states that

Each project implemented under the Forest Plan will evaluate site-specific conditions and resource concerns to determine whether, how, and when to log young-growth stands. Part of that analysis by the interdisciplinary team should include looking at where on the landscape stands proposed for harvest occur, the current condition of those stands, and the harvest prescription to advance those stands toward the desired condition. Landscape connectivity would also be reviewed (See WILD1.VI.A, page 4-86 of the Forest Plan.) Every project and activity must be consistent with the applicable plan components (36 CFR 219.15(d)).

[FEIS at I-50]. While it is certainly true that site-specific conditions will necessarily dictate a lot of the “whether, how, and when,” this leaves too much of the analysis—all of it—to later phases. Adequate information needs to exist now in order to allow for a rational decision to be made. For instance, the rationale for decision requires it to be true both that 1) these areas will contribute substantially to an economic source of young-growth timber, and that 2) this can be done in the context of the landscape to preserve connectivity, and move those stands towards old-growth characteristics. The plan requires that both of those things be true, but leaves until later answering the question whether or not it is even possible.

vi. The LRMP authorization for clearcutting second-growth is arbitrary

The LRMP and EIS show that the Forest Service intends to log recovering forests primarily through clearcutting. Even in riparian areas and beach fringe, where the 35%/33% harvest limitations apply, the practical result is certain to be small clearcuts of about 10-acres each. The analysis, however, fails to provide a reasonable justification for clearcutting, violating NFMA. [16 U.S.C. § 1604(g)(2)(F)]. The EIS discusses clearcutting for the purpose of reducing natural conditions that affect wood product quality or to regenerate hemlock based on the Forest Service’s experience with old-growth logging. According to the EIS, clearcutting old-growth has produced “healthy forested stands.”

But the EIS never considers whether clearcutting should be the primary method for removing recovering forests given that less destructive means of removing the trees are (at least, according to the FEIS and ROD) available. The discussion of “young growth management” asserts that thinning treatments, including commercial thinning, can meet wood product quality goals while reducing adverse impacts to wildlife. If that is true, then, while the EIS suggest that clearcutting recovering forests “may promote regeneration of desirable species,” it is not the optimum method because there would be other ways to achieve regeneration goals, such as maintaining stands of Sitka spruce or Alaska yellow cedar within timber units, or through commercial thinning.

c. Conclusion and Suggested Resolution

Objectors urge the agency to simply withdraw the determination that old-growth LUD, riparian areas and beach fringe are suitable for timber harvest. Where some form of logging is important to restoring or improving habitat function, then great—that is allowed under the current plan. But using those areas to generate second-growth timber volume is an incredibly controversial and risky step. It must not be taken until the decision-maker has in front of him the best available information.

In order to comply with NEPA, at minimum, a revised EIS should be released for public comment that squarely addresses the uncertainty, controversy and risk involved with the proposed second-growth logging. Responsible opposing views should be acknowledged and

the best available science should be applied. Necessary information, including additional studies of young-growth techniques and additional inventory of volume and yield, should be gathered where the cost is not exorbitant. Remaining risks should be addressed through precautionary measures. In order to comply with the mandates of NFMA, particularly the viability requirement, as well as the APA, the agency in the end needs to be able to give a convincing statement of reason why viability remains assured in light of the unraveling of these components of conservation strategy.

C. Alaska yellow cedar

1. Objection Point 15. The LRMP failed to develop measures responding to Alaska yellow cedar decline based on a flawed EIS

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our scoping comments requested that the EIS address cedar high-grading, consider yellow cedar decline and include alternatives that remove areas with healthy yellow cedar stands from the suitable timber lands designation. As we pointed out again in our DEIS comments, the Forest Service has disproportionately highgraded the species for economic reasons, and logging increases climate change-induced risks to the species because of herbivory by deer and competition from western hemlock and Sitka spruce that inhibit yellow cedar regeneration in clearcut stands. [Ref089 at 46 – 50 (CBD 2014); Ref167].

b. Statement of Supporting Reasons

The EIS discloses that yellow-cedar decline is “one of the most widespread and important forest problems in southeast Alaska” but does not disclose the finding that listing the species under the Endangered Species Act may be warranted. [FEIS at 3-176; 80 Fed. Reg. at 19,263]. It describes Alaska yellow cedar decline in a single paragraph, and cites a 1997 study explaining that the decline is likely caused by a warming trend that began in the 1800s. [*Id.*]. The EIS then concludes, by omission, that the proposed LRMP is irrelevant to the direct, indirect and cumulative effects on the species. [FEIS at 3-179-181]. The absence of any analysis means that the EIS failed to show whether logging yellow cedar in areas where it is likely to persist for the foreseeable future violates the agency’s substantive obligations under NFMA to take practicable steps to preserve the existing diversity of tree species or its analytical obligations under NEPA. [16 U.S.C. § 1604(3)(B); 40 C.F.R. § 1502.9(a)].

A revised EIS needs to review components of the Alaska Region’s developing strategy for yellow cedar conservation and its relevance to the Amendment process. Aside from annual forest health reports, there is very little material in the record – an e-mail from the Forest Supervisor to Tetra Tech with instructions to consider the FWS findings in the LRMP analysis, [PR 769_05_000800], a power-point presentation on the yellow cedar conservation strategy, [PR 769_05_000703], and one study from one of the Pacific Northwest Research Station’s yellow cedar decline researchers. [PR 769_05_000611]. Yet scientists – mostly from Alaska Region – have produced over 20 peer-reviewed articles on yellow cedar decline since the 2008 TLMP Amendment, in addition to the dozens of studies produced over two decades of research dedicated to yellow cedar. [See, e.g. Ref176 at 194 – 224 (Hennon et al 2016)].

Because of the forest-wide significance of this issue and because of the extent of yellow cedar decline in the planning area, we requested that you consider yellow cedar decline in your timberland suitability determinations and develop alternatives that avoid taking healthy yellow cedar stands. The Forest Service’s own conservation recommendations include shifting

yellow cedar removals from healthy stands in areas not at risk of significant further decline to dead yellow-cedar forests. [Ref175 at 1 (Hennon et al. 2008)] Higher elevation yellow cedar stands also have significant conservation value on many Alexander Archipelago islands. [See, e.g. Ref176 at 301, 305, 313, 337].

Our scoping comments also added the importance of developing alternatives or plan components that avoid logging yellow cedar given the poor regeneration of the species. The FEIS discusses regeneration in a single paragraph in the timber section, stating that clearcutting would favor both cedars. [FEIS at 3-3035. Yet the Pacific Research Station’s recent report, which reflects documented, historic observations, identifies an “imbalance of regeneration” caused by, among other things, hemlock and spruce out-competing yellow cedar due to their greater reproduction and growth rates. [Ref176 at 145]. There is only “limited” information on yellow cedar regeneration, and despite efforts to favor other species, western hemlock regenerate far more prolifically than other species after logging. [Id. at 86]. The authors explain that:

There is anecdotal information suggesting that natural regeneration by yellow-cedar is successful to replace the species after timber harvest in some areas, but may be unsuccessful in others. Geographic patterns of successful and unsuccessful natural regeneration could be revealed by compiling and analyzing existing regeneration stocking data. There is a need to correlate the yellow-cedar component as a percentage of composition in forests before harvests with the composition percentage in regeneration following harvests. [Id. at 365-366].

Additionally, herbivory from deer is a “major impediment” to successful regeneration.

c. Conclusion and suggested resolution

A revised EIS needs to disclose uncertainties about species regeneration and demonstrate an effort to examine actual changes in post-harvest species composition. Recent NEPA analyses show that regeneration in clearcut areas results in an ongoing conversion to other forest types with significant reductions in yellow cedar composition. [Ref351 at 3-414; Logjam FEIS at 3-160]. The Kosciusko Vegetation Management and Watershed Improvement Project targeted nearly 30 MMBF of young growth – and less than a fraction of a percent was yellow cedar. It is unreasonable for the EIS to ignore the cumulative effects of logging this species in a changing climate.

VI. Economic Considerations: additional NEPA analysis is necessary to redo the Forest Service’s demand scenarios and methodologies, analyze export policy impacts and evaluate the public cost of the timber sale program

A. Comments on the upper limit of timber that can be sold

Our DEIS comments explained that the Forest Service’s timber sale planning procedures have consistently overestimated market demand for federal timber in southeast Alaska. We requested that the Forest Service revisit its methodology and series of market demand scenarios that predict industry growth and expansion when actual events show prolonged and persistent decline. Yet despite the low cut and sold volumes and known market conditions, the updated demand projections continue to assume that southeast Alaska timber operators will be competitive and maintain historic market shares. The FEIS and supporting analyses thus failed to fix this ongoing programmatic failure and provide a realistic assessment of markets and demand for federal timber. The updated projections, based on hypothetical scenarios developed in Daniels (2015), anticipate a competitive timber

industry that can retain historical market shares. But the projections ignore explicit demand determinants such real price and cost data and market trends. The new scenarios thus reflect misleading economic assumptions.

1. Objection Point 16. The FEIS Timber Demand Scenarios rely on misleading economic assumptions, requiring an a revised DEIS

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments explained that the development of a Projected Timber Sale Quantity (PTSQ) of 46 MMBF per year was arbitrary and relied on misleading economic assumptions – particularly with regard to market demand. [Ref167 at 57]. Forest Plans must include “the planned timber sale program.” [16 U.S.C. § 1604(f)(2)]. Under the 2012 planning rule, Forest Plan measures such as the adoption of a Projected Timber Sale Quantity (PTSQ) must comply with the 2012 rule’s economic sustainability requirements. [36 C.F.R. § 219.8, 219.8(b)]. If the Forest Service overestimates market demand, its methodology for calculating timber sale offerings will result in the excess preparation of deficit timber sales that exceed actual industry utilization. As explained in the following paragraphs, the PTSQ and supporting demand analyses arbitrarily inflate demand for federal timber. Thus, preparation of an additional NEPA analysis for the TLMP Amendment is necessary, so that a realistic market demand study is considered in the decisionmaking process.

NEPA requires federal agencies to disclose sufficient information as needed to ensure “informed decisionmaking and informed public participation.” [*State of Cal. v. Block*, 690 F.2d 753, 767 (9th Cir. 1982); *see also Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)(explaining that an EIS serves two functions: (1) to ensure that agencies take a hard look at the environmental impacts of proposed projects and (2) to ensure the availability of information to the public so as to enable public participation in the decisionmaking process)]. An EIS cannot serve these functions if it reflects misleading economic assumptions. [*Hughes River Watershed Conservancy v. Glickman*, 81 F.3d, 437, 446 (4th Cir. 1996)]. This includes an obligation to disclose any uncertainties about the feasibility of an agency plan or project, such as the relationship between long-term, global timber market declines and the agency’s projections. As explained by the Fourth Circuit:

Misleading economic assumptions can defeat the first function of an EIS by impairing the agency’s consideration of the adverse environmental effects of a proposed project. NEPA requires agencies to balance a project’s economic benefits against its adverse environmental effects. The use of inflated economic benefits in this balancing process may result in approval of a project that otherwise would not have been approved because of its adverse environmental effects. Similarly, misleading economic assumptions can also defeat the second function of an EIS by skewing the public’s evaluation of a project. [*Hughes River Watershed Conservancy*, 81 F.3d at 446; *see also Columbia Basin Land Protection Ass’n*, 643 F.2d at 594-95 (explaining that NEPA requires an EIS to balance the environmental costs of a project against its economic and technological benefits)].

Further, the Administrative Procedure Act (APA) requires that an agency “examine the relevant data and articulate a satisfactory explanation for its action, including a “rational connection between the facts found and the choice made.” [*Motor Vehicle Manufacturers Ass’n v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 43 (1983)]. An agency action is “arbitrary and capricious if the agency ... entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the

product of agency expertise.” [Id.]. The analysis – particularly the three market demand scenarios - ignored actual market trends and data, thus also violating the APA.

b. Statement of supporting reasons

The LRMP adopts a PTSQ of 46 MMBF per year. [LRMP at 5-16]. The PTSQ reflects the PNW Research Station’s development of new demand projections for this amendment and provides three alternative future scenarios. [FEIS, Vol. II Appx. G at G-2]. These scenarios project “demand in foreign and domestic markets and the portion of that demand Alaska is likely to fill (based on historic trends).” [FEIS at 3-491]. All of the scenarios ignored a long-term decline in market demand, and anticipate increasing demand over the next fifteen years. [FEIS Vol. II, Appx G at G-6]. The market demand scenarios rely on misleading economic assumptions about (1) the overall domestic share of global timber markets and (2) a constant market share of federal timber from southeast Alaska.

The FEIS baseline model contemplates a steady increase in southeast Alaska timber removals over the next 15 years, from 118.7 MMBF in 2015 to 155.6 MMBF in 2030. [FEIS at 3-493, Table 3.22-9]. Scenario 1 is the baseline model for the next decade. It assumes that (1) “projected trends in imports, consumption and market share will remain constant; (2) that softwood log exports will continue at the current five year average.” [FEIS, Vol. II Appx. G at G-5]. Log exports comprise more than two-thirds of projected baseline volume of federal timber removals. [FEIS at 3-492-493]. Pacific Rim nations, particularly China, form the primary market, having consumed over 90% of southeast Alaska timber from 2005-2011. [Id. at 3-491]. China is also the primary market for the Tongass National Forest’s closest competitors for market share – that is, west coast log exporters; overall, nearly two-thirds of U.S. log exports are sent to China. [See: four publications and press releases by Zhou, at USFS PNW Res. Sta.].²⁵

Current market trends reflect a “substantial” decline in U.S. lumber prices and particularly for West Coast raw log exports. [Ref075 at 4-5 (Campbell Global 2015, Timber Trends); Ref378 & 379 (Zhou 2015a,b)]. The FEIS does not discuss export market information compiled by the PNW Research Station. The economic analyses thus arbitrarily ignore the substantial weakening of export markets and the competitive disadvantage of Alaska and Pacific Northwest raw log exporters. Recent Pacific Northwest Research Station press releases indicate that both the value and volume of log exports from Alaska and the West Coast are declining and at a much greater rate than other timber exporting regions. [Ref378 & 379 (Zhou 2015a,b)]. In 2015, the Forest Service reported the following trends:

- In the fourth quarter of 2014, west coast log exports decreased by nearly 25% in volume relative to the third quarter of 2014;
- In the first quarter of 2015, west coast log exports decreased again, by nearly 16% relative to the fourth quarter of 2014;
- The value of all exports in 2014 dropped by 7% for raw logs relative to 2013

²⁵ (1) Ref377: Zhou 2013, Production, prices, employment and trade, Northwest Forest industries, all quarters 2012. Resource Bulletin PNW-RD-265. Portland, OR: USDA Forest Service, Pacific Northwest Research Station. 163pp. (2) Ref378: Zhou 2015a, West Coast log and lumber exports decreased in 2014. Pacific Northwest Research Station, Portland, OR, March 2015; (3) Ref379: Zhou 2015b, West Coast log and lumber exports decreased in first quarter 2015. Pacific Northwest Research Station, Portland, OR, May 2015. (4) Ref380: Zhou 2015c, Production, prices, employment and trade, Northwest Forest industries, all quarters 2013. Resource Bulletin PNW-RD-266. Portland, OR: USDA Forest Service, Pacific Northwest Research Station. 163 p.

- The value of log exports dropped again during the first quarter of 2015, by 21% relative to the value during the last quarter of 2014
- The primary market for west coast logs, China, had increased imports from other areas of the United States;
- The market share of west coast log exports in the first quarter of 2015 dropped 16% relative to the first quarter of 2014;
- Similar trends exist for west coast processed lumber. [*Id.*].

These data are consistent with industry projections finding that that Alaska and other Pacific Northwest log exporters are losing their market share, and are at an even greater competitive disadvantage relative to Canadian and southern U.S. timber operators. [Ref075 at 11 (Campbell Global 2015, Timber Trends)]. In sum, there is little demand because markets are poor for locally produced sawtimber or raw log exports from southeast Alaska. Additionally, regional timber exporters face weakening foreign markets, causing the historical competitive disadvantage relative to other timber exporters appears to be increasing. The failure of the FEIS to consider actual trends in export markets is a significant error that resulted in an arbitrary PTSQ that in turn drove the programmatic purpose and need and range alternatives.

Scenario 2 increases estimated demand for federal timber relative to the baseline and Scenario 1, based on the addition of wood energy markets. [FEIS Vol. II Appx. G at G-5]. Scenario 2's elevated future demand relies on a Forest Service "policy to support the conversion from distillate fuel to wood-based energy in Southeast Alaska's residential, commercial and industrial sectors" that would generate demand for sawmill residues and low- and utility-grade logs." [*Id.*]. The FEIS assumes this conversion will be successful. [FEIS at 3-494]. The sole source for this assumption is a 2014 two-page web post which describes a small number of federally financed projects. [PR 769_05_000325 (Deering 2014)].

The FEIS never identifies uncertainties associated with the biomass conversion program; however, the record identifies the following issues related to a regional biomass conversion:

- (1) The extent to which future oil prices impact conversions from diesel;
- (2) Total market potential for combustible wood heating products;
- (3) Regional capacity to implement a biomass program
- (4) Determining effective ways to leverage and deliver a biomass conversion program and
- (5) Receptiveness of residential and commercial customers. [PR 769_05_000006 at 1-47 (Black & Veatch 2012)].

As we explain in our discussion of the biomass conversion program in our climate change section, the Net Present Value of these conversions is negative when accounting for capital and supply costs. And that was before oil prices crashed. Finally, Scenario 3 assumes a higher market trajectory "by considering only pre-recession (prior to 2007) domestic consumption growth rates." [FEIS Vol. II Appx. G at G-5]. It "is based on the possibility that domestic sawn-wood demand growth will continue at a pre-recession rate throughout the projection period." [*Id.*]. Again, there is no reasonable basis for this assumption.

All three scenarios fail to consider relevant factors in global markets – pricing, and both demand and supply. Notably, the market demand analysis does not consider one of the most important and relevant factor in market demand – price. It explicitly estimates market demand based on a perceived need for supply: "[t]he method is based on quantity, rather than price." [PR 769_05_00031 at 21 (Daniels et al 2016)]. As a critique of this approach

from the record explains: “[w]ithin this framework, the actual demand becomes irrelevant. Markets become irrelevant. Prices become irrelevant.” [PR 769_02_000084 (Niemi 2016a at 15)].

Given the dependence of federal timber exporters on Chinese markets, it was arbitrary for the analysis to fail to disclose and analyze the existing condition and trends in these market. The Forest Service’s own analysis “showed model results to be most sensitive to changes in Pacific Rim export markets.” [PR 769_05_00031 at 45 (Daniels et al 2016)]. As shown in the Natural Resource Economics’ review, the actual condition of the Chinese manufacturing and imports makes it “reasonable to assume the U.S. share of global production likely will decline, perhaps considerably.” [See PR 769_02_000084 (Niemi 2016a (Socioeconomic Comments: Timber Demand) at 12)]. Yet the scenarios relied on by the FEIS arbitrarily and implausibly assume constant market share – or even growth. [FEIS Vol. II, Appx. G at G-5]. These scenarios are implausible even under the Forest Service’s study, which identifies a “high degree of uncertainty” about the future of southeast Alaska timber exporters, and questions whether they will remain competitive. [PR 769_05_00031 at 45, 48 (Daniels et al 2016)]. In other words, the analysis and the scenarios are internally inconsistent, making the chosen PTSQ arbitrary because it is implausible and contrary to the evidence before the agency.

Further, the FEIS scenarios fail to consider competition from other timber producers for Chinese markets and factors such as terms of trade that make forest products produced elsewhere cheaper than those produced in the U.S. [See PR 769_02_000084 (Niemi 2016a at 13)]. Indeed, southeast Alaska logs or the few products “are especially vulnerable to this decline in competitiveness.” [*Id.* at 14].

c. Conclusion and suggested resolution

In sum, the projected PTSQ reflects optimistic demand scenarios that never consider empirical market data compiled by the agency showing that federal timber from southeast Alaska, and indeed timber from the Pacific Northwest generally, cannot compete with other national and international timber producers who have significant competitive advantages. The Reviewing Officer should rescind the FEIS, draft ROD and Proposed LRMP and direct the Responsible Official to prepare a revised market demand analysis that incorporates pricing information, considers global competition and other relevant economic factors, and then revise the FEIS, draft ROD and Proposed LRMP accordingly.

2. Objection Point 17. Morse methodology is outdated and needs correction

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments requested that the Forest Service update the Morse methodology used to calculate timber sale volume offerings. [Ref167 at 59]. The Morse methodology suffers from the same legal flaws as the demand scenarios – it relies on misleading economic assumptions, and fails to consider relevant factors. The failure to fix this flaw violated NEPA and the APA.

b. Statement of supporting reasons

Appendix G to the TLMP DEIS describes the procedures for meeting market demand and planning timber sales, known as the Morse Methodology. [FEIS, Appx. G at G-1-3]. Appendix G explains that the new demand projections do not require a significant change in the basic Morse methodology. [*Id.* at G-2].

The Morse methodology relies on several assumptions:

- (1) Short term volatility of forest products markets
- (2) A lack of alternative timber suppliers outside of the federal government;
- (3) A difficulty in estimating timber demand, even a year or two in advance and
- (4) A need to “respond to rapidly changing market conditions” in order to remain competitive. [*Id.* at G-1].

These assumptions cause the Forest Service to prepare timber sale offering goals years in advance. Three of the assumptions – that short-term market changes are difficult to predict - are redundant and arbitrary given the known long-term decline in markets for federal timber and competitive disadvantages described in the preceding section.

The second assumption – a lack of alternative timber suppliers – is also wrong given the agency’s dependence on export markets for federal timber. Federal timber supplied slightly less than half of the timber take in southeast Alaska from 2002 – 2014. [FEIS at 3-486]. But the FEIS projects a proportional increase in non-federal timber take such that non-federal logging will comprise roughly two-thirds of the projected total take over the next fifteen years. [*Id.* at 3-493]. This change reflects a substantial timber supply coming from the state of Alaska, Sealaska corporation and the Alaska Mental Health Trust. [See *id.*; FEIS Vol. II, Appx. C at C-11-15]. But the FEIS and supporting analysis never consider whether current and reasonably foreseeable future timber harvests from these entities would reduce the demand for federal timber or independently meet the government’s timber demand and logging and export job objectives.

An additional problem with the Morse methodology lies in how it accounts for another critical input into the methodology – mill capacity. Mill capacity reflects “the amount of net sawlog volume that could be utilized by the sawmill, as currently configured, during a standard 250 day per year, two shifts per day annual operating schedule – and, not limited by availability of workforce, raw materials, or market conditions. [PR 769_05_000336 at 3]. The FEIS asserts that it has adjusted the 2000 model to account for changes in the share of federal timber provided to local processors and sawmill capacity. [Appx. G at G-2]. But the Forest Service has failed to recognize a persistent, long-term decline in actual mill utilization rates. As with the market demand scenarios, the utilization rate of the installed mill capacity over the past decade has been lower than projected by an order of magnitude, ranging between 5 and 15%. [PR 769_05_000336 at 3]. The FEIS shows that the active mill capacity used in the methodology exceeds the amount of locally sawn lumber by 85 percent. [FEIS at 3-488]. More specifically, Viking Lumber Company has a listed capacity of 80 MMBF itself, [*id.*], but it mills one-fifth of that amount. [PR 769_05_000336 at 5].

c. Conclusion and suggested resolution

In sum, the inputs into and assumptions underlying the 2000 Morse methodology are flawed, resulting in inflated goals for timber sale offerings and volume under contract, resulting in excess preparation of wasteful timber sales. The Reviewing Officer should direct the Responsible Official to rescind the proposed LRMP, draft ROD and FEIS with instructions to develop or correct the existing federal timber sale planning procedures.

B. Objection Point 18. The FEIS failed to adequately analyze and consider alternatives to the Alaska Region’s export policy

Because the Forest Service’s justification for this project relies primarily on local economic benefits, raw log exports and interstate shipments were an important issue with

regard to the economic analysis for this project. The analysis failed to assess the procedural deficiencies with the Forest Service's adoption of the policy and failed to adequately consider the environmental and employment consequences of the policy.

The FEIS arbitrarily assumes that 100% export or 50% export is consistent with the TLMP, the Forest Service's enabling statutory authority and the exceptions to applicable federal regulations that prohibit the export or shipment of raw logs. [16 U.S.C. §§ 473-475, 477-482, 551; 36 C.F.R. § 223.201.]. Federal regulations require a separate approval process for exports and interstate shipments because the timber sales from public lands are for "local use" and the restrictions on interstate shipments and foreign exports are "necessary to ensure the development and continued existence of adequate wood processing capacity in Alaska." [16 U.S.C. §§ 473-475, 477-482, 551; 36 C.F.R. § 223.201]. Because the Alaska Region unlawfully eviscerated the existing regulatory restriction on export policy without providing adequate notice and public comment, the FEIS and ROD violate the APA by implementing an export-driven policy which unlawfully utilizes a foreign market appraisal to calculate pond log values under and in actuality rescinds and replaces the existing regulation. [5 U.S.C. § 553(b)].

It is our view that the timber sale program cannot proceed concurrently with an export policy that arbitrarily conflicts with the purpose of the Organic Administration Act and the Forest Service's local processing regulations for Alaska. The regulations provide five factors for the Regional Forester to consider in determining whether or not to approve exports. The primary two regulatory justifications clearly reflect the understanding that export should occur only when it is surplus to local needs:

- "[p]ermit more complete utilization on areas *being logged primarily for local manufacture*"
- [b]ring into use a minor species of little importance to local industrial development" [36 C.F.R. § 223.201(a), (c)].

The Limited Export Policy is an unreasonable interpretation of the regulation and in fact expressly undermines the regulatory policy. The Alaska Region's interstate shipment and export policies do not reflect a reasonable interpretation of its regulations and violate the Organic Administration Act's local use requirements. In fact, as shown by the Forest Service's own mill utilization reports, the export policy has caused the precise result that the regulation sought to prohibit – exports of jobs along with raw logs.

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our scoping and DEIS comments requested that the Forest Service initiate a regulatory process to review federal regulations that mandate local processing of Tongass National Forest timber and requested that further NEPA analysis consider alternatives that rescind the export policy. [Ref167 at 60-61]. The ongoing authorization for 100% export or 50% export (depending on the species) of unprocessed timber is inconsistent with the TLMP, the Forest Service's enabling statutory authority and the exceptions to applicable federal regulations that prohibit the export or shipment of raw logs. [16 U.S.C. §§ 473-475, 477-482, 551; 36 C.F.R. § 223.201.]. Federal regulations require a separate approval process for exports and interstate shipments because the timber sales from public lands are for "local use" and the restrictions on interstate shipments and foreign exports are "necessary to ensure the development and continued existence of adequate wood processing capacity in Alaska." [16 U.S.C. §§ 473-475, 477-482, 551; 36 C.F.R. § 223.201].

Further, the FEIS does not disclose the full extent of the federal timber export program, and the Forest Service has never provided a NEPA analysis to assess the extent to which the export policy itself may have significant adverse impacts on the environment. The export policy increases old-growth logging (and the resulting increased impacts) by the international timber brokers who dominate federal timber purchases. This proposed LRMP Amendment makes the policy permanent, requiring a NEPA analysis of its impacts. [See 40 C.F.R. § 1508.18 (requiring analysis of federal policies)].

The decision to proceed with a large, export-driven programmatic amendment also violates NFMA, which requires that uses of National Forest System lands be consistent with the land management plan. [16 U.S.C. §1604(i)]. Proposed LRMP timber goals emphasize the production of saw timber and products for Alaska residents, and to supply local mills. [LRMP at 2-5]. Similarly, existing TLMP standards and guidelines require the Forest Service to manage wood products for “quality sawtimber material and other merchantable wood products” and “[r]equire utilization and optimum feasible use of wood material” and “[p]romote the use of wood for its highest value product commensurate with present and anticipated supply and demand.” [2008 TLMP at 4-74]. The effect of the export policy is inconsistent with the existing and proposed local employment and product manufacturing goals, violating NFMA because of non-compliance with the Forest Plan. [16 U.S.C. § 1604(i); *Idaho Sporting Cong., Inc. v. Rittenhouse*, 305 F.3d 7, 962 (9th Cir. 2002)].

Finally, the FEIS provided misleading employment figures. The FEIS neither recognized nor correctly portrayed the TNF’s limited ability to create or maintain local processing capacity. In particular, it did not provide an accurate assessment of job and income generation based on a realistic analysis of exports and interstate shipments of raw logs out of the region. This information was important so that the public could evaluate whether the project would fulfill the stated purpose and need for the project. The FEIS instead inflated the employment figures by relying on inaccurate data and unexplained assumptions. This reliance on inaccurate or misleading economic information violated NEPA and impaired the consideration of adverse environmental effects. [*Natural Resources Defense Council v. U.S. Forest Service*, 421 F.3d 797, 811 (9th Cir. 2005)].

b. Statement of supporting reasons

In the beginning of the timber sale program on public lands, in 1897, Congress directed the Forest Service to sell timber only for local use. [16 U.S.C. §§ 473-475, 477-482; Ref391 Lane 1998]. Local use actually meant in-state use as Congress even prohibited interstate exports. [*Id.*]. This prohibition included territorial Alaska. In 1898, Congress explicitly required local use of timber sold from public lands in Alaska. [*Id.*]. In 1926, the Forest feared that log exports would lead to the result discussed in the previous subsection -that log exports would lead to fewer job and market opportunities in Alaska. [*Id.*]. Then- Secretary of Agriculture W.M. Jardine authorized Chief Forester William Greeley to regulate log exports from Alaska. [*Id.*]. Greeley’s primary concern was with ensuring a supply of spruce and western hemlock for the development of local processing capacity. [*Id.*].

In 1946, the Forest Service first codified the regulations for log exports from Alaska that prohibited raw log exports “without prior consent of the Regional Forester” and listed factors to guide the consent determination. [*Id.*]. A modified form of the 1946 regulation, found at 36 C.F.R. § 223.201, remains in effect and prohibits raw log exports and interstate shipments of spruce and hemlock. The purpose of the export and interstate shipment ban is “necessary to ensure the development and continued existence of adequate wood processing capacity in Alaska for the sustained utilization of timber from the National Forests which are geographically from other processing facilities.” [36 C.F.R. § 223.201].

The record shows that export levels in Alaska are “are radically different” from other West Coast lumber producers, with Alaskan mills processing only 13.2 percent of the total removals and Oregon mills processing nearly 80% of their timber in 2011. [PR 769_05_000323 (Forest Service 2014)]. And since the Forest Service developed the export policy, mill employment has decreased significantly and far out of proportion to the level of federal timber removals. [PR 769_05_000336 at 3 (showing a range of 58 – 64 jobs 2009 – 2013 and 94 – 148 jobs 2004 – 2008); cf. FEIS at 3-486 (showing removals of roughly 36 MMBF annually from 2004-2008 and 30 MMBF annually from 2009-2013)].

i. The FEIS is misleading regarding the extent of the Forest Service’s export policy

Additionally, the FEIS does not analyze the full extent or impact of the export policy or how it increases the environmental impacts of federal logging. It states that the Forest Service allows the export of up to 50% of the western hemlock and spruce sawlog volume. [FEIS at 3-489-490]. It also asserts that Alcan must “sell logs that cannot be exported to a processing facility in the state.” [Id.].

The FEIS is misleading. Actual data show the Forest Service routinely waives these requirements, and allows Viking and Alcan to ship an ever-increasing proportion of timber out of the region as unprocessed logs. For example, Viking entered into a contract in December 2009 for the 24.5 MMBF Diesel sale authorized under the Logjam ROD and FEIS.²⁶ In 2010 and 2011 Viking shipped 13.6 MMBF out-of-state unprocessed, or roughly 55% of the purchased volume. [Ref359 through 365 (USFS export reports for CY2010-2014)]. Viking purchased the Slake sale from the Logjam project one year later,²⁷ and shipped 13.6 MMBF unprocessed, or nearly two-thirds of the sale volume. Similarly, by 2014, Alcan had exported 7,477 MMBF of Sitka spruce and western hemlock, and 2,081 MMBF of Alaska yellow cedar out of the 12.7 MMBF cut from the Skipping Cow project – or over three-quarters of the total volume. [Ref359 through 365]. Alcan has no local markets for smaller logs and has only one buyer for domestic logs, Viking Lumber, and thus is not able to sell large amounts of timber to Viking, resulting in exports in excess of the Alaska Region’s export policy. [Ref229 (Nichols 2013)]. Thus, although the Alaska Region admits that its practice of waiving the policy is “inconsistent” with policy, it readily grants waivers so that the 50% out-of-region processing policy is a floor rather than a ceiling. [Ref099 and Ref239 through 242]. Thus, the analysis should disclose exports and interstate shipments in excess of the Alaska Region’s policy, and consider the additional implications for local employment.

The FEIS acknowledges that the Forest Service allows Alcan and Viking to export timber volume in excess of the policy, but insists that “for the purpose of this programmatic analysis, it is reasonable to evaluate the upper limit as prescribed by the current version of the Limited Export Policy.” [FEIS, Appx. I at I-169]. This explanation is implausible and contrary to evidence before the agency. In 2016, the Forest Service approved 100% export for the North Kuiu timber sale, and Petersburg Ranger District Ranger Jorge Enriquez made clear that this practice would need to recur for future projects. [Ref132 (Enriquez 2016); Ref243 (Pendleton 2016)].

²⁶ See Forest management reports and accomplishments, volume under contract and cut and sold reports. Available at www.fs.usda.gov/detail/r10/landmanagement/resourcemanagement/?cid=fsbdev2_038785

²⁷ See *supra* n. 20

ii. The FEIS provides misleading employment projections

The FEIS never squarely addresses the employment ramifications of the export policy as implemented through routine waivers or as expanded through the recent 100% export authorization. The FEIS significantly inflates potential employment opportunities based on the implausible assumption that more volume will go to local mills. The FEIS estimates a range of federal timber employment based on two scenarios: (1) the upper estimate value assumes that all project volume is processed locally with the exception of Alaska yellow-cedar and (2) the lower estimate value assumes that 50% of the total sawlog volume in hemlock and spruce are exported, as well as all of the Alaska yellow-cedar. [FEIS at 3-519]. Neither job estimate accounts for the export of red cedar. This is misleading.

The FEIS table that displays projected employment levels was misleading with regard to total annualized jobs by calculating an upper range based on local processing. There was no data to support the assumption that there would be no export of federal hemlock, spruce and red cedar and 50% local processing of yellow cedar. [FEIS at 3-519]. But the FEIS makes this assumption and projects a maximum range of 100 annualized sawmill jobs under the Selected Alternative generated by 40.8 MMBF of sawlogs. [*Id.*]. The estimate of 100 annualized jobs relies on the assumption that large timber sale purchasers would process 100% of the spruce and hemlock – even though the FEIS explicitly anticipates exporting more than two-thirds of the federal sawlogs throughout the planning period. [*Id.* at 3-492, Table 3.22-8]. This estimate is the minimum realistic export volume as it roughly accounts for the exportable amount of red and yellow cedar from southern and central Tongass timber sales of 18 – 20 percent, [PR 769_05_000981 at 2 (Wilson 2002)], and half the spruce and hemlock.

Thus the mill job estimate is contrary to the evidence before the agency, and arbitrary. Then the FEIS estimates jobs under the Limited Export Policy based on assumed local processing of 50 percent of the spruce and hemlock – even though, as described in the preceding paragraphs – the Forest Service routinely waives the 50 percent export limit.

The Forest Service's excuse for this job transfer to foreign processors is that transportation jobs would replace mill jobs. [FEIS, Vol. II, Appx. I at I-169]. But it is misleading to suggest that transportation sector jobs would meet the purpose and need to provide employment for southeast Alaskans. According to Regional Economist Susan Alexander, one MMBF of federal sawlogs generates 2.68 sawmill jobs, and 0.62 transportation jobs, or 3.3 jobs.²⁸ Conversely, in the other option one MMBF of federal timber generates less than half that rate of employment – 1.53 jobs in an entirely different employment sector, transportation.

Mill jobs comprise the majority of the projected employment benefit, but the minimum number – 49 jobs – is itself higher than the amount of mill jobs (42) generated by 12.9 MMBF that the FEIS projects for local processing. Yet the FEIS projects a range of up to 100 mill jobs, inflating the total purported employment figures of 187 – 221 jobs by roughly 25 percent. [FEIS at 3-519 (estimating a maximum number of 221 jobs based on the potential for 100 mill jobs)]. Thus transportation jobs do not make up the difference. Indeed, federal timber has never provided 200 annualized jobs over the past decade. [FEIS at 3-485, Table 3.22-4]. Further, the FEIS never considers whether southeast Alaskans would benefit from

²⁸ These numbers are derived from Ref381 (Alexander 2012). Employment Coefficients and Indirect Effects for NEPA Planning. The document is provided in the FEIS reference list at 6-5 but was not included in the project record itself. The document was sent to project leader Susan Howle by e-mail on August 25, 2016.

jobs in the transportation sector; the record indicates, for example, that marine transportation jobs are held primarily by non-resident workers. [PR 769_05_000329 at 12-13].

c. Conclusion and suggested resolution

The draft ROD is arbitrary because it relies on an illegal policy developed without observance of procedures required by law. It also relies on an FEIS that violated NEPA because it provided misleading information about the extent to which the Forest Service intends to authorize raw log exports. The employment projections rely on misleading assumptions and there are unexplained inconsistencies between the projections and actual employment data shown in the FEIS. The export policy is also inconsistent with the local employment purpose and need for the amendment, and with existing and proposed Forest Plan goals, objectives and standards for local utilization, violating NFMA.

An EIS cannot satisfy NEPA if it reflects misleading economic assumptions. [*Hughes River Watershed Conservancy v. Glickman*, 81 F.3d, 437, 446 (4th Cir. 1996)]. As explained by the Fourth Circuit:

Misleading economic assumptions can defeat the first function of an EIS by impairing the agency's consideration of the adverse environmental effects of a proposed project. NEPA requires agencies to balance a project's economic benefits against its adverse environmental effects. The use of inflated economic benefits in this balancing process may result in approval of a project that otherwise would not have been approved because of its adverse environmental effects. Similarly, misleading economic assumptions can also defeat the second function of an EIS by skewing the public's evaluation of a project. [*Hughes River Watershed Conservancy*, 81 F.3d at 446; see also *Columbia Basin Land Protection Ass'n*, 643 F.2d at 594-95 (explaining that NEPA requires an EIS to balance the environmental costs of a project against its economic and technological benefits)].

The Reviewing Officer should direct the Responsible Official to rescind the draft ROD and FEIS, and prepare an additional NEPA analysis that includes local processing alternatives, and provides a realistic range of employment figures that reflects actual local employment under the export policy.

C. Objection Point 19. A revised DEIS needs to disclose public costs of the timber sale program and external costs to fisheries, recreation and subsistence

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments explained that the analysis failed to carefully assess the significant impacts of continuing your commitment to large-scale timber harvest in central and southern Tongass National Forest Ranger Districts and noted that the analysis improperly excluded a detailed public investment analysis that disclosed the full administrative cost of administering the TLMP timber sale program, as well as negative external costs imposed on the fisheries and recreation sectors. [Ref167 at 62].

NEPA requires a cost-benefit analysis where relevant to a decision. [40 C.F.R. § 1502.23]. The required analysis can be a formal analysis that quantifies costs and benefits in monetary terms or an informal analysis that balances costs and benefits. [*Id.*]. While the form of the analysis may vary, “[a]t a minimum, the Environmental Impact Statement should at least include those considerations, including factors not related to environmental quality, which are likely to be relevant and important to a decision.” [*City of Sausalito v. O’Neill*, 211

F.Supp.2d 1175, 1196 (N.D. Cal. 2002)(citing *Sierra Club v. Sigler*, 695 F.2d 957, 976, n. 15 (5th Cir. 1983)).

As explained by the 5th Circuit, once an agency chooses to “trumpet the benefits” as a “selling point,” it must fully disclose and analyze potential costs:

[An agency] cannot tip the scales of an EIS by promoting possible benefits while ignoring their costs. Simple logic, fairness, and the premises of a cost-benefit analysis, let alone NEPA, demand that a cost-benefit analysis be carried out objectively. There can be no ‘hard look’ at costs and benefits unless all costs are disclosed.

If an agency were permitted to cite possible benefits in order to promote a project, as the Corps has done, yet avoid citation of accompanying costs ... the cost-benefit analysis in the EIS would be reduced to a sham: such a “cost-benefit analysis would always be tipped in favor of benefits.” [*Sierra Club v. Sigler*, 695 F.2d at 679].

The FEIS failed to compare the benefits provided by intact old growth forests to recreation, fisheries and subsistence with the economic harms done to these interests by logging old-growth and recovering forests. Additionally, the analysis failed to candidly disclose actual public expenditures that fully incorporate numerous significant timber program costs. These costs are directly relevant to the range of alternatives and the decision to proceed, downsize or rescind planning on the timber sale program. [40 C.F.R. §§ 1502.14, 1502.16; 40 C.F.R. § 1502.24]. NEPA requires “at least a broad, informal cost-benefit analysis by federal agencies of the economic, technical, and environmental costs of a particular action” that fully and accurately discloses costs. [*Sierra Club*, 695 F.2d at 975-76].

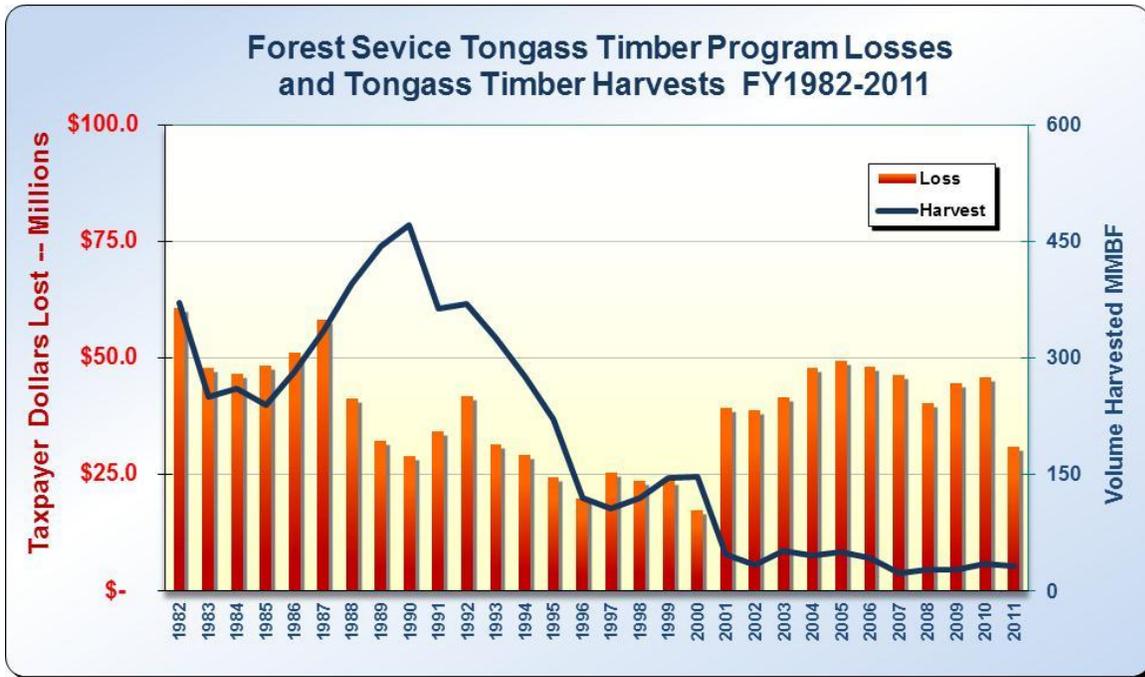
b. Statement of supporting reasons

i. The FEIS fails to accurately disclose public timber sale program costs

The FEIS projects federal revenues of \$45 million for the first decade of primarily old-growth logging under the preferred alternative. [FEIS at 3-517]. These revenues are misleading because they exclude the public administrative costs. [*Id.* at 3-519]. Then, the FEIS provides misleading information about administrative costs, suggesting that those costs are a mere \$104 per MBF. [*Id.* at 3-518]. The sole basis for this estimate is a one page document that provides no underlying data. [PR 769_05_000920 (Vermillion 2012)]. In contrast, there have been several recent reviews of Forest Service timber sale expenses that use actual Forest Service budget data and calculate public costs that are five to ten times as high as the cost disclosures in the FEIS. [Ref216 (Mehrkens 2013); PR 769_05_0671 (Alexander and Gorte 2014)].

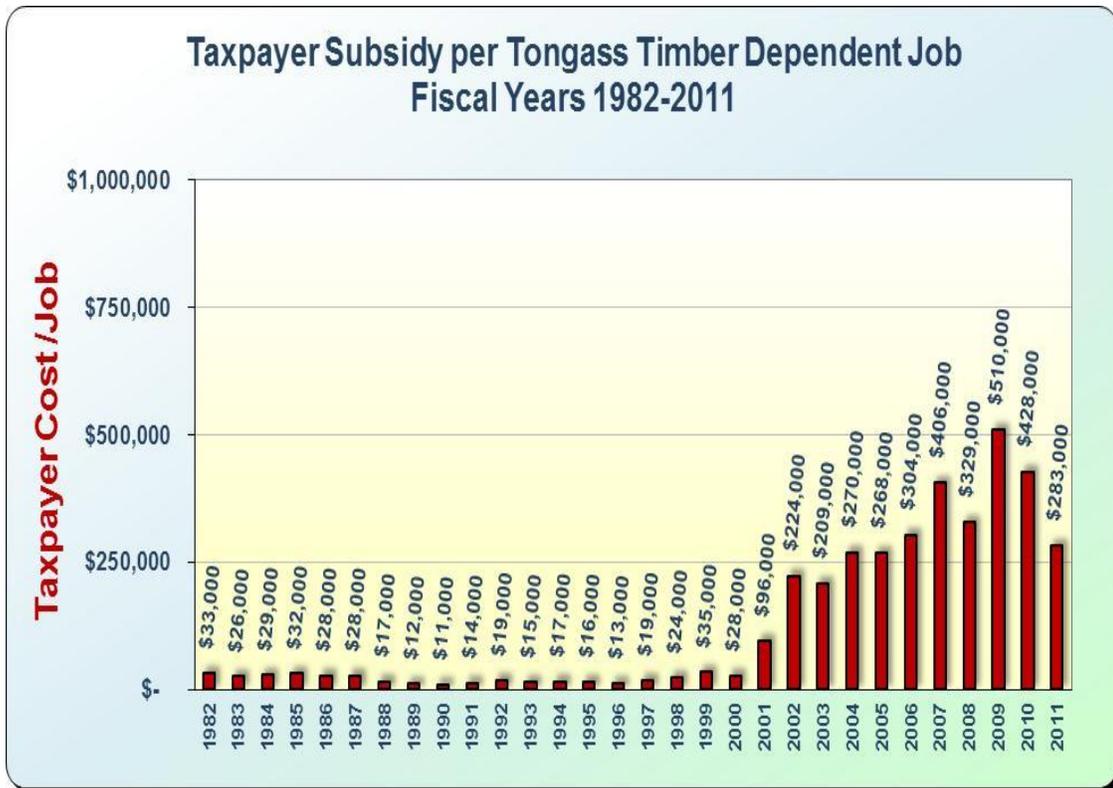
As shown in Figure 1, which reflects data provided by the Forest Service, the Tongass National Forest timber sale program has historically been prohibitively expensive, requiring a public subsidy in excess of \$1,200 per MBF sold. [Ref216 (Mehrkens 2013)].

Figure 1



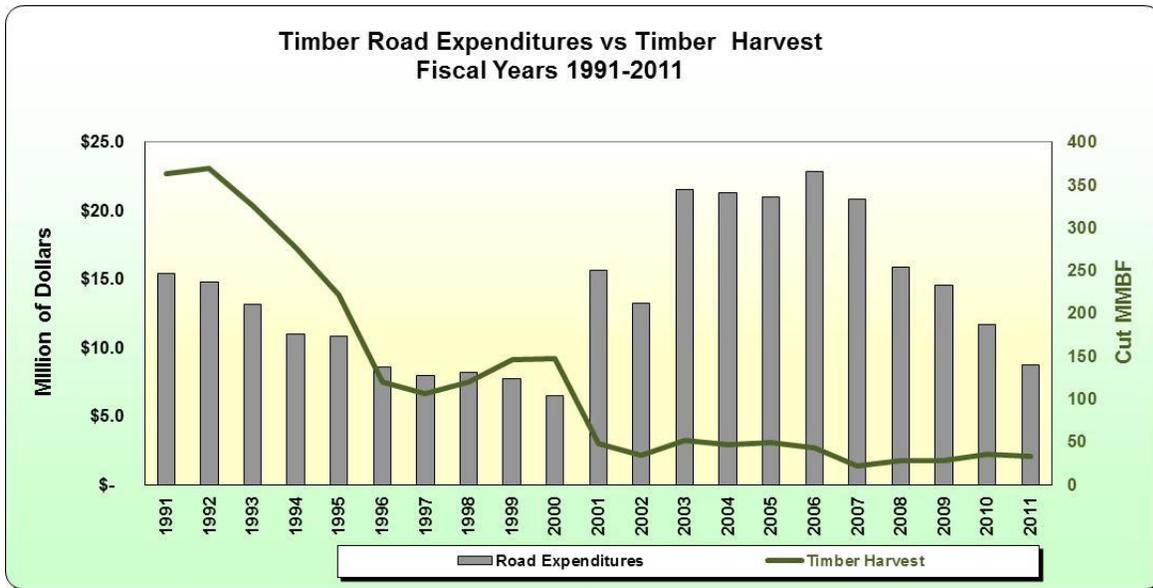
This cost inefficiency also means that it requires a massive public subsidy per timber job.

Figure 2



These costs are significant. For example, taxpayers bear a significant portion of road-related costs and there are additional, undisclosed road construction, reconstruction and pre- and post-haul maintenance costs. For example, at a national level, logging roads typically consume two-thirds of national forest system road costs. [Ref404 at 15 (Voss 2005)]. The Tongass National Forest has repeatedly required taxpayers to pay for Viking’s logging road infrastructure over the past decade. As shown in Figure 3, public road expenditures have increased dramatically relative to the production from the timber sale program:

Figure 3



Additionally, administrative costs add to the timber sale program costs. Overhead costs have ranged from 16 – 63% of costs for timber sale preparation, administration and engineering support. [Ref216 at 11 (Mehrkens 2013)]. At a national level, timber program related general administration costs ranged between 58 and 70% of the Forest Service budget during the past decade. [PR 769_02_0088; Ref404 at 15 (Voss 2005)]. For FY 2010-2012, the overhead costs for NFTM and CMRD budget line items for timber preparation, administration and engineering support were 39% for the Region 10 office and 31% for the TNF. [Ref216 at 11 (Mehrkens 2013)].

Similarly, Alexander and Gorte (2014) determined that the annual cost of the timber sale program ranged between \$489 to \$1,132 per thousand board feet, or a 10:1 expense revenue loss ratio over the five years FY-2009 to FY-2013. [PR 769_05_0671 at 4-5 (Alexander & Gorte 2014)]. Over that recent five-year period, the timber sale program resulted in a public loss of \$100 million. [Id. at 21]. Alexander and Gorte concluded that:

... 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. [Id. at 5].

In sum, the FEIS failed to provide the public with a realistic estimate of costs for: (1) Viking and Alcan’s logging roads; (2) all agency administrative costs relative to the timber

program, including, but not limited to inventory and planning costs; (3) the cost of projects designed to ameliorate degraded habitat conditions that result from timber sales and (4) NEPA costs.

ii. The FEIS arbitrarily ignores costs to southeast Alaska's primary economic sectors

We also requested that the EIS evaluate how TLMP Amendment implementation will impose real costs, monetary and otherwise, on other forest values and give these values equal consideration. [40 C.F.R. § 1502.23; 42 U.S.C. § 4332(2)(B)]. NEPA documents need to assess the “relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity” for other users of forest resources. [42 U.S.C. § 4332(2)(C)]. CEQ regulations require that a cost-benefit analysis “discuss the relationship between that analysis and any analyses of unquantified environmental impacts, values and amenities.” [40 C.F.R. § 1502.23]. The Forest Service need not necessarily monetize these considerations but must include them where relevant and important to a decision. [40 C.F.R. § 1502.23].

Indeed, Alaska Region scientists and experts have also recognized that ceasing all harvesting would increase carbon storage value and that this benefit “may be amplified by indirect benefits of eliminating harvesting, such as maintenance of the southeast Alaska fisheries and tourism industries and reduced expenses for the Tongass timber program.” [Ref205 (Leighty et al. 2006)]. Similarly, the Forest Service has recognized ecosystem services as an important issue: “[w]hen our forests are undervalued, they are increasingly susceptible to development pressures and conversion. Recognizing forest ecosystems as natural assets with economic and social value can help promote conservation and more responsible decision making.”²⁹

Environmental degradation caused by climate change will result in substantial social costs. There are tools available, developed by “multiple Federal agencies,” that would allow for the assessment of the social cost of carbon that “can provide decisionmakers and the public with some context for meaningful NEPA review.” [Ref092 at 16 (CEQ 2014b)]. The DEIS failed to monetize the costs of CO₂ emissions even though there are readily available means to disclose the economic harm caused by federal logging. The lowest estimate of annual cost of CO₂ emissions is \$27 per ton, meaning that the 4 million tons of carbon released under the Forest Service/TAC alternative would cost a minimum of \$108 million, and \$884 million at the higher estimated annual cost of \$221 per ton. [Ref116 at 9 (DellaSala 2015)].

But then the FEIS over-values timber industry net revenues and ignores the harm caused to fisheries, recreation and subsistence and to the planet itself through reduced carbon storage capacity. The FEIS arbitrarily concludes that LRMP alternatives – all of which would log 460 MMBF over the next decade with corresponding damage from roads - would have no environmental consequences for recreation and fisheries and ecosystem services. [FEIS at 3-521-3-523]. Yet timber harvest and road construction blocks fish passage, increases sediment input into streams, and log transfer facilities harm benthic habitat. [*Id.* at 3-122 – 3-133]. As explained in our objection points related to aquatic habitat, the timber sale program and related road construction clearly harms fish, and thus reduces economic outputs from the commercial fisheries. Similarly, the Amendment reduces scenic integrity guidelines, and allows clearcutting in the beach fringe. The Forest Service will also

²⁹ See, e.g. <http://www.fs.fed.us/ecosystemservices/>.

underfund its recreation program in order to perpetuate net public losses from the timber sale program. [PR 769_05_000671 at 2-4 & 12-13; PR 769_02_000084 (Niemi 2016b at 3-9)].

Yet the FEIS arbitrarily projects net revenues for the timber industry without ever accounting for the taxpayer cost to run the program, or the external costs passed on to fishermen and tour operators. [*Id.* at 481]. As explained in Niemi’s comments, the analysis excluded relevant information about the socio-economic importance of adverse impacts to subsistence, wildlife and fish populations, or the economic harm that would result from increased carbon dioxide emissions. [PR 769_02_000084 (Niemi 2016b (Socioeconomic Comments: Logging Costs) at 2)]. This “incomplete and biased description of the socioeconomic consequences” misled the public. [*Id.*].

c. Conclusion and suggested resolution

In sum, the draft ROD is arbitrary because the FEIS omitted information needed to evaluate the economic sustainability of the timber program – the public cost of the program, and the external cost to southeast Alaskans who must indirectly provide an additional subsidy to Viking and Alcan through reduced salmon harvests, lost recreational opportunities due to the impact of logging activities and scenery and declines in subsistence resources. The Reviewing Officer should direct the Responsible Official to rescind the draft ROD and FEIS and prepare an additional NEPA analysis that provides a realistic cost-benefit analysis, including a full disclosure of external costs imposed on the region’s most important economic sectors – fishing and tourism.

VII. Issues Concerning Wildlife, Subsistence, and the Conservation Strategy

A. The Forest Service’s refusal to fully re-evaluate the integrity of the Conservation Strategy, along with the 2016 TLMP Amendment’s revisions, is arbitrary, capricious, and contrary to NEPA and NFMA.

1. Introduction

Our Objections on the Conservation Strategy all flow from a simple premise: the Conservation Strategy needs a thorough revision *now*—not at some unspecified future date beyond 2023. We object to the agency’s steadfast refusal to fully re-evaluate the integrity of the Conservation Strategy, and the refusal to update the TLMP to bring components of the plan—including standards and guidelines—in line with scientific studies, empirical data, and resource inventories developed over the course of the last 20 years. Notably, our position is supported by the U.S. Fish and Wildlife Service (“FWS”) and the State of Alaska—the Forest Service’s two partnering agencies for Tongass wildlife management—who were integral in the development of the Conservation Strategy. [See 2016 TLMP Amendment FEIS at I-28 “The Tongass Old-Growth Conservation Strategy was designed through a collaborative effort by a broad range of scientists, Alaska Department of Fish and Game, and [the] U.S. Fish and Wildlife Service[.]”].

In their DEIS Comments, the FWS specifically commented: “We also recommend that specific elements of the conservation strategy be updated with the best available scientific data and strengthened by incorporating experience from the last 20 years of management, specifically where available information suggests the current conservation strategy is not adequate to sustain species.” [FWS DEIS Comments at 2]. In its Scoping Comments, the State of Alaska states that it “believes it is appropriate to review the conservation strategy given its age and our agency’s experience in using it as guidance for management purposes.”

[SoA Scoping Comments at 4]. Thus, neither of the Forest Service’s partnering agencies on Tongass wildlife management support the Forest Service’s approach of continuing with the status quo and deferring any meaningful analysis, at a time when substantive changes are being made to the Forest Plan.

Our DEIS comments thoroughly explained why a full revision is needed *now*. In particular, the Conservation Strategy—the agency’s singular tool for meeting its wildlife viability obligations—is nearly 20 years old. There was significant uncertainty about the efficacy of the Conservation Strategy when it was initially adopted, and ongoing scientific inquiries have further eroded confidence in the ability of the Conservation Strategy to provide for viable, widely distributed wildlife populations, even despite the facts (as the FEIS points out) that the full ASQ of the 1997 and 2008 Forest Plans has not been utilized and that those plans’ horizon is 100 years.

We acknowledge that the agency has made some nominal efforts to analyze the integrity of the Conservation Strategy over the years; for example, the 2006 Conservation Strategy Review Workshop and the 2013 Conservation Strategy Summit. But the 2006 CSR Workshop was a broad-brush, time-limited review that did not result in any substantive changes to the Conservation Strategy. In fact, after the 2006 CSR Workshop, the Forest Service actually *removed* important protections of the Conservation Strategy, and replaced them with a Standard and Guideline that favored timber economics rather than wildlife protections. [See, e.g., 2008 TLMP ROD at 21 (replacing certain goshawk S&Gs with the “legacy” S&G).³⁰ And the 2013 Conservation Strategy Summit was a public, rather than scientific process that has not resulted in any revision to the Conservation Strategy. Neither of these efforts constitutes an adequate substitute for the required, comprehensive synthesis and re-evaluation, *i.e.*, one that integrates robust scientific analysis, meaningful opportunities for public comment, and actually results in an updated framework for managing viable wildlife populations in line with contemporary science and field evidence.

Our overarching point here is that the agency should have re-evaluated and updated the conservation strategy as part of the 2016 TLMP Amendment, in order to bring the Conservation Strategy and the Forest Plan into compliance with NEPA and NFMA. Our DEIS Comments identified three pathways for doing so: (1) re-evaluating and updating the Conservation Strategy pursuant to the 2012 Planning Rule; (2) re-evaluating and updating the Conservation Strategy pursuant to the 1982 Rule; or (3) conducting a full plan revision, consistent with NFMA’s requirement that plans are revised at least every 15 years. The agency did not take any of these pathways.

Instead, the agency is poised to carry forward the 1997 Conservation Strategy—largely unchanged since its adoption nearly 20 years ago—until the plan revision process purportedly set to begin in 2023. The consequence of this approach is that the agency will be relying on a 25-plus-year-old framework for managing wildlife populations. That approach is arbitrary, capricious, and contrary to NFMA and NEPA. On top of that, the Forest Service is not simply carrying forward the 1997 Conservation Strategy without re-evaluation or revision, the agency with the 2016 TLMP Amendment is proposing fundamental changes to core elements of the Conservation Strategy. The fact that the agency believes that *not only* does it not have a duty to analyze the Conservation Strategy in general—after nearly 20 years on the books—but *also*, that it can fundamental alter central provisions of the

³⁰ In any event, it is arbitrary for the Forest Service to now rely on the decade-old CSR Workshop as a basis for deferring comprehensive analysis of the Conservation Strategy.

Conservation Strategy, *and still not provide re-analysis*, is a significant shortcoming that renders to the 2016 TLMP Amendment and FEIS unlawful.

2. Objection Point 20. The Forest Service's attempt to get out from under any substantive regulatory requirement with respect to wildlife management is contrary to NFMA.

NFMA requires the Forest Service to promulgate regulations to guide the development and revision of forest plans. [16 U.S.C. § 1604(g)]. These regulations (“forest planning regulations”) shall, *inter alia*, specify guidelines for forest plans to “provide for diversity of plant and animal communities.” [*Id.* § 1605(g)(3)(B) (the “Diversity Requirement”)]. NFMA’s “Diversity Requirement” is non-discretionary, and attaches to the 2016 TLMP Amendment through the forest planning regulations. The question of which forest planning regulations apply to the 2016 TLMP Amendment is the focus of this objection. Because the Forest Service takes the position that it is not subject to the substantive provisions of any forest planning regulations with respect to fish and wildlife management, the 2016 TLMP Amendment has been adopted unlawfully and is contrary to NFMA.

In 1982, the Forest Service promulgated regulations implementing NFMA’s Diversity Requirement. The “1982 Rule” established a framework for managing fish and wildlife populations, the content of which was incorporated in the 1997 TLMP and has been carried forward to the 2016 TLMP Amendment. The 1982 Rule required the agency to manage habitat to maintain viable populations of fish and wildlife species, and to identify and monitor Management Indicator Species (“MIS”). [See 36 C.F.R. § 219.19 (2000)]. The 1997 TLMP was developed pursuant to the 1982 Rule. When the agency adopted the 2008 TLMP Amendment, it had a choice to apply the 1982 Rule, or recently promulgated regulations. [See 71 Fed. Reg. 10,837, 10,838 (Mar. 3, 2006) (describing effective dates and transition)]. The Forest Service chose to apply the 1982 Rule. [See 2008 TLMP ROD at n.1]

In 2012, the agency adopted a new planning rule, which was designed to “provide for the sustainability of ecosystems and resources; meet the need for forest restoration and conservation, watershed protection, and species diversity and conservation; and assist the [Forest Service] in providing sustainable flow of benefits, services, and uses of NFS lands.” [77 Fed. Reg. 21162, 21162 (April 9, 2012)]. The 2012 Planning Rule replaced the 1982 Rule’s viability requirement and the MIS framework. In its place, the 2012 Planning Rule requires the agency to “maintain the diversity of plant and animal communities and support the persistence of most native species in the plan area.” [36 C.F.R. § 219.9 (2012)].

For the 2016 TLMP Amendment, the agency again faced the choice of which regulation to apply, because the 2012 Planning Rule provided for a transition period. [See 36 C.F.R. § 219.17(b)(3) (explaining that plan amendments for plans approved or revised under a prior planning regulation, like the TLMP, “may be initiated under the provisions of the prior planning regulation for 3 years after May 9, 2012, and may be completed and approved under those provisions” or may be initiated, completed, and approved under the requirements of” the 2012 Planning Rule); *see also* 736_01_000002 (TLMP amendment project initiation letter dated June 26, 2014)].

Unfortunately, the Forest Service opted for an unusual approach. Rather than apply one set of planning regulations to the amendment process—to ensure consistency throughout the forest plan—the agency instead chose to apply only select parts of the 2012 planning rule to only select parts of the TLMP. Specifically, the agency chose to develop the new “plan content” of Chapter 5 under the 2012 Planning Rule; the other chapters of the forest plan would “remain under” the 1982 Rule. [See 2016 TLMP Amendment FEIS at D-3; *see also* 2016 TLMP Amendment at 1-3 (“The direction in Chapter 5 was developed under the

2012 Planning Rule and is separated from the 1982 Planning Rule direction in Chapters 2, 3, and 4 because the project-to-plan consistency requirements imposed by the 2012 Planning Rule apply only to plan components developed under that rule.”)].

Thus, the Forest Supervisor determined that the 2012 Planning Rule applied only to the “narrow” plan amendment, which focuses on the timber program and renewable energy opportunities. [769_09-000001 at 1, 13]. Accordingly, the agency chose to apply only the substantive provisions of the 2012 Planning Rule related specifically to timber harvest, renewable energy resources, and transportation and utility corridors at 36 C.F.R. §§ 219.11 and 219.10(a)(1) and (a)(2). The agency expressly did not apply other substantive provisions like 36 C.F.R. §§ 219.8 and .9, which relate to sustainability and the diversity of plant and animal communities. [See 769_09-000001 at 24; see also 2016 TLMP Amendment FEIS at I-26 (“At this time the responsible official does not propose to redesign the Tongass Conservation Strategy in light of 36 CFR 219.9 for diversity of plant and animal communities. In particular, the regional forester is retaining and using the list of Alaska Region Sensitive Species (“sensitive species”) for the Tongass and is not designating species of conservation concern (SCC) at this time under 36 CFR 219.9.”)].

Forest planning is a complex and controversial process in its own right. For some reason, the Forest Service here decided to ratchet up the stakes by engaging in a convoluted application of forest planning regulations. For example, on the one hand, the agency is applying the 2012 Planning Rule’s “timber provisions” at Section 219.11 of the 2012 Planning Rule. Although common sense would suggest that any plan amendments involving commercial logging operations would have a direct nexus to fish and wildlife management, the agency did not apply Section 219.9 of the 2012 Planning Rule, which governs the agency’s fish and wildlife management obligations. [769_09-000001 at 18]. And despite the obvious nexus between renewable energy production and sustainability, the agency decided not to apply the 2012 Planning Rule’s provisions regarding ecological, social, and economic sustainability as specified in 36 CFR 219.8.” [769_09-000001 at 15].

The agency did not need to choose this course of action; it could have simply carried forward forest planning under the 1982 regulations, to ensure consistency throughout the TLMP. [See 36 C.F.R. § 219.17(b)(3)]. But the agency instead developed a plan that is subject to a complex web of regulatory duties. The confusion is brought into stark focus when considering the agency’s fish and wildlife management obligations, and how the agency is now interpreting its duties.

As discussed, the agency chose not to apply Section 219.9—the 2012 Planning Rule’s provisions implementing NFMA’s Diversity Requirement. Thus, the 2016 TLMP Amendment’s substantive “plan content” governing the agency’s fish and wildlife management obligations is carried forward from the 2008 TLMP Amendment. Again, the 2008 TLMP Amendment applied the provisions of the 1982 Rule, and specifically incorporated the provisions of Sections 219.19 and 219.27 of that Rule.

Yet in the FEIS and draft ROD, the agency repeatedly asserts that “no obligations” exist from the 1982 Rule, on account of that rule being superseded. While it is of course true that the 1982 Rule has been superseded, the fact remains that the agency developed the TLMP’s fish and wildlife management provisions under that rule. [See *Native Ecosystems Council v. Tidwell*, 599 F.3d 926, 932 n.8 (9th Cir. 2010 (explaining that although the 1982 Rule is no longer in effect, the Forest Service “required to comply with the regulations” in place at the time of its decision”); see also *Nat. Res. Defense Council v. U.S. Forest Serv.*, 421 F.3d 797, 800 n.3 (9th Cir. 2005 (applying the regulations “in effect when the plan revisions challenged in this lawsuit were prepared”)].

If the Forest Service believes that “no obligations” exist from the 1982 Rule, the question thus becomes, which planning regulations apply to the 2016 TLMP Amendment with respect to fish and wildlife management? The agency expressly has not incorporated the fish and wildlife management obligations of the 2012 Planning Rule. Instead, the agency chose to retain the TLMP’s existing fish and wildlife components, which were developed under the 1982 Rule. Given that the agency believes that “no obligations” exist from the 1982 Rule, then, the agency’s position appears to be that *neither* the 2012 Planning Rule *nor* the 1982 Rule apply to the 2016 TLMP Amendment’s fish and wildlife provisions.

This position is contrary to statute incorrect as a matter of law. A Forest Plan must be in compliance with forest planning regulations, which implement NFMA’s Diversity Requirement. [See *Citizens for Better Forestry v. U.S. Dep’t of Agric.*, 341 F.3d 961, 966 (9th Cir. 2003) (explaining that the content and promulgation of forest plans must comply with forest planning regulations)]. Indeed, the agency here has disavowed any duty attaching under *any planning regulations*. Whether or not the 2016 TLMP Amendment was validly enacted pursuant to NFMA’s Diversity Requirement depends upon whether the 2016 TLMP Amendment is consistent with the planning regulations implementing the Diversity Requirement. Because the agency has (1) adopted a forest plan amendment that has implications for fish and wildlife; (2) chose not to apply the 2012 planning rule’s provisions implementing the Diversity Requirement; and (3) decided that no obligations exist from the 1982 Rule, the agency has unlawfully interpreted away any substantive measurement of whether the 2016 TLMP Amendment complies with NFMA’s Diversity Requirement.

Our objection here is threefold. *First*, we object to the agency’s decision to apply the 2012 Planning Rule in a piecemeal and haphazard fashion as arbitrary, capricious, and contrary to NFMA. When the agency chose to incorporate the 2012 Planning Rule, as opposed to continuing under the 1982 Rule, the agency had a duty to apply all of the substantive provisions of the 2012 Planning Rule, not just select provisions. This is especially true where the new content developed for the 2016 Planning Rule implicates fish and wildlife populations. Moreover, if the agency is relying upon the 2012 planning rule as allowing for the Forest Service to revise the TLMP without complying with either the 2012 rule or the 1982 rule, then the 2012 planning rule is contrary to NFMA.

Second, we object as a matter of law to the agency’s interpretation of its duties under the 1982 Rule. When the agency chose not to apply the 2012 Planning Rule’s provisions regarding fish and wildlife management, it explicitly decided to retain the TLMP’s provisions that were developed under the 1982 Rule. Accordingly, the agency had a duty to demonstrate how the 2016 TLMP Amendment was consistent with the 1982 Rule, and in particular, the provision requiring the agency to maintain viable and well-distributed populations of fish and wildlife species.

Third, we object to the agency’s failure to demonstrate as a matter of fact that the 2016 TLMP will provide for viable populations of fish and wildlife species. We develop this objection further *infra*, by showing how the agency’s reliance on an outdated Conservation Strategy, coupled with the 2016 TLMP Amendment’s significant changes to it, cannot be reconciled with the agency’s duty to provide for viable fish and wildlife populations well distributed across the planning area.

a. Statement referencing prior comments and content of objection and explaining how decision and/or analysis violate law or regulation.

Our DEIS Comments identified two approaches for the Forest Service to ensure compliance with NFMA’s substantive requirements. On the one hand, we suggested to the Forest Service that it incorporate the substantive provisions of the 2012 Planning Rule,

specifically with regard to diversity. [Ref167 at 66 (GSACC et al. DEIS comments)]. We noted that the 2016 TLMP Amendment “clearly implicates” wildlife and makes substantive changes to the existing wildlife standards and guidelines contained in the Conservation Strategy, thus making the diversity requirement of Section 219.19 in the 2012 Planning Rule “applicable.” [Id.].

On the other hand, given the agency’s statements in the DEIS that it was not planning to incorporate the 2012 Planning Rule with respect to wildlife management duties, we commented that the 1982 Rule still applies to the Forest Service’s management of the Tongass. [See, e.g., id. at 78 (“[A] robust re-evaluation of the conservation strategy is needed *now*—not at some unspecified future date—to ensure that the agency is meeting its obligations to provide for wildlife viability under the 1982 Rule.”)]. We commented that “[u]ntil the agency revises the TLMP under the 2012 planning rule, the 1982 Rule governs the agency’s wildlife management duties.” [Id. at 78 n.76]. Notably, the FWS agrees with our comments. [FWS DEIS Comments at 4 (“[T]he Forest Service’s 1982 planning rule (47 FR 43037, Sept. 30, 1982) . . . continues to apply to most of the wildlife standards and guidelines in the proposed Forest Plan”)].

The draft ROD accurately summarizes the concerns we raised in our comments, *i.e.*, that the 2016 TLMP Amendment does not meet the viability requirements of the 1982 Rule, and that the proposed amendment’s changes to the Conservation Strategy require the agency to apply the diversity requirements of the 2012 Planning Rule. [769_09-000001 at 18]. But with the final 2016 TLMP Amendment, FEIS, and draft ROD, the agency has carried forward the same flaws we identified in our comments. The agency offers various supporting rationales for its position, but none of the responses rectify the Forest Service’s unlawful position.

- At PLR-2, the agency states that “[n]o obligations exist from the 1982 rule, as that rule no longer exists.” [2016 TLMP Amendment FEIS at I-26 (citing 36 C.F.R. § 219.17(c)) (emphasis added)].
- In Appendix D, where the Forest Service provides its review of the Conservation Strategy, the agency admits: “It should be noted that the wildlife components of the Forest Plan *remain under* the 1982 Planning Rule, and specific updates to meet the 2012 Planning Rule requirements are not proposed under this Forest Plan Amendment.” [Id. at D-3 (emphasis added)]. The agency repeats this statement at Response to Comments WILD-7. [Id. at I-78].
- PLR-2 also notes, “[t]he 2012 rule . . . makes it clear that the responsible official determines the scope and content of any amendment and therefore determines which substantive provisions of the 2012 rule are applicable The proposed amendment meets the applicable substantive provisions of the 2012 rule” [Id. at I-30].
- At PLR-2, the agency also defends its decision to apply only selected provisions of the 2012 Planning Rule, as opposed to applying all of its substantive provisions. [Id. at I-25 (explaining that the agency interprets 36 C.F.R. § 219.17(c) (2012) to mean that “an amendment of an ‘old rule’ plan will not require the entire plan to conform to the new rule’s substantive provisions (§§ 219.8 through 219.11) and be subject to the new rule’s consistency provisions (§ 219.15).”)].
- The agency references to the 1982 Rule in Chapter 3 of the FEIS: “The 1982 Planning Rule directed the use of Management Indicator Species (MIS) in forest planning to help display the effects of forest management. The 1997 Forest Plan selected 13 wildlife MIS which carried through to the 2008 Forest Plan Amendment. Because this EIS is

analyzing an amendment to the 2008 Forest Plan done under the 1982 Planning Rule, these species are analyzed here even though the 2012 Planning Rule does not use MIS for evaluating effects.” [2016 TLMP Amendment FEIS at 3-230].

All of these responses rely on flawed interpretations of NFMA’s management obligations. We object to the Forest Service’s position that it could segregate its application of the 2012 Planning Rule, such that development of only certain portions of the 2016 TLMP Amendment occurred under the 2012 Rule, and not others. We object to the agency’s position that while the TLMP’s wildlife provisions *remain under* the 1982 Rule, no obligations exist under that Rule. By taking the position that neither the 2012 Planning Rule nor the 1982 Rule apply to the 2016 TLMP Amendment’s wildlife provisions, the agency is unlawfully advocating to be allowed to operate in a netherworld where no substantive regulatory requirements apply. This is contrary to the plain language of the statutory diversity requirement under NFMA. 16 U.S.C. § 1604(g)(3)(B). Finally, the agency has not demonstrated in fact how the 2016 TLMP Amendment accords with the requirement to provide for viable and well-distributed fish and wildlife populations, in violation of NFMA’s Diversity Requirement, and 36 C.F.R. § 219.19 (2000).

b. Statement of supporting reasons.

Forest management occurs at three levels. [See *Citizens for Better Forestry v. U.S. Dep’t of Agric.*, 341 F.3d 961, 965 (9th Cir. 2000) (explaining that “the agency utilizes a three-tiered approach to forest management”). “National uniform regulations promulgated by the Secretary of Agriculture constitute the highest tier of regulatory oversight of the forest management system and govern the development and revision of the regional and local plans.” [Id. (citing 16 U.S.C. § 1604(g)(3)]. These regulations set guidelines to be followed, during preparation of management plans, regarding plant and animal species conservation, timber management, and water management. [Id. (citing 16 U.S.C. § 1604(g)(3)].

The next tier of regulatory oversight comprises the land and resource management plans, like the TLMP. [16 U.S.C. § 1604(a)]. These plans operate like zoning ordinances; the “content and promulgation of these plans must comply with” the forest planning regulations. [*Better Forestry*, 341 F.3d at 966]. At the lowest tier, site-specific projects are prepared to implement specific on-the-ground actions. These projects “must be consistent with both sets of higher-level rules.” [Id. (citing 16 U.S.C. § 1604(i)].

Here, however, the agency has specifically disavowed any duties attaching under “tier one” of forest management, as applied to the agency’s fish and wildlife management obligations. This position is unlawful. Forest planning regulations implement NFMA’s statutory requirements, including the Diversity Requirement. [16 U.S.C. § 1604(g)]. Forest plans must be consistent with the forest planning regulations in order to comply with NFMA. The agency’s interpretation of its duties—whereby by the agency would be exempt from any requirement to show that the 2016 TLMP Amendment is consistent with forest planning regulations with respect to fish and wildlife management—is contrary to NFMA.

i) The Forest Service arbitrarily failed to adopt the substantive provisions of the 2012 Planning Rule related to wildlife management.

Our DEIS Comments explained that when the Forest Service made the decision to apply the 2012 Planning Rule—rather than applying the 1982 Rule, in keeping with the 1997 TLMP and 2008 TLMP Amendment—the agency had a legal duty to apply the new rule correctly. [Ref167 at 66 (GSACC et al. DEIS comments)]. The agency has failed this task. Rather than applying the 2012 Planning Rule in a uniform and consistent manner, the agency applied only a select, and artificially narrow, subset of the 2012 Planning Rule’s

substantive requirements. Our DEIS comments highlighted how this approach could not be reconciled with the agency's management obligations under NFMA.

The 2012 Planning Rule is built around four substantive provisions: sustainability, diversity of plant and animal communities, multiple use, and timber harvest. [36 C.F.R. §§ 219.8, .9, .10, .11]. These substantive subsections must be applied harmoniously to give effect to the intent behind the regulations. For example, 36 C.F.R. § 219.11—timber requirements based on NMFA—stipulates that a forest plan must contain components regarding timber management “while meeting the requirements of §§ 219.8 through 219.10.” Subsection 219.10—multiple use—contains similar language: “While meeting the requirements of §§ 219.8 and 219.9, the plan must provide for ecosystem services and multiple uses” In short, the architects of the 2012 Planning Rule constructed a new paradigm for forest management, one that would provide a stable and consistent framework because of the “vastly difference context for management and improved understanding of science and sustainability that [has] evolved over the past three decades and [has] created a need for an updated planning rule that will help the Agency respond to new challenges in meeting management objectives for NFS lands.” [77 Fed. Reg. 21,161, 21,163 (Apr. 9, 2012)].

But with the 2016 TLMP Amendment, the agency only has applied 36 C.F.R. §§ 219.11, 10(a)(2), and .10(a)(3). These provisions are narrowly focused on timber management, renewable and nonrenewable energy and mineral resources, and transportation and utility corridors. [See 2016 TLMP Amendment draft ROD at 12; *id.* at 14 (“Based on my review of the Final EIS and the project record, I have determined that these provisions—36 CFR 219.11, and 219.10(a)(2) and (a)(3)—are the only applicable substantive requirements of the 2012 Planning Rule.”]. Accordingly, the agency has not applied the substantive provisions relating to sustainability, diversity of plant and animal communities, and multiple uses other than energy and utility corridors.

In the draft ROD, the agency accurately summarizes our comments and concerns with this approach, *i.e.* that the “Forest Service was being arbitrary and capricious in merely picking and choosing which parts of the 2012 Rule to apply” and that “all of the substantive requirements of the Rule should apply, especially the sustainability requirements of 36 CFR 219.8 and the diversity requirements of 36 CFR 219.9” [2016 TLMP Amendment draft ROD at 11]. Nevertheless, the agency carried forward its position, stating as follows:

I have concluded that the only practical way to interpret the 2012 planning rule's application to plan amendments is to focus on the proposed action—the responsible official's proposed action will determine the scope and scale of the change to the plan. If I were to determine the scope of an amendment based on all the possible effects on all the natural resources of the National forest it would be impossible to complete a narrowly focused plan amendment; the proposed action would inevitably be broadened to require changes to the plan's management direction for any and every affected resource. Making such changes in conformance with the substantive provisions of the 2012 Rule would essentially cause a revision of the plan. I do not believe that the planning rule was intended to make narrow amendments of plans developed under a prior rule impossible.[*Id.* at 11–12].

Our Objection largely tracks our DEIS Comments, because the agency's position has not changed. This objection point pertains broadly to the agency's arbitrary, capricious, and unlawful application of the 2012 Planning Rule. We also discuss why the agency clearly had a duty to apply the substantive wildlife provisions of the 2012 Planning Rule, given how the 2016 TLMP Amendment clearly implicates wildlife. This point is further developed *infra*, where we explain the specific changes to the Conservation Strategy adopted by the 2016 TLMP Amendment.

aa) The agency's interpretation of the 2012 Planning Rule is arbitrary, capricious, and contrary to NFMA.

With the 2016 TLMP Amendment, the Forest Service is amending an “old rule” plan with a “new rule” plan. The agency correctly points out that the 2012 Planning Rule does not explicitly address this scenario. But that does not relieve the agency from applying the rules in a uniform and consistent manner.

The agency largely attempts to deflect criticisms over its chosen approach on account of a need to be able to adopt narrow plan amendments. The agency expresses concern that narrow plan amendments would be “impossible” if a plan amendment had to conform with the substantive provisions of the 2012 Planning Rule. [See 2016 TLMP Amendment draft ROD at 12–13]. Little sympathy is due here because the agency brought this problem upon itself. The agency could have simply amended the forest plan under the 1982 Rule—an opportunity afforded by the transition language of the 2012 Planning Rule. [See 36 C.F.R. § 219.17(c); see also 77 Fed. Reg. at 21,243 (“This transition period for new amendments would give the responsible official the option to facilitate amendments for plans developed under previous rules for a limited time, using a familiar process, until full familiarity with the new rule develops.”)]. This would have facilitated a much simpler process by which to develop a “narrow” plan amendment—for the agency, and for the public.

Because the agency decided to forgo that approach, however, and instead applied sections of the 2012 Planning Rule, it had a duty to apply that rule lawfully—regardless of the difficulty. The draft ROD erects a straw man in an effort to demonstrate the difficulty of applying the 2012 Planning Rule’s substantive provisions:

If I were to determine the scope of an amendment based on all the possible effects on all the natural resources of the National Forest it would be impossible to complete a narrowly focused amendment; the proposed action would invariably be broadened to require changes to the plan’s management direction for any and every affected resource.

[2016 TLMP Amendment draft ROD at 11]. As we pointed out in our DEIS Comments, while the initial burden on the agency may be heavy the first time it amends an “old rule” plan with the 2012 Planning Rule, once the substantive provisions of the 2012 Planning Rule are in place, demonstrating a narrow amendment’s compliance with those provisions should not be an onerous process. [Ref167 at 67–68 (GSACC et al. DEIS comments)].

Indeed, when the Forest Service adopted the 2012 Planning Rule, it recognized that initial efforts to conform to the 2012 Planning Rule would be more time consuming and expensive. [See, e.g., 77 Fed. Reg. at 21,253 (“During the initial efforts by management units to develop, revise, or amend plans under the new rule, costs are expected to reflect additional time and resources needed to adjust to a new planning framework, including training.”) (emphasis added)]. To facilitate a smooth rollout of the new rule, the agency intended to “phase in” implementation of the new rule through pilot plans. [See *id.* at 21,188 (“The Agency intends on phasing in the implementation by starting several plan revisions in 2012.”)]. Just because the initial process of conforming a plan amendment to the 2012 Planning Rule’s substantive provisions may be cumbersome, that does not give the agency an excuse to apply ad hoc some provisions, while ignoring others.

Moreover, the agency’s interpretation here squarely conflicts with the plain language of the regulation. 36 C.F.R. § 214.14(a)(2) requires a decision document to explain “how the plan components meet the sustainability requirements of § 219.8, the diversity requirements of § 219.9, the multiple use requirements of § 219.10, and the timber requirements of § 219.11.” The draft ROD does not contain this required disclosure. 36 C.F.R. § 219.11 provides that a forest plan must contain components regarding timber management “while

meeting the requirements of §§ 219.8 through 219.10.” 36 C.F.R. § 219.10 contains similar language: “While meeting the requirements of §§ 219.8 and 219.9, the plan must provide for ecosystem services and multiple uses.” No showing is made by the Forest Service that the plan meets the requirements of any of the substantive requirements of the 2012 Planning Rule other than 36 C.F.R. §§ 219.11, .10(a)(2), and .10(a)(3).³¹

The FEIS dismisses the preambular language of subsection 219.11 requiring consistency with other substantive provisions: “Clearly, this phrase is intended for new or revised plans; otherwise, a simple, narrow proposal to change a plan developed under the 1982 Rule would be impossible.” [2016 TLMP Amendment FEIS at 2-3]. Again, the difficulty here is of the Forest Service’s own doing, and was expressly envisioned by the agency when it drafted the 2012 Planning Rule—that is, initial plan development, revision, and amendment under the new rule could create a regulatory burden, but thereafter would be much simpler than under previous planning rules. In any event, the plain language of subsection 219.11 does not single out “new or revised” plans—the agency has made up that distinction out of whole cloth.

With its chosen approach here, the Forest Service is merely picking and choosing which provisions of the 2012 Planning Rule to apply. For the initial plan amendment under the new rule, this approach was arbitrary, capricious, and contrary to law.³² And, to the extent that the agency’s interpretation is consistent with the 2012 Planning Rule, then the rule itself is inconsistent with the statute, because it allows for Forest Plan amendments to escape compliance with the regulations, and hence the statutory diversity requirement, even though those amendments may impact wildlife and reduce protections for wildlife habitat. The flaws with the agency’s approach are particularly glaring with respect to the agency’s wildlife management obligations, as discussed in the next section.

³¹ We also reiterate here a point raised in our DEIS Comments: the agency’s “priority of direction” is arbitrary, capricious, and contrary to NFMA. Under the agency’s interpretation of the 2012 Planning Rule, the agency could incorporate the substantive provisions of only 36 C.F.R. §§ 219.10(a)(2), (3) and .11, without incorporating the other substantive provisions of the 2012 Planning Rule. Thus the new “plan content” of Chapter 5 was developed only pursuant to some of the 2012 Planning Rule’s substantive provisions, and not others. This means that Chapter 5 was developed without any application of the wildlife requirements of subsection 219.9.

But the 2016 TLMP Amendment includes the following “priority of direction.” This is the hierarchy of plan provisions, meaning that where a conflict or discrepancy between direction occurs, the following priority will apply: (1) higher-level direction (federal law and regulations); (2) chapter 5 (pan components); (3) chapter 3 direction (LUD standards and guidelines); (4) chapter 4 direction (forest-wide standards and guidelines). [2016 TLMP Amendment at 1-5].

Alarming, this means that the plan content of chapter 5 related to timber management, renewable energy, and transportation and utility corridors—which was not developed pursuant to the 2012 Planning Rule’s substantive provisions regarding wildlife diversity—would trump the TLMP’s provisions under chapters 3 and 4 that relate to wildlife management, and which were specifically adopted pursuant to the substantive provisions of the 1982 Rule.

This approach renders the agency’s interpretation of the 2012 Planning Rule arbitrary, capricious, and contrary to NFMA. To the extent the 2012 Planning Rule permits such an approach, the rule itself is contrary to statute.

³² It is already apparent how the agency’s chosen approach has a negative, cascading effect on forest management. Although the agency is to establish a monitoring program, [36 C.F.R. § 219.12], any monitoring efforts under the new planning regulations are effectively useless without first designating species of conservation concern. [See *id.* § 219.12(a)(5) (providing that the monitoring plan must contain one or more questions and associated indicators addressing, *inter alia*, the status of species of conservation concern)].

bb) Because the 2016 TLMP Amendment clearly implicates wildlife, the agency should have applied 36 C.F.R. § 219.9

Our DEIS Comments explained that the 2016 TLMP Amendment clearly implicates wildlife by making substantive changes to Standards and Guidelines codifying the Conservation Strategy. These changes make the substantive requirements of 36 C.F.R. § 219.9 applicable to the 2016 TLMP Amendment. [Ref167 at 67 (GSACC et al. DEIS comments)]. The agency, however, did not incorporate the substantive provisions of subsection 219.19. Nevertheless, the agency continues to maintain that the 2016 TLMP Amendment “complies with all the applicable requirements of the 2012 Planning Rule.” The agency’s decision that the provisions of subsection 219.19 are not “applicable” was arbitrary, capricious, and contrary to NFMA.

As we pointed out in our comments, NFMA requires regulations to be in place providing for diversity of plant and animal communities. The Diversity Requirement means that either the 1982 Rule or the 2012 Planning Rule must govern the 2016 TLMP Amendment. [Ref167 at 68 (GSACC et al. DEIS comments)]. The 2012 Planning Regulations implement the Diversity Requirement by providing “the ecological conditions to both maintain the diversity of plant and animal communities and support the persistence of most native species in the plan area.” [36 C.F.R. § 219.9.] Among other substantive requirements, Subsection 219.9(a)(1) requires the agency to ensure ecosystem integrity by developing “plan components, including standards and guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore their structure, function, composition, and connectivity.” Subsection 219.9(a)(2) requires the agency to ensure ecosystem integrity and diversity by developing “plan components, including standards or guidelines, to maintain or restore the diversity of ecosystems and habitat types throughout the plan area.” Importantly, to ensure ecosystem integrity and diversity, the agency must identify “species of conservation concern,” and to maintain a viable population of each of these species. [36 C.F.R. § 219.9(a), (b)].

The agency, however, chose not to integrate the wildlife provisions of the 2012 Planning Rule. It did not develop plan content specific to ecosystem integrity or diversity. The agency did not identify species of conservation concern—let alone adopt standards and guidelines to ensure their viability. That decision was arbitrary and contrary to law because the changes to the existing TLMP developed by the 2016 TLMP Amendment clearly make subsection 219.9 “applicable.” In short, the 2016 TLMP Amendment alters the framework of the Conservation Strategy, [see e.g., Ref298 to 300 (Smith 2016a,b,c)]—the agency’s singular tool for managing for old-growth dependent species on the Tongass. The amended forest plan calls for continued old-growth logging at levels at or above current levels for at least another 10 to 15 years. Areas that were previously off-limits—in order to protect critical wildlife habitat features—are now opened up to commercial logging operations. We develop this point in more detail *infra*, after further explaining the scope and content of the 2016 TLMP Amendment’s changes to the Conservation Strategy. For purposes of this objection point, we note that subsection 219.9 clearly was “applicable” to the 2016 TLMP Amendment because the amendment clearly impacts wildlife.

The draft ROD notes that “[b]ecause the Selected Alternative maintains the integrity of the Conservation Strategy it does not require application of section 219.9.” [2016 TLMP Amendment draft ROD at 18]. This conclusion is suggested, not proven. As discussed in detail throughout this objection, there is no scientific basis to conclude that the Conservation Strategy is currently functioning as intended, or that its “integrity” will be “maintained”; without a full and fair evaluation of the integrity of the Conservation Strategy, the agency

simply has no basis to use this justification as an excuse for not applying subsection 219.9. [See e.g. Ref298 to 300].

The draft ROD casually states that the 2016 TLMP Amendment “will meet the intent, if not the letter, of other substantive provisions of the 2012 rule, such as the diversity provisions of 36 CFR 219.9.” [2016 TLMP Amendment draft ROD at 23]. The agency also notes that the “Selected Alternative will therefore be at least as protective of the diversity of plant and animal communities as 36 CFR 219.9.” [*Id.* at 18]. As discussed above, subsection 219.9 establishes a very detailed and specific framework for meeting NFMA’s diversity requirement, including the development of plan components to ensure ecosystem integrity and diversity, and to maintain viable populations of species of conservation concern. There is simply no basis for the agency simply to assume—without undertaking the exercise of developing specific plan content incorporating Subsection 219.9—that the “intent” of that subsection has been met. [*Cf. Or. Nat. Des. Ass’n v. U.S. BLM*, 625 F.3d 1092, 1120–21 (9th Cir. 2010 (rejecting agency’s argument that it had met its duty to specifically analyze a specific subset of land characteristics “by proxy,” that is, by addressing other factors that allegedly captured the specific subset of land characteristics)). As just one example: because the agency here has not identified species of conservation concern—how could it possibly then represent that the “intent” of subsection 219.9 has been met? [See 36 C.F.R. § 219.9(b)(1) (requiring determination that plan components will maintain a viable population of each species of conservation concern within the plan area). In any event, it is the letter of the 2012 Planning Rule that matters, not some artificially conjured characterization of the “intent” of those regulations.

Overall, the agency’s position is that because the 2016 TLMP Amendment retains the general framework of the Conservation Strategy, the agency’s NFMA duties related to wildlife management have been completely satisfied. [See 2016 TLMP Amendment draft ROD at 23]. But the issue of whether the agency is satisfying NFMA’s Diversity Requirement is tested by evaluating whether the 2016 TLMP Amendment is consistent with the applicable forest planning regulations. The agency clearly has not applied the substantive wildlife provisions the 2012 Planning Rule, and so those regulations cannot serve as the required yardstick. As demonstrated below, however, the agency also disavows any obligations stemming from the 1982 Rule. This position is not tenable, and violates NFMA.

ii) The Forest Service eschews any obligations from the 1982 Rule, but until the agency adopts the provisions of the 2012 Planning Rule, the 1982 Rule still applies to wildlife management on the Tongass.

The Tongass National Forest incorporated the viability requirements of the 1982 Rule for the adoption of the 1997 TLMP, and again for the adoptions of the 2008 TLMP Amendment. For the 2016 TLMP Amendment, the agency acknowledges that the “wildlife components of the Forest Plan *remain under* the 1982 Planning Rule, and specific updates to meet 2012 Planning Rule requirements are not proposed under this Forest Plan Amendment.” [2016 TLMP Amendment FEIS at D-3 (emphasis added)]. But elsewhere in the planning record, the agency repeatedly argues that “no obligations exist from the 1982 rule, as that rule no longer exists” [*Id.* at I-26]. These statements are irreconcilable. The agency sets forth its full, strained position as follows:

The [TLMP] was developed using the 1982 Rule. No obligations exist from the 1982 Rule, as that rule no longer exists (36 CFR 219.17(c)). Implementing the viability requirement of the now superseded planning regulations, the Tongass Forest Plan contains a goal of providing an abundance and distribution of old-

growth habitat to maintain viable populations of wildlife in the forest. The proposed amendment retains that goal in the Old-growth Habitat Conservation Strategy (hereafter, ‘Conservation Strategy’) and the Wildlife Forest-Wide Standards and Guidelines, with plan direction to “Provide the abundance and distribution of habitat necessary to maintain viable populations of existing native and desirable non-native species well-distributed in the planning area (i.e., the Tongass National Forest).” (WILD1IIB, Proposed Forest Plan, p.4-82).

[2016 TLMP Amendment FEIS at I-26]. This position is unlawful and contrary to NFMA. Because the agency has retained wildlife provisions developed under the 1982 Rule, the legality of 2016 TLMP Amendment must be tested against that version of the forest planning regulations. Under the agency’s approach, in measuring whether the 2016 TLMP Amendment is consistent with the agency’s legal obligations, the question would become whether the 2016 TLMP Amendment is consistent with itself. That is not how the three-tiered system of forest planning works.

aa) 36 C.F.R. § 219.17(c) confirms that the 1982 Rule still governs the TNF’s wildlife management obligations.

The agency cites 36 C.F.R. § 219.17(c) of the 2012 Planning Rule in support of its argument that no obligations exist under the 1982 Rule. That provision actually confirms that the 1982 Rule still governs, for at least two reasons.

36 C.F.R. § 219.17(c) provides in full:

This part supersedes any prior planning regulation. No obligations remain from any prior planning regulation, except those that are specifically included in a unit’s existing plan. Existing plans will remain in effect until revised. This part does not compel a change to any existing plan, except as required in § 219.12(c)(1). None of the requirements of this part apply to projects or activities on units with plans developed or revised under a prior planning rule until the plan is revised under this part, except that projects or activities on such units must comply with the consistency requirement of § 219.15 with respect to any amendments that are developed and approved pursuant to this part.

The agency’s interpretation here is contrary to the plain language of the regulation. Section 219.17(c) does not provide a blanket exemption from any requirement under a prior planning regulation. Rather, it clarifies that obligations from prior planning regulations do have continuing force where incorporated into a unit’s existing plan. And until an existing plan is revised under the 2012 Planning Rule, those obligations remain. Moreover, when it adopted the 2012 Planning Rule, the agency clarified that this provision is applicable to project-level decisions—as opposed to revisions and amendments. [See 77 Fed. Reg. 21,161, 21,243 (Apr. 9, 2012) (summarizing Section 219.17(c) as follows: “projects completed under existing forest plans need only be consistent with the plan and not the 1982 Rule”) (emphasis added)]. The agency further stated:

This provision is needed for clarity so that all NFS units understand they are subject to the new planning rule for plan development, plan amendment, and plan revision, but otherwise are governed by the plan provisions of their current plans. Responsible officials, who continue plan development, revisions or amendments initiated prior to the effective date of the final rule using the procedures of the 1982 rule, must comply with the 1982 rule procedures in developing those plans, plan revisions or amendments. Plan amendments initiated after the effective date of this rule, may for three years follow the 1982 rule procedures or the requirements of this rule for amendments.

Id. Simply put, the agency has no basis to interpret 36 C.F.R. § 219.17(c) as removing any obligation under the 1982 Rule, especially where it has chosen not to apply the requirements of the 2012 Planning Rule with respect to fish and wildlife management. Subsection 219.17(c) simply does not stand for the proposition that the agency may adopt a plan amendment in the absence of any governing regulation.

Moreover, there can be no dispute that each version of the TLMP since 1997 has expressly incorporated the viability requirements of 1982 Rule. It follows, under the plain language of the 2012 Planning Rule, that the agency must apply the 1982 Rule until the agency revises the portions of the Plan that incorporated the 1982 regulations, which the agency has not done. [See 2016 TLMP Amendment FEIS at D-3 (“[Specific updates to meet 2012 Planning Rule requirements are not proposed under this Forest Plan Amendment.”)].

The 1982 Rule established a framework for managing wildlife populations, the content of which was incorporated in the 1997 TLMP and carried forward to the 2016 TLMP Amendment. The 1982 rule required the agency to manage habitat to maintain viable populations of fish and wildlife species, and to identify and monitor Management Indicator Species (“MIS”).

Specifically, section 219.19 required the Forest Service to manage wildlife habitat to “maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.” 36 C.F.R. § 219.19 (2000).

Section 219.19 of the 1982 Rule also established the MIS framework. “An MIS species is a bellwether, or class representative, for other species that have the same special habitat needs of population characteristics.” *Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1173 (9th Cir. 2006) *abrogated in part on other grounds Winter v. Nat. Res. Def. Council*, 555 U.S. 7 (2008). Section 219.19 required the Forest Service to select MIS, and to evaluate the effects of alternatives on fish and wildlife populations by reference to the “amount and quality of habitat and of animal populations trends of the [MIS].” [36 C.F.R. § 219.19(a)]. Moreover, Section 219.27 established specific management requirements, including the duty to “[p]rovide for adequate fish and wildlife habitat to maintain viable populations of existing native vertebrate species and provide that habitat for [Management Indicator Species] is maintained and improved” [36 C.F.R. § 219.27(a)(6)].

The 1997 TLMP expressly adopted this wildlife management framework. WILD.II.B. of the 1997 TLMP required the Forest Service to “[p]rovide the abundance and distribution of habitat necessary to maintain viable populations of existing native and desirable introduced species well-distributed in the planning area.” [1997 TLMP at 4-110]. WILD.II.B. then expressly cited the 1982 Rule. [See *id.* (“Consult 36 C.F.R. § 219.19 and 36 C.F.R. § 219.27)]. And the Glossary of the 1997 TLMP defined “viable population” as: “For forest planning purposes, a fish or wildlife population which has the estimated number and distribution of reproductive individuals to insure its continued existence is well distributed in the National Forest.” [*Id.* at 7-47].

Moreover, the 1997 TLMP adopted the MIS strategy. [See *id.* at 3-132 (WILD112.II.E)]. The 1997 TLMP FEIS described the MIS concept, and explained that 13 MIS species were selected as part of the planning process. [1997 TLMP FEIS at 3-151]. The 1997 TLMP ROD states that “habitat needs for sustaining viable populations of individual species are

addressed by the guidelines for specific species or species groups represented by [MIS].” [1997 TLMP ROD at 32; *see also id.* at 33 (“NFMA prescribes the use of [MIS], whose response to land management activities can be used to predict the likely response of other species with similar habitat requirements. Thirteen MISs [sic] have been identified for the Tongass Forest Plan.”)]

The same language on viability requirements, and the MIS strategy, were carried forward for the 2008 TLMP Amendment. [See 2008 TLMP at 4-89 (WILD1.II.B. Provide the abundance and distribution of habitat necessary to maintain viable populations of existing native and desirable introduced species well-distributed in the planning area (i.e. the Tongass National Forest). (Consult 36 CFR 219.19 and 36 CFR 219.27).].³³ The 2008 TLMP Amendment Glossary similarly contains the same definition of “viable population” as the 1997 TLMP, which in turn is the same definition in the 1982 Rule, “For forest planning purposes, a fish or wildlife population that has the estimated number and distribution of reproductive individuals to insure its continued existence is well-distributed in the National Forest.” [2008 TLMP Amendment at 7-47]. And the 2008 TLMP Amendment carried forward the MIS strategy. [See 2008 TLMP Amendment at 4-89 (WILD1.II.E.); 2008 TLMP Amendment FEIS at 3-230.].

Indeed, the 2008 TLMP Amendment ROD expressly states: “Both the 1997 Forest Plan and the 2008 Tongass Forest Amendment were prepared under 1982 planning regulations, which required the identification of [MIS] in forest plans.” [2008 TLMP Amendment ROD at 27].

Now, the 2016 TLMP Amendment again carries forward the same viability language, and the MIS framework. At 4-85, the 2016 TLMP Amendment states: “Provide the abundance and distribution of habitat necessary to maintain viable populations of existing native and desirable non-native species well-distributed in the planning area (i.e., the Tongass National Forest). (Consult 36 CFR 219.19 and 36 CFR 219.27 (1982)).³⁴ The fact that the WILD1.II.B. cites 36 C.F.R. 219.27—which was part of the 1982 Rule and does not exist under the 2012 Planning Rule— while expressly citing the 1982 Rule, is dispositive. In addition, the Glossary contains the same definition of “viable population”: “For forest planning purposes, a fish or wildlife population that has the estimated number and distribution of reproductive individuals to insure its continued existence is well-distributed in the National Forest.” [*Id.* at 7-67].³⁵

Moreover, the 2016 TLMP Amendment leaves the MIS strategy unchanged. [See *id.* at 4-85 (WILD1.II.E)]. In the FEIS, the Forest Service tries to stake out some sort of middle ground on the MIS strategy, asserting that the agency is evaluating the 1997/2008 MIS as part of the Plan Amendment, despite the MIS framework not being part of the 2012 Planning Rule. [2016 TLMP Amendment FEIS at 3-230]. But the bottom line is that the 2016 TLMP

³³ The 2008 TLMP Amendment clarified that the “planning area” was the Tongass National forest.

³⁴ Notably, the Final 2016 TLMP Amendment expressly provides that it is incorporating the 1982 Rule (and not the 2012 Planning Rule). This clarifying language was added after the DEIS and proposed 2016 TLMP Amendment, [see proposed 2016 TLMP Amendment at 4-89], and the 2016 TLMP Amendment FEIS does not explain or address this addition in the section “Changes between Proposed Forest Plan and Forest Plan. [2016 TLMP FEIS at 1-16–21].

³⁵ Curiously, the Glossary also contains *another* definition of “viable population,” based on the 2012 Planning Rule. [See 2016 TLMP Amendment at 7-68]. Nowhere else in the 2016 TLMP Amendment is this definition used, and nowhere does the agency explain why this second definition was added or what purpose it serves.

Amendment is carrying forward the MIS strategy, and the agency has not gone through the exercise of adopting the strategy of using “species of conservation concern.” [See 36 C.F.R. § 219.9]. Evaluating the impacts of the Plan Amendment on MIS is not some sort of Good Samaritan exercise, as the FEIS seems to imply. [See *id.* (asserting that MIS species are being evaluated “even though the 2012 Planning Rule does not se MIS for evaluating effects.”)]. Rather, it is a duty that remains attached because the current Forest Plan expressly incorporates the MIS framework, and the agency has not revised the TLMP under the 2012 Planning Rule.

Simply put, the 1997 Forest Plan expressly incorporated the wildlife viability and MIS obligations of the 1982 Rule, and specific language on the viability requirement and the MIS framework have been carried forward into the 2016 TLMP Amendment.³⁶ The Forest Service could have revised the TLMP to bring the Plan into compliance with the 2012 Planning Rule, but it chose not to. Until the agency undertakes this effort, the viability provisions of 36 C.F.R. 219.19 and 36 C.F.R. § 219.27 (1982), including the MIS framework, apply to planning in the Tongass National Forest. [See 36 C.F.R. § 219.17(c) (“None of the requirements of this part apply to projects or activities on units with plans developed or revised under a prior planning rule until the plan is revised under this part”)].

The agency’s position that “no obligations exist from the 1982 Rule” therefore is legally incorrect. The agency’s approach would disrupt the three-tiered approach to forest management. The “content” of forest plans “must comply with” forest planning regulations. [*Citizens for Better Forestry v. U.S. Dep’t of Agric.*, 341 F.3d 961, 965 (9th Cir. 2000)]. Accordingly, whether or not the 2016 TLMP Amendment’s complies with NFMA’s requirements for managing wildlife is measured by its consistency with the 1982 Rule.

On the other hand, under the agency’s asserted position, determining NFMA compliance would require a tautological exercise whereby NMFA compliance is measured by asking whether the 2016 TLMP Amendment is consistent with itself. [See 2016 TLMP draft ROD at 18 (noting that the TLMP requires the agency “to maintain viable populations of existing native and desirable non-native [wildlife] species well-distributed in the planning area); *see id.* at 23 (concluding that the “Selected Alternative will retain the ability of the Conservation Strategy . . . to maintain viable, well-distributed populations of wildlife across the planning area”). Because the agency’s proffered approach finds no basis in NFMA, and indeed is directly contrary to it, the agency’s interpretation of its duties is unlawful.

The practical consequence of the agency’s narrow interpretation is borne out in the agency’s assessment of the 2016 TLMP Amendment’s ability to meet the agency’s wildlife obligations. The agency has provided only a cursory review of wildlife populations on the Tongass, uncritically relying on 20-year-old viability assessments, while refusing to undertake a full and fair evaluation of whether an approach for managing for viable and well-distributed populations developed in the mid-1990s is (1) currently working, and (2) will continue to work as intended after significant changes to adopted by the 2016 TLMP Amendment. [See *e.g.*, Ref 298 through 300 (Smith 2016a,b,c)]. Our specific objections over the agency’s failure to demonstrate how the 2016 TLMP Amendment complies with the 1982 Rule’s viability provision are recorded below, *infra*, following our explanation of why a complete re-evaluation of the Conservation Strategy is required now. We note here that by

³⁶ Interestingly, the agency does not appear to contest that the specific provisions of the 1982 Rule were expressly incorporated into the TLMP. [See 2016 TLMP Amendment draft ROD at 37]. It is unclear how the agency can square this admission with its interpretation of 36 C.F.R. 219.17(c), which provides that “No obligations remain from any prior planning regulation, except those that are specifically included in a unit’s existing plan.”

failing to critically test the 2016 TLMP Amendment's wildlife provisions against the 1982 Rule, the agency had no basis to conclude that it was meeting its duties under NFMA.

bb) The Forest Service cannot reduce express duties from the 1982 Rule and Forest Plan to aspirational "goals" without revising the TLMP.

An ancillary problem with the agency's interpretation of its duties under NFMA stems from the agency attempting to reduce the express viability duties of the 1982 Rule to aspirational "goals." This underhanded effort to minimize the agency's wildlife management obligations was unlawful. [See *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 961 (9th Cir. 2002) ("[W]ildlife habitat must be managed to maintain viable populations") (emphasis added)].

As discussed, the 1997 TLMP and 2008 TLMP Amendment expressly incorporated the 1982 Rule's viability requirements, and the 2016 TLMP Amendment has not revised this framework. [See 2016 TLMP Amendment FEIS at I-78 ("[T]he wildlife components of the Forest Plan remain under the 1982 Planning Rule.")] Despite the clear understanding that the agency is not proposing any changes to the forest plan with respect to viability obligations, the agency nevertheless tries repeatedly to re-frame these obligations as "goals" rather than duties. For example, at page I-26 of the Response to Comments, the agency states "Implementing the viability requirements of the now superseded planning regulations, the Tongass Forest Plan contains a goal of providing an abundance and distribution of old-growth habitat to maintain viable populations of wildlife in the forest." (emphasis added). At page I-88 of the Response to Comments, the agency again states:

The 1982 Planning Rule (in effect at the time of the 1997 and 2008 Forest Plans) directed that "fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area." The 1997 Forest Plan developed a conservation framework for wildlife that employed this now superseded regulation; this proposed amendment carries forward that Conservation Strategy and contains a goal of providing an abundance and distribution of habitat to sustain viable populations in the planning area (Tongass National Forest).

(emphasis added); see also 2016 TLMP Amendment FEIS at I-92 (same); *id.* at I-95 (same). The agency cannot reduce an express duty to a goal in its environmental compliance documents; the process to achieve such a result would be an express forest plan amendment or revision. [Cf. *Native Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 961 (9th Cir. 2005)].

The implications of the agency's approach are significant. The 1982 Rule's viability requirement is codified in the TLMP's Forest-wide Standards and Guidelines section. [2016 TLMP Amendment at 4-85 (WILD1.II.B. Provide the abundance and distribution of habitat necessary to maintain viable populations of existing native and desirable non-native species well-distributed in the planning area (i.e., the Tongass National Forest). (Consult 36 CFR 219.19 and 36 CFR 219.27 (1982).)]. The TLMP provides that "Standards" developed under the 1982 Rule "can usually be identified by words such as 'must' or 'will,' [and] are mandatory requirements that must be met." [*Id.* at 1-4]. On the other hand, the forest plan defines a "forest-wide goals" as being "responsive to identified public issues and ecosystem service-related opportunities, and collectively describe the desired conditions sought to be attained during the life of this Plan. They are expressed in broad, general terms, but do not include completion dates. [*Id.*].³⁷

³⁷ The TLMP Glossary defines "goal" as a "concise statement that describes a desired future condition normally expressed in broad, general terms that are timeless, in that there is no specific duty date by

The 1982 Rule, implementing NFMA’s Diversity Requirement, set a floor for wildlife management: the Forest Service shall manage fish and wildlife habitat to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. Furthermore, the 1982 Rule required that, to “insure” that viable populations will be maintained, the agency must provide habitat to support “at least” a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.” 36 C.F.R. § 219.19 (2000). Simply put, providing for wildlife viability is not a goal, it is a hard requirement. [See *Lands Council v McNair*, 537 F.3d 981, 998–99 (explaining that the agency must preserve the amount of habitat deemed necessary to ensure viable populations)]. By interpreting its viability obligations as a “goal,” the agency has violated the substantive requirements of NFMA and its implementing regulations.

c. Conclusion and suggested resolution.

The 2016 TLMP Amendment was adopted unlawfully and is contrary to NFMA. The agency must go back and apply either the 1982 Rule or the 2012 Planning Rule to the 2016 TLMP Amendment, in order to demonstrate how the forest plan complies with NFMA.

3. Objection Point 21. In light of the Conservation Strategy’s age and questionable validity, the Forest Service’s failure to completely re-evaluate the integrity of the Conservation Strategy, or to revise the entire TLMP, violates NEPA and NFMA.

The Conservation Strategy is the Forest Service’s tool for meeting its substantive obligations under NFMA. NFMA requires the Forest Service to manage for multiple uses of the forest, but within that context, the agency must provide for species’ diversity. 16 U.S.C. § 1604(g)(3)(B). The Forest Service implements the diversity requirement through adoption, revision, and amendment of forest plans, which must in turn comply with substantive regulations in place at the time of the new forest plan’s approval. [See generally *Citizens for Better Forestry v. U.S. Dep’t of Agric.*, 341 F.3d 961 (9th Cir. 2003)]. Acting pursuant to regulations in force at the time, the 1997 TLMP and 2008 TLMP Amendments rely on the Conservation Strategy to provide for viable and well-distributed populations of old-growth dependent wildlife species. First developed in 1993, the Forest Service adopted the Conservation Strategy during the 1997 revision process.

The Forest Service is now amending the TLMP, but is refusing to fully re-evaluate the integrity of the Conservation Strategy—the underpinnings of which are now more than 20 years old. [See 2016 TLMP Amendment FEIS at D-3 (“The scope of this analysis is the individual proposed modifications to the contributing elements of the conservation strategy and the associated potential to affect its functioning. The proposed Forest Plan amendment does not propose changes to the framework of the conservation strategy . . .”); see also *id.* (Therefore, this analysis is not a review of the underpinnings of the current conservation strategy.”)].³⁸

which the goal is to be achieved.” [Id. at 7-23]. The Glossary also includes a second definition of “goal,” derived from the 2012 Planning Rule: “Optional plan components that are broad statements of intent, other than desired conditions, usually related to process or interaction with the public. Goals are expressed in broad, general terms, but do include completion dates (36 C.F.R. § 219.7(e)(2).” [Id.]. Where the agency includes two definitions such as this, it is not clear which one the agency intends to rely upon. The agency should be more explicit, or should only provide one definition.

³⁸ Interestingly, the FEIS deleted the following text, which had been included in the DIES: “Such an evaluation is outside the scope of this proposed Forest Plan amendment and would be more

Our objection here is that the agency, for the 2016 TLMP Amendment, was *required* to evaluate the underpinnings of the Conservation Strategy, pursuant to NEPA and NFMA. In various places within the Response to Comments, the agency spins our position: “Completely changing the Conservation Strategy to a different approach would be outside the scope of this amendment.” [2016 TLMP Amendment FEIS at I-42 (emphasis added); *see also id.* at I-85 (“Redesigning the very large Old-growth Habitat reserves, one component of the Conservation Strategy, is outside the scope of this focused amendment.”)]. While it may be the case that a complete revision of the Conservation Strategy is necessary,³⁹ that is a later step; our point here is that the agency’s NEPA and NFMA violations are occurring at step 1. To put it colloquially: it’s impossible to diagnose a problem, and to subsequently devise a treatment, if you don’t go in for a check-up.

Our point is that the agency must demonstrate that a forest plan adoption, revision, or amendment—whether narrow or broad, or even if it simply carries forward the pre-existing plan with no changes—complies with NFMA. In so demonstrating, the agency must explain how the plan is consistent with the substantive obligations following from the statute and its implementing regulations. And in demonstrating NFMA compliance, the agency must also comply with NEPA, including the duty to provide a full and fair discussion of significant environmental issues. [See 40 C.F.R. § 1502.1].

Simply put, the agency is not permitted to simply “punt” on a significant environmental issue. On the Tongass, the efficacy Conservation Strategy—and the question of whether it adequately provides for viable and well-distributed populations of old-growth dependent species—has been a controversial issue ever since its adoption. And 20 years of scientific studies and empirical research have consistently called the Conservation Strategy’s efficacy into question. Now, the agency is amending the TLMP in a manner that continues the practice of clear-cut old-growth logging, and opens-up previously off-limits areas to commercial logging to target some of the oldest young growth stands on the forest. A deliberate, scientific review was required, but the agency has simply skipped this required first step.

Just because the agency chooses to call its amendment narrow,⁴⁰ that does not give the agency license to skip over the required compliance review. Is the Conservation Strategy working? The answer to that question unlocks whether the agency is meeting its substantive obligations under NFMA. And the process for answering that question is what defines the agency’s NEPA obligations. By refusing to fully re-evaluate the integrity of the Conservation Strategy, the agency has not met its duties under either statute or their implementing regulations.

appropriately conducted in the context of a Forest Plan revision, which under the 2012 Planning Rule requires an assessment of ecological sustainability and diversity of plant and animal communities.”

It is not clear what motivated this deletion—has the agency’s position changed regarding the scope of the amendment?

³⁹ And we believe that this is demonstrably the case.

⁴⁰ The agency’s chosen descriptor is oxymoronic in any event. The amendment seeks to implement the Secretary’s call to transition the forest to young-growth logging and away from old-growth logging over the next 10–15 years—facially, a dramatic shift from the 60-year practice of clear-cut old-growth logging on the forest. The 2016 TLMP Amendment includes an entire new chapter (Chapter 5). The FEIS is 899 pages—not counting the additional 653 pages of Volume II. This is not a “narrow” amendment.

a. Statement referencing prior comments and content of objection and explaining how decision and/or analysis violate law or regulation.

Our DEIS Comments requested that the agency fully re-evaluate the Old-growth Conservation Strategy or prepare a full plan revision. [Ref167 at 77 (GSACC et al. DEIS comments)]. We explained that there were serious questions at the time the Conservation Strategy was adopted in 1997 about the ability of the Conservation Strategy to meet wildlife viability needs, and that subsequent science has further eroded confidence in the Conservation Strategy's ability to satisfy the viability requirements of 36 C.F.R. § 219.19 (2000). [*Id.* at 77–78]. We urged the Forest Service to either include a comprehensive evaluation of the Conservation Strategy during the 2016 Amendment process, or alternatively, to proceed with a full plan revision. [*Id.*]. The agency has done neither, and the level of analysis regarding the Conservation Strategy in the FEIS and agency's Response to Comments is insufficient under NEPA and NFMA.

On the bulk of our substantive comments on this issue, the agency responds in the following manner: “See responses to PLR-1, and PLR-2, CONS-1, and Appendix D of the FEIS.” [2016 TLMP Amendment FEIS at 1-52 (CONS-13, 14, 15)]. No additional, specific response is provided.

As for the cross-references, PLR-1, PLR-2, CONS-1, and Appendix D all provide very general material, and are at best vaguely responsive of our substantive comments. This approach is not supportable under NEPA. NEPA regulations dictate the ranges of options the agency may utilize in responding to substantive comments. [See 40 C.F.R. 1503.4(a) (in the FEIS, the agency “shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement.”)]. Possible responses are to (1) modify alternatives; (2) develop and evaluate alternatives not previously given serious consideration; (3) supplement, improve, or modify the analysis; (4) make factual corrections; or (5) explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response. [See *id.*; see also *Or. Nat. Desert Ass'n v. U.S. BLM*, 531 F.3d 1114 (9th Cir. 2008)].

- In PLR-1, the agency reviewed the regulatory framework of 36 C.F.R. §§ 219 regarding plan amendments, and argued that “[b]ecause the responsible official has the discretion to determine whether and how to amend the plan, the responsible official has the discretion to determine the specific changes to propose and approve.” [2016 FEIS App. I-24–26]. But this does not address our comment that the agency cannot meet its obligations under NEPA and NFMA without a comprehensive review of the Conservation Strategy.
- In PLR-2, the agency determined that “[n]o obligations exist from the 1982 rule . . .” and discussed the diversity requirements of NFMA. [*Id.* at I-26]. PLR-2 also provides an overview of the coarse-filter/fine-filter approach, the Conservation Strategy and its history, and discusses the 2016 TLMP Amendment and the effect of its changes on the Conservation Strategy. [2016 TLMP FEIS at I-27–30]. In PLR-2, the Forest Service decides that the provisions of 36 C.F.R. § 219.9 do not apply to the amendment. [*Id.* at I-26 (“The proposed amendment would not change the plan's Conservation Strategy for wildlife, and so does not require the application of section 219.9.”)]. But again, this does not get at our core point, which is that a review of the integrity of the Conservation Strategy is needed *now*.

- CONS-1 discusses young growth harvest and renewable energy after stating that “[c]ompletely changing the Conservation Strategy to a different approach would be outside the scope of this amendment.” [*Id.* I-42–43]. As explained above, this response distorts the nature of our comments, and is incorrect as a matter of law in any event.
- Appendix D says “[i]t is assumed that integrity is maintained when the conservation strategy is expected to continue to function effectively regardless of alteration or modification of individual parts” [*Id.* at D-2]. But our point is that that it is inappropriate for the agency to rely on assumptions about the efficacy of the Conservation Strategy before undertaking to actually test or validate them pursuant to NEPA and NFMA.

Though not explicitly clear, we located some other places where the agency tangentially responds to our comments, including CONS-9 and CONS-13. But none of these replies are fully responsive to our overarching point that a full review of the integrity of the Conservation Strategy is required. We fully address all of the agency’s peripheral responses in our statement of supporting reasons below.

- CONS-9 generally states that Appendix D has concluded that all alternatives will maintain the integrity of the Conservation Strategy, and that the Conservation Strategy “is functioning under conditions that are much better than anticipated at the time of its development in 1997.” [*Id.* at I-50].
- CONS-9 also references CONS-3, which discusses modifications to the Strategy to allow logging in beach and estuary fringe, RMAs, and non-development LUDs, and repeats the agency’s position that less intensive harvest levels than predicted in 1997 “outweigh the localize [sic] effects of young-growth harvest proposed in Old-growth Habitat LUD, the beach and estuary fringe, and RMAs [as proposed].” [*Id.* at I-44–45].
- CONS-9 references the young growth direction in Chapter 5 of the Plan, [*Id.* at I-52], which lists the management approaches for various desired forest conditions. [2016 Amended TLMP 5-1–8]. CONS-9 also references CONS-1, which states “[c]ompletely changing the Conservation Strategy to a different approach would be outside the scope of this amendment.” [2016 FEIS App. I-42]. CONS-9 also references PLR-1, [*id.* at I-50], which focuses on the agency’s perceived discretion to determine whether and how to amend Forest Plans. [*Id.* at I-24–26].
- Like the agency’s responses in CONS-9, CONS-13 also references PLR-1, CONS-1, and Appendix D. This Response adds a citation to PLR-2, which provides an overview of NFMA’s viability and diversity requirements, and the Conservation Strategy. [*Id.* at I-26–30].
- Neither CONS-9 nor CONS-13 discuss NFMA’s requirement that the Forest Service revise Plans at least every 15 years, although elsewhere in the FEIS, the agency recognizes this duty. [See FEIS at B-1, I-13]. Although not referenced in the Response to Comments on the Conservation Strategy, the agency at Response to Comments P&N-8 sets forth its position on why it is not preparing a full plan revision. The agency believes that “the 2008 plan amendment essentially completed the process of revising the [TLMP] that was initiated in 1987,” and so the TLMP “will not need to be revised again until 2023.” [FEIS at I-15].

b. Statement of supporting reasons.

Our DEIS Comments highlighted the need for the agency to re-evaluate the integrity of the Conservation Strategy. But rather than fully evaluate the integrity of the Conservation

Strategy to ensure NFMA consistency, and to ensure that a hard look was taken under NEPA, the agency's position on the Conservation Strategy rests on an assumption. When faced with specific questions about the integrity of the Conservation Strategy, the agency's common refrain is: "Overall, the Conservation Strategy is functioning under conditions that are much better than anticipated at the time of its development." [See 2016 TLMP Amendment FEIS at I-43, I-44, D-20]. It's as if simply by incanting that phrase enough times, it might actually become true. On this basis, and because the agency believes that a comprehensive review of the Conservation Strategy is "outside the scope" of the "narrow" amendment process, the agency has steadfastly refused to prepare a full evaluation of the integrity of the Conservation Strategy and its scientific underpinnings, and an evaluation of whether it can withstand scrutiny under more contemporary scientific research.

Appendix D of the FEIS is the agency's evaluation of the integrity of the Conservation Strategy, and the agency concludes that the conservation strategy currently functions as intended and is expected to function regardless of which alternative is selected." [2016 TLMP FEIS at D-5]. This conclusion is arbitrary, because the agency did not actually evaluate the integrity of the Conservation Strategy to determine whether it was functioning "as intended." [See *Motor Vehicle Mfrs. Ass'n. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (agency engages in arbitrary decisionmaking where it fails to articulate a rational connection between the facts and its decision)]. Appendix D does not actually evaluate the scientific underpinnings of the Conservation Strategy, does not actually address whether the Conservation Strategy is providing for viable and well-distributed populations of old-growth dependent species, and does not actually address new scientific information.⁴¹

Instead, the agency repeatedly *assumes* that the original Conservation Strategy ensured viability, and that populations must be viable today because the Tongass has been logged less intensively than was expected in 1997. [See 2016 TLMP Amendment FEIS at D-2, 3, 5-6, 9]. This conclusory reasoning is flawed because it ignores the actual conditions on the Tongass. In order for the agency to conclude (in a legally, scientifically, or logically valid way) that the Conservation Strategy is working, the agency needs to thoroughly assess its management approach by studying past, present, and future habitat conditions. In short, the agency cannot meet its obligation to ensure wildlife viability in the Tongass without reevaluating the Conservation Strategy's "coarse filter" and "fine filter" components, which we specifically pointed out in our DEIS Comments. Moreover, because the Forest Service failed

⁴¹ Ironically, the agency does begin to review new scientific information and recent research, all of which seems to call into question the Conservation Strategy's assumptions about the home ranges and dispersal capabilities of old-growth dependent species, the efficacy of various components of the Conservation Strategy, and even the core foundations of the Conservation Strategy's habitat reserve approach. [2016 TLMP Amendment FEIS at D-4-5].

But rather than fully and fairly evaluate this information, the agency notes only that studies "provide additional considerations regarding" various species' conservation needs. From there, the agency stops short of actually addressing the specific implications and management recommendations of the new science and research, and states that information from the studies "would be used to review the conservation strategy design, if in the future, data from various sources suggest that the conservation strategy is no longer functioning as intended." [*Id.* at D-5]. But without actually analyzing or disclosing the information, the agency has no basis for dismissing it now.

The agency's "ostrich approach," where it chooses to bury its head in the sand, rather than undertake the required analysis, is of course incompatible with NEPA. [*Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157, 1167 (9th Cir. 2003) (explaining that NEPA obligates the agency to make available to the public high quality information before decisions are made and actions are taken) (citing 40 C.F.R. § 1500.1(b))].

to evaluate current habitat conditions and the status of MIS species—as opposed to simply pointing to the absolute number acres of POG remaining across the landscape—the agency’s assumptions about the validity of the Conservation Strategy are baseless.

i) The plan to perpetuate old-growth logging for another 15+ years required a comprehensive review of the 20-year-old Conservation Strategy through a revised amendment or a plan revision.

The Forest Service spends a great deal of time emphasizing that the purpose of the amendment is to “transition” to young-growth logging. But the agency has devised a plan that actually calls for an equivalent or even additional amount *old-growth logging* than has been occurring on the Tongass over the last decade. Under the agency’s Selected Alternative, the projected timber sale quantity is 46 MMBF. The agency “expects” that this will average about 12 MMBF of young growth and 34 MMBF of old growth during the first 10 years, but there does not appear to be anything restricting the volume proportions. Either way, annual average harvest volumes from 2002 through 2014 were 36 MMBF of old-growth. [2016 TLMP Amendment FEIS at 3-341]. Far from a transition *away from* old-growth logging, the agency has developed a proposal to *lock-in* current levels of old-growth logging for at least another decade.

The plan to perpetuate old-growth logging calls for the need to fully re-evaluate the Conservation Strategy, either through a revised amendment, or through a full plan revision. [Cf. Ref272-Powell et al. (1997) at 9 (“The 1994 Peer Review concluded that, consistent with generally accepted principles of ecosystem management, future logging should mimic the small-scale, natural disturbance patterns on the Tongass. Rather than adopt an ecologically-based approach however, the selected alternative continues to rely heavily on the silvicultural method most destructive to Old Growth wildlife habitat: large-scale clear-cutting on short rotation. Continued large-scale clear-cutting, particularly on a short rotation as called for in the plan, is incompatible with ensuring adequate protection of wildlife and essential habitat.”)]. As the FWS explained in comments on the DEIS, “Old-growth logging on the Tongass has been controversial, in part due to direct and indirect impacts to fish and wildlife caused by clearcut logging and the roads associated with logging.” [FWS DEIS Comments at 1]. On this basis, the expert wildlife agency recommended that “specific elements of the conservation strategy be updated with the best available scientific data and strengthened by incorporating experience from the last 20 years of management, specifically where available information suggests the current conservation strategy is not adequate to sustain vulnerable species.” [*Id.* at 2]. The Forest Service did not heed the recommendations of its “cooperating agency.”

NFMA requires the Forest Service to revise forest plans “at least every fifteen years” or sooner if “conditions in a unit have significantly changed” [16 U.S.C. § 1604(f)(5)(A)]. The Forest Service codified this requirement in its own planning regulations. [36 C.F.R. § 219.7(a) (“A plan must be revised at least every 15 years.”)]. Plan revisions are distinct from plan amendments. The former is designed to produce “a new plan for the entire plan area” [36 C.F.R. § 219.7], whereas plan amendments are designed to “help units adapt to new information or changing conditions.” [*Id.* at § 219.13].

The agency dismisses this requirement here by citing the 2008 ROD: “The Regional Forester stated in the 2008 ROD that: ‘Because this amendment essentially completes the process of revising the Tongass Forest Plan that was initiated in 1987, the Forest Plan will not need to be revised again for 10 to 15 years, unless changed conditions require it sooner.’” [2008 TLMP Amendment draft ROD at 2; *see also* 2008 TLMP Amendment FEIS at I-15

“Because the 2008 plan amendment essentially completed the process of revising the Tongass Forest Plan that was initiated in 1987, the Forest Plan will not need to be revised again until 2023.”⁴²

The Forest Service’s conclusory assertion from 2008 is not a legally sufficient basis for deferring a full plan revision. And using that flawed justification to kick the can down the road, so that the revision process does not begin until 2023, stretches NFMA well beyond its breaking point. Using this logic, the agency apparently believes it has a 21-year buffer period to which 16 U.S.C. § 1604(5)(A) does not apply (*i.e.*, the 21-year period between the 1997 TLMP and the 2008 TLMP Amendment). And taken to its logical extreme, the agency’s position would allow it to finalize a plan revision only once every 36 years (*i.e.*, if the plan revision process takes 21 years—the first plan revision process began in 1987 and was completed in 2008—and the agency does not begin that process until 2023, then a new, revised plan will not be completed until 2044—36 years after the “completion” of the first revision in 2008). That justification is contrary to law, and irreconcilable with any principal of sound forest management.

Simply put, the 1997 TLMP should be used as the operative plan to which the 15-year requirement of 16 U.S.C. § 1604(f)(5)(A) applies. The 2008 TLMP Amendment was just that—an amendment. It was decidedly not a full plan revision, and indeed, was often referred to as an “adjustment”. [See, *e.g.*, 603_1609 at 13 (“[T]he current Forest Plan adjustment will be based on the 1982 rules.”)]. Congress set the 15-year timeframe in NFMA to facilitate timely updates to forest plans, so that our national forests were not being managed based on stale science, obsolete resources inventories, and outdated policy objectives.

Even aside from the strict 15-year timeframe, NFMA provides that forest plans should be revised if “conditions in a unit have significantly changed” [16 U.S.C. § 1604(f)(5)(A)]. In our DEIS Comments we noted that “[b]ecause of the significant ecological and socio-economic changes that have occurred in the region since the 1997 TLMP, a full revision of the Forest Plan is long overdue.” [Ref167 at 9 (GSACC et al. DEIS comments)]. Surely this language applies to the Tongass National Forest. Indeed, the FEIS notes that “[h]arvest of old-growth trees has become increasingly controversial The decline in timber sale volume between 2008 and 2012 is based on a variety of factors including demand, economic conditions, harvest costs, policy changes and litigation.” [2016 TLMP Amendment FEIS at 1-5].⁴³ Indeed, the whole purpose of the amendment is purportedly to establish a new paradigm for management of the Tongass National Forest, to transition the forest management program to be more ecologically, socially, and economically sustainable. [*Id.* at

⁴² The agency also notes that, “[n]o matter when the time starts to do a plan revision, [annual appropriations acts] have regularly permitted Forest Service land management plans to be more than 15 years old if the USDA is acting in good faith to update the plans. [2016 TLMP Amendment FEIS at I-15]. We object to that statement on two grounds. First, while annual appropriations acts have exempted the agency from a the 15-year time frame of 16 U.S.C. § 1604(f)(5)(A), the exemption only applies where the agency is acting expeditiously and in good faith to revise a forest plan—not simply to update the plan. [See, *e.g.*, Consolidated and Further Continuing Appropriations Act of 2015, Pub. L. No. 113-235, § 408, 128 Stat. 2130, 2445 (2015)].

Second, the agency has not pointed to a specific appropriations act that applies to the agency’s decision made this year. “[A]ppropriations acts are generally only in force during the fiscal year of the appropriation and do not work a permanent change in the substantive law.” [*Nat. Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 806 n. 19 (9th Cir. 2005)].

⁴³ Also, the pro-timber industry Southeast Conference has even noted, just this year, that: “Logging has become a socially unacceptable business to be in.” [Ref304 at 26].

ES-2]. The draft ROD explains that the most recent 5-year review of the forest plan concluded that “conditions on the land and demands of the public had changed and therefore the Tongass National Forest should make changes to the Forest Plan.” [769_09_000001 at 4]. The time is ripe for a TLMP revision.

Instead, the Forest Service undertook to complete a “narrow” plan amendment. [See generally 2016 TLMP Amendment draft ROD (repeatedly emphasizing the “narrow” amendment)]. If the agency could lawfully forgo a plan revision, and amend an 8-year-old plan (which in turn was an “adjustment” of a now 19-year-old plan), that amendment needed to be decidedly broader. In particular, it needed to fully re-evaluate the integrity of the Conservation Strategy to help facilitate the development of a reasonable range of alternatives, to update stale data with new science and empirical research, to ensure that significant issues were fully and fairly evaluated, and most importantly, to establish consistency with NFMA’s substantive duties.

The agency attempts to justify its approach by (ironically) appealing to changed conditions (changed conditions, of course, being a reason for a full plan revision). As the argument goes, because less logging and road building have occurred than was originally anticipated, the Conservation Strategy is “stronger than anticipated in the analysis conducted as part of the 1997 Plan Revision.” [2016 TLMP Amendment draft ROD at 21]. But the appeal to an absolute number of acres, as opposed to consideration of habitat conditions, the juxtaposition of habitats, the functionality of corridors, or, importantly, the actual status of old-growth dependent species, is a flawed approach. While it may serve as a convenient excuse, the reliance on spreadsheet data at the expense of a full and fair analysis was not consistent with NEPA or NFMA.

The Conservation Strategy is the agency’s tool for meeting its wildlife viability obligations, and so at the plan amendment stage, a detailed analysis of the Conservation Strategy’s efficacy was required. This is especially true when the plan calls for continued logging of old-growth forests—logging that will stretch even beyond the date for the start of the next plan revision. Simply put, the agency has no way of demonstrating consistency with NFMA and its implementing regulations if it has no basis for determining whether the Conservation Strategy is actually working. [See *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 961 (9th Cir. 2002) (explaining that the Forest Service is required to “safeguard the continued viability of wildlife in the Forest.”)].

The failure to undertake this required NFMA evaluation at the plan amendment stage resulted in a set of equally troubling NEPA procedural violations. NEPA contains “action-forcing” procedures designed to ensure that high quality information—including accurate scientific information, expert agency comments, and public scrutiny—are provided to the public and the decisionmaker before decisions are made. [40 C.F.R. § 1500.1]. Importantly, the content of the NEPA review must be guided by the substantive statutes. Here, the agency actually listed “wildlife habitat and the conservation strategy” as a significant issue. But the agency in the FEIS neither tests its assumptions about the efficacy of the Conservation Strategy, nor analyzes whether the Conservation Strategy will continue to provide for viable wildlife populations. Instead, the agency simply assumes the integrity of the Conservation Strategy, and defers any meaningful re-evaluation until the next plan revision set to begin in 2023. [See 769_03_0024 (IDT meeting, explaining that for the amendment process, the agency “will not mess with the conservation strategy”)]. The agency’s approach closely tracks an approach taken by the BLM in southeastern Oregon, which the Ninth Circuit Court of Appeals found unlawful. *Or. Nat. Desert Ass’n v. U.S. BLM*, 625 F.3d 1092 (9th Cir. 2010).

In 1995, BLM began a planning process—pursuant to the Federal Land Management and Policy Act (“FLPMA”)—to prepare a resource management plan (“RMP”). Prior to

preparing the plan, BLM in 1980 had undertaken an inventory of its lands in southeastern Oregon to recommend “Wilderness Study Areas” (*i.e.*, those lands with “wilderness characteristics,” a statutorily defined category) to the President for permanent protection as Wilderness. After preparing an EIS considering the recommendations, BLM transmitted those recommendations to the President in 1991. The report advised permanent preservation for 21 of the WSAs (the inventory had identified 32). It also identified about 3,000 acres of land adjoining WSAs that could be acquired as preservation as wilderness. In 1992, the President submitted those recommendations to Congress, which had not yet acted upon them at the time of the litigation. After submitting the recommendations, the BLM had not since inventoried any lands in the planning area outside of the WSA for wilderness characteristics.

During the planning process for the RMP, a conservation organization (“ONDA”) submitted comments to the BLM noting that it had been years since the agency’s last inventory of lands with wilderness characteristics. ONDA argued that the FLM should make certain its information was accurate before designing a management strategy for the region. BLM responded that a “global reinventory” to address wilderness values within the planning area was outside the scope of the RMP. In essence, BLM argued that BLM completed any required evaluation and assessment of wilderness values with its submittal to the President. The EIS for the RMP therefore did not consider the effects of the RMP on areas with wilderness characteristics not already designated as WSAs, nor did it analyze management options for the wilderness values in such areas.

The Ninth Circuit addressed whether BLM complied with NEPA in developing its land management plan where it failed to properly analyze the effects of the plan on lands possessing wilderness characteristics. The court explained, “the considerations made relevant by the substantive statute driving the proposed action must be addressed in the NEPA analysis.” [*Id.* at 1130]. The Court noted that under FLMPA, BLM is charged with managing the public lands under the principles of multiple use and sustained yield, and with developing a resource management plan which would allow it to do so. To fulfill statutory purposes, the BLM’s EIS supporting its management plan had to consider the land resources and values relevant to its long-term management strategy. [*Id.* at 1131].

The Court held that BLM violated its NEPA duties where its EIS did not contain any analysis of whether lands with wilderness characteristics should be accorded management protections under the plan. [*Id.* at 1143]. The Court noted that the “BLM’s management of any lands with wilderness characteristics is likely to be vigorously debated. It is fairly debatable issues of this kind that NEPA was designed to bring out in the open, for analysis and discussion in the service of sound decisionmaking.” [*Id.*]. The Court concluded that by failing to respond to ONDA’s request of the BLM to conduct an analysis of the lands’ wilderness characteristics, the BLM “did not provide the full and fair discussion of the issue required by NEPA, and also did not properly respond to ONDA’s comments.” [*Id.* (citing 40 C.F.R. §§ 1502.1, 1503.4)].

Here, the Forest Service did not provide the opportunity for a vigorous debate over the efficacy of the Conservation Strategy, in violation of NEPA. By refusing at Step 1 to test its assumptions about the integrity of the Conservation Strategy, the agency issued an EIS that was structurally flawed. NFMA and its implementing regulations require the Forest Service to ensure that a forest plan provides for the viability of fish and wildlife species. The agency here is adopting a plan that implicates the viability requirement by permitting clearcut logging and roadbuilding in critical old-growth forest habitat. In 1997, the agency developed a plan for managing species viability, but key assumptions embedded in that plan have not been critically tested by the agency in the past 20 years, relating to the nature and extent of

old-growth logging, and whether the plan in fact is ensuring species diversity. [See *Lands Council v. McNair*, 537 F.3d 981, 998–99 (9th Cir. 2008) (explaining that the “Forest Service may meet wildlife viability requirements by preserving habitat, but only where both the Forest Services’ 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”); see also *ONDA*, 625 F.3d at 1130 (explaining that “the statutory objectives underlying the agency’s actions work significantly to define its analytic obligations”)].

Without a comprehensive re-evaluation of the Conservation Strategy, the agency had no basis for carrying forward its stale viability assumptions, in violation of NFMA. And this failure also infected the NEPA analysis because the scope and content of the EIS was artificially and unlawfully narrow. By not critically testing the validity of the Conservation Strategy, the agency could not provide a “full and fair” evaluation of the environmental consequences of its plan to re-authorize clearcut logging and roadbuilding in old-growth forest habitat. Without an understanding of the current functionality of the Conservation Strategy, the agency had no basis for dismissing alternatives that called for an end to old-growth logging. By deferring any meaningful analysis of the Conservation Strategy, the agency unlawfully deferred analysis of the cumulative impacts of old-growth logging on sensitive wildlife populations. [See *Kern v. U.S. BLM*, 284 F.3d 1062, 1075 (9th Cir. 2002) (“It is not appropriate to defer consideration of cumulative impacts to a future date when meaningful consideration can be given now.”)]

In sum, the agency here is perpetuating old-growth logging on the Tongass for years to come, but is refusing to update a 20-year-old Conservation Strategy that serves as the foundation for the agency’s viability obligations. Because of the significant passage of time, and the significant changed conditions, the agency was required under NFMA to revise the TLMP. Otherwise, the agency had a duty under NFMA and NEPA to engage in a broader amendment process, one that fully and fairly evaluated the consequences of old-growth logging, and identified whether the Conservation Strategy needed to be updated to integrate current science. By refusing to follow either of these pathways, the agency’s plan amendment, ROD, and FEIS are unlawful.

ii) There was significant scientific uncertainty over the efficacy of the Conservation strategy at the time of its adoption, and there is considerable scientific doubt as to whether the Conservation Strategy is currently working.

In line with the above, we explained in our DEIS Comments why there was no credible basis for simply carrying forward assumptions about the integrity of the Conservation Strategy, which made a full re-evaluation necessary now. [See Ref167 at 77–84 (GSACC et al. DEIS comments)]. During its development of the Conservation Strategy, the agency received consistent feedback underscoring significant uncertainty over the foundational structure of the Conservation Strategy, including the (1) need for an expanded reserve system, (2) a matrix management strategy that would better protect important old-growth habitat and provide for connectivity, and (3) the need to incorporate specific recommendations developed for several species of concern. [Ref271-Powell et al. (1996) at 2]. Reflecting on the development of the Conservation Strategy, Dr. Winston Smith, one of the PNW Research Station reviewers, calls the Conservation Strategy a “grand experiment.” [Ref298-Smith (2016a) at 3]. Like any experiment, the Conservation Strategy needed to be thoroughly tested to evaluate whether its embedded assumptions were in fact valid. But the

reality is the agency has not engaged in rigorous testing over the past 20 years, and now, the agency is refusing to undertake that necessary evaluation with the 2016 amendment.

In the FEIS, the Forest Service has not meaningfully responded to our comments on the questionable validity of the coarse filter / fine filter model, the serious implications of past, present, and future highgrading and clearcutting of old-growth forests, and the teachings of new science and on-the-ground information. [See Ref167 at 77–84 (GSACC et al. DEIS comments)]. Instead, the agency falls back on its well-worn position that the Conservation Strategy was presumed to be effective in 1997, and because less old-growth logging has occurred since then, the Conservation Strategy is now functioning “stronger than anticipated.” [See 2016 TLMP Amendment FEIS at I-29]. The agency’s assumptions cannot take the place of required analysis.

We incorporate by reference our DEIS Comments noted above, because the agency has provided no meaningful response. Our comments explain in detail why the integrity of the Conservation Strategy cannot be assumed form the basis for this objection, and we underscore some of these points below. In short, it was arbitrary, capricious, and contrary to NEPA and NFMA for the agency to simply carry forward the 20-year-old Conservation Strategy without any meaningful analysis.

aa) Coarse Filter

We commented that the OGRs are meant to maintain the habitats of the species most vulnerable to logging, and yet for years, researchers have questioned whether the OGRs protect sufficient habitat. [See Ref167 at 79–80 (GSACC et al. DEIS comments)]. We noted our agreement with the State of Alaska that current OGRs should be reviewed in order to assess whether the Forest Service could improve the strategy. [*Id.* at 80].

The agency at PLR-2, states that the coarse/fine filter has been used for many years, and that the “amended plan would retain the underlying plan’s coarse/fine filter approach” [2016 TLMP Amendment FEIS at at I-27, I-30]. The agency also contends that the “amendment would not change the plan’s Conservation Strategy for wildlife, and so does not require the application of section 219.9.” [*Id.* at I-26]. The agency’s position thus seems to be that the coarse filter approach must be working because the agency has been doing it for a long time, and that because the 2016 amendment would not alter the coarse filter approach, it’s efficacy need not be re-evaluated.

We specifically dispute the latter point below, given the material alteration of areas the agency considers part of the reserve system. As to the former point, we maintain that the agency’s refusal to consider whether the system of OGRs is in fact sufficiently protective of wildlife needs is inconsistent with NFMA’s viability requirements, and NEPA’s hard look duty. This is true both because of the significant uncertainty over the efficacy of the reserve system at the time of the Conservation Strategy’s adoption, and because of new evidence on the inadequacy of the reserve design.

Whether or not the reserve-based strategy was the best, or even an appropriate, strategy for the TNF has long been specifically questioned: “Finally, [the reserve paradigm] may not be the best paradigm for the Tongass National Forest[,] which is less fragmented from logging, but more fragmented naturally than the Pacific Northwest and where other options still exist.” [603_0009 at 22; *see also id.* at 13 (“Taken together the island structure and the dendritic pattern of much of the forest means that the Tongass National Forest has a natural level of fragmentation unsurpassed by any other National Forest.”)]. PNW Research Station reviewers “felt that to reduce risk to species viability, developing a new approach using the areas of critical habitat remaining on the Tongass should be better than using an

approach (the HCA approach) oriented around saving only potentially inadequate vestiges of habitat.” [Ref271 – Powell et al. (1996) at 6].

Moreover, the Forest Service has long misled the public about the rationale behind the reserve design. The agency has stated in numerous documents that the design was based on an “umbrella species” approach, *i.e.*, that the agency specifically considered the needs of species with the largest home ranges—the Alexander Archipelago wolf and the brown bear—and designed the size of the reserves according. For example, in a March 23, 2006 “Conservation Strategy Overview,” the agency states that “Very Large Reserves (21 total) as designed *were added to the conservation strategy after considering the large home ranges of the brown bear and Alexander Archipelago wolf.*” [603_2007, at 3 (emphasis added)]. As we explained in our DEIS Comments, that was simply not the case. [See Ref167 at 104–09 (GSACC et al. DEIS comments)].

Indeed, in his review of the above-mentioned document, the “Conservation Strategy Overview,” Chris Iverson, who was point person on the Forest Service’s 1997 TLMP Conservation Strategy IDT, specifically rebutted the idea that the Very Large Reserves were a “conscious” creation of the IDT to address conservation of old-growth dependent species. As Iverson made clear, “no species habitat needs were explicitly used to design the ‘very large reserves.’” [603_1127, at 7].

Rather than respond to this point raised explicitly in our DEIS Comments, the Forest Service simply notes that a re-design of the Very Large Reserves “is outside the scope of this focused amendment.” [2016 FEIS at I-85]. That response misses the point. Our concern is that there are serious questions about the underpinnings of the Conservation Strategy, which in turn call into question its overall integrity. Rather than re-evaluate the Conservation Strategy in light of this information, the agency has simply offered conclusory assertions about the integrity of the conservation strategy—in particular, that because less acres of POG have been harvested than as predicted by the 1997 TLMP. [2016 FEIS at D-20].

Our Objection here is that the agency’s “coarse filter”—a central component of the Conservation Strategy—is not sufficiently protective of wildlife habitat needs, and therefore, the Conservation Strategy does not provide for wildlife viability, in contravention of NFMA and its implementing regulations. [See *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 961 (9th Cir. 2002) (explaining that the Forest Service must “safeguard the continued viability of wildlife within the Forest”)]. Moreover, because the agency has refused to provide a detailed assessment of the Conservation Strategy’s integrity—despite serious questions about its efficacy—the agency has not provided “high quality information” and “accurate scientific information,” in violation of NEPA. [See *WildEarth Guardians v. Montana Snowmobile Ass’n*, 790 F.3d 920, 925 (9th Cir. 2015)].

bb) Fine Filter

Our DEIS comments urged the agency to comprehensively re-evaluate the “fine-filter” component of the Conservation Strategy, which applies to the management of matrix lands. [Ref167 at 80–81 (GSACC et al. DEIS comments)]. We commented that the agency should not apply fine filter protections as *discretionary* guidelines. [See *id.*]. The agency came closest to addressing these comments in PLR-2, where it stated “[t]he fine filter . . . complements the coarse filter by providing for additional habitat needs or other ecological conditions of at-risk species, when the responsible official determines those needs are not met through the coarse filter.” [2016 TLMP Amendment FEIS at I-27]. The agency remarked that it would “retain” this approach and “no additional changes are needed to the amended plan to implement any other substantive provisions of the rule.” [*Id.* at I-30].

We object to the agency's refusal to revisit its fine-filter approach, and to assess whether this core component of the Conservation Strategy is effectively meeting the needs of at-risk wildlife species. [See *id.* (“The amended plan would retain the underlying plan’s coarse/fine filter approach to maintain ecological integrity and provide ecological conditions for at-risk species.”)].

When it adopted the Conservation Strategy, the agency knew that its reserve-based approach needed to be augmented with specific Standards and Guidelines applicable to matrix lands. [See 603_1592 at D-10 (explaining that the topic of matrix management “was of notable concern to the Pacific Northwest Research Station Review scientists who suggested that more attention be directed to this component of landscape conservation planning”)]. Moreover, the agency recognized that attention to the needs of specific species was critical for maintaining viable and well-distributed populations. [See *id.* at D-11 (“A variety of species-specific standards and guidelines were adopted to strengthen the conservation strategy for individual species and species groups.”)]. For some species like wolves, matrix management of deer habitat represented the “most important factor” influencing viability ratings for the species. [*Id.* at D-63].

Yet over the last 20 years, the agency has never critically tested whether the fine-filter approach is meeting its intended objectives. Species-specific research has not received attention, and in many cases has been specifically *ignored* in project-level decisions. [See, *e.g.*, Ref260 Person (2014) (explaining wolf research on Prince of Wales Island showing dramatically reduced populations that was ignored during preparation of the Big Thorne timber sale)]. Moreover, the agency has specifically *removed* important protections for certain species like goshawks and marten. [See, *e.g.* 603_1592 at H-A14 (FWS commenting that the legacy standards and guidelines would reduce the existing conservation standards for the goshawk”)].

In fact, the entire MIS approach and its application to the Tongass long has been the subject of continuous critique. [See, *e.g.* 603_0009 at 18 (“In particular, any approach which assumes the habitat of only a few species is also the habitat of many other species is not workable.”)]. The team of reviewers from the PNW Research Station specifically questioned the suite of MIS chosen, noting the lack of reliable data to inform a scientifically defensible methodology for choosing species. [*Id.*]. And the reviewers further questioned the choice to exclude a number of species that may be better indicators of environmental quality, like amphibians. [*Id.* at 19; see also Ref272-Powell et al. (1997) at 2 (noting that “because few wildlife species have received even rudimentary research attention, the probability is high that management practices that alter habitat will produce unanticipated adverse impacts”)]. Even the Forest Service has openly questioned the MIS approach, and questioned whether the chosen MIS species fulfilled MIS objectives. [See, *e.g.*, 603_1592 at D-20 (“However, there is generally poor support in the literature for the fine filter approach because of the difficulty in identifying appropriate species to serve as surrogates, or whether this is even possible”)]; *id.* at 2-13 (“It is anticipated that the current list of MIS may be revised in the future”)].

Of significant concern to us, as pointed out in our DEIS Comments, is the Forest Service's interpretation of fine-filter Standards and Guidelines as discretionary. The agency expressly adopted the fine-filter approach to augment the reserve approach—because reserves alone could not provide for species viability. [See 603_1323 at 1 (“Within the matrix, components of the old-growth ecosystem are maintained by standards and guidelines to protect important areas and provide old-growth forest habitat connectivity.”)]. But during project-level decisionmaking, the agency has consistently interpreted fine-filter components as discretionary guidelines, rather than substantive management prohibitions. The result

has been the erosion of key habitat protections in favor of timber objectives. [See, e.g., Ref352-USFS (2013i) at 28 (“At project completion, none of the project area WAAs (all land ownerships included) would support 18 deer per square mile.”)].

In conclusion, the agency’s fine-filter approach needs re-evaluation, and likely significantly revision, to bring the approach in line with species specific research and more contemporary management paradigms. By carrying the approach forward, without any re-analysis, the agency has violated its duties under NEPA and NFMA.

cc) The risks of high-grading and clearcutting

Our DEIS Comments also focused on the fact that the Forest Service is arbitrarily relying on the *quantity* of POG across the forest to support its conclusions about the “integrity” of the Conservation Strategy—rather than taking the requisite hard look that also includes the *quality* of habitat remaining on the Tongass. [See Ref167 at 81–82 (GSACC et al. DEIS comments)]. We urged the agency to consider more than simply the number of acres that would and would not be logged under the various alternatives. [*Id.* at 81]. An evaluation of the composition of reserves, the juxtaposition of habitats, the functionality of corridors, and non-linearities in ecosystem responses to logging activities is necessary to support any conclusion that the Conservation Strategy is working as intended.

In the FEIS, the agency compounds the failures of the DEIS. Where the Table 8 of Appendix D of the DEIS had compared projected (1997) vs. actual + projected (2016) acres of harvest through 2041, that same Table (now Table 9) in Appendix D of the FEIS compares projected (1997) vs. actual + projected (2016) through 2095. [2016 TLMP Amendment FEIS at D-23]. This only serves to further obfuscate the issue.⁴⁴ Still missing is the necessary

⁴⁴ We anticipate that, in response to these objections, the agency will point to other tables in the FEIS showing statistics on, for example, the cumulative percent of original high-volume POG remaining, or the cumulative percent of original large-tree POG remaining. [2016 TLMP Amendment FEIS at 3-218–20]. Two points: (1) regardless of the POG composition these statistics are measuring, the statistics still only show absolute acreages, which is exactly the problem we’re raising here; and (2) untethered to any actual analysis, these are just empty statistics in any event.

On the latter point, what does it mean that, after implementation of Alternative 5, only 48% of the large POG will remain on the North Central Prince of Wales Biogeographic Province? We interpret that statistic as an abject management failure of the agency to manage for viable and well-distributed populations of fish and wildlife species. [See Ref299-Smith 2016b at 5 (“Although the 1997 [TLMP] and 2015 Draft EIS describe logging as having occurred on a small percentage of the entire Tongass, the vast majority of the logging has been concentrated in the most accessible and productive portions of Southeast Alaska (USDA Forest Service 1997, Smith et al. 2011). Indeed, more than 50% of the most productive old growth forests have been clearcut logged on POW, the majority of which occurred across north central POW, substantially reducing and fragmenting the most productive habitat of the POW flying squirrel (Smith and Nichols 2003, Smith and Person 2007, Smith et al. 2011).”)].

Without citing any scientific support for the proposition that threshold levels of critical old-growth habitat have not been exceeded, the Forest Service has no basis to conclude that “[o]verall biodiversity on the Tongass and in Southeast Alaska remains in good condition” [2016 TLMP Amendment FEIS at 3-217; cf. *Lands Council v. McNair*, 537 F.3d 981, 998–99 (9th Cir. 2008) (explaining that the “Forest Service may meet wildlife viability requirements by preserving habitat, but only where both the Forest Services’ 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 fact is that the highest-volume POG stands—which generally provide the best habitat conditions—on the Tongass have been disproportionately logged over the past 60 years. Even back in the mid-1990s scientists warned the Forest Service about the detrimental impacts of continued high-

review of the needs of old-growth dependent species across the landscape, and whether the Conservation Strategy is effectively meeting those species' needs.

At GEN-6 of the Response to Comments, the Forest Service refers comments about “high-grading” and clearcutting to TIM-19, ALT-3, and ALT-11. [2016 TLMP Amendment FEIS at I-6–7]. TIM-19 addresses the size of old-growth clearcuts, and states “most old-growth clear cuts on the Tongass are less than the maximum allowed under NFMA.” [*Id.* at I-40]. ALT-3 addresses comments that the agency should have considered a no old-growth logging alternative, and argues “an immediate end to old-growth logging would not allow industry to transition.” [*Id.* at App. I-18]. ALT-3 also references PLR-2, which explains the transition to young-growth harvests. [*Id.* at I-26–30]. ALT-11 references a 2013 “Leader’s Intent” document that outlines the gradual transition from old growth harvest to young growth harvest for the Tongass, “to allow for a re-tooling of industry, but . . . also allow for the current young-growth stands to mature to a point where there are significant acreages of an age and size that could be economically harvested.” [*Id.* at I-21–22]. None of these points are responsive to our comments.

Our comments emphasized that “the fact that less POG has been harvested is not a sufficient basis for concluding that the conservation strategy is ‘stronger’ than predicted.” [Ref167 at 82 (GSACC et al. DEIS comments)]. And yet, throughout Appendix D, the agency writes that the 1997 Strategy was expected to ensure wildlife viability, and because the Forest Service has committed less timber to logging than expected 20 years ago, wildlife populations must be viable. [See 2016 TLMP Amendment FEIS App. D].

We object to the fact that the agency has not undertaken an analysis of habitat quality or distribution within the core components of the Conservation Strategy. Merely pointing to the absolute number of acres of POG across the entire forest or within a biogeographic province says nothing about the habitat composition of reserves, or the functionality of important corridors within the beach and estuary fringe or riparian areas. The agency’s overarching position—that because less POG has been logged than the 1997 TLMP projected, conditions on the landscape are necessarily better than anticipated—is nothing more than a non sequitur. We maintain that an analysis of “functional” rather than “physical” connectivity is necessary to support any conclusions about the integrity of the Conservation Strategy and the viability of old-growth dependent species. [Ref167 at 81 (GSACC et al. DEIS comments)]. The agency’s failure to undertake this required analysis renders its decision arbitrary, capricious, and contrary to law.

dd) New Science

The Forest Service in the FEIS states rather disingenuously that the Conservation Strategy is “built from current conservation science.” [2016 TLMP Amendment FEIS at D-1]. The agency’s sense of time is warped. The Conservation Strategy was developed in the mid-1990s—thus built from decades-old science. The agency later acknowledges that “an intensive scientific evaluation of the Conservation Strategy and species-specific viability assessments” was conducted...in 1997. [See *id.*; see also 2016 TLMP Amendment FEIS at D-

grading of the highest volume stands, and implore the agency to implement compensatory low grading practices. [See, e.g., Ref272-Powell et al. (1997) at 7]. But the agency made an explicit management choice to not specifically protect the high-volume stands, asserting that the agency did not believe this to be a “prudent” management approach. [603_1592 at D-10].

A review the implications of that policy choice—including whether it is possible to maintain viable and well-distributed populations of old-growth dependent species *without* protecting the best remaining habitat—is exactly what should have occurred during this plan amendment process.

1 (explaining that the agency is relying on Appendix N of the 1997 TLMP as the “foundation and a primary reference for the science behind the conservation strategy”). We commented that the Forest Service could not fulfill its obligation to ensure wildlife viability on the Tongass without thoroughly considering new science. [Ref167 at 82–84 (GSACC et al. DEIS comments)]. We urged the agency to take a hard look at science that bears directly on the integrity of the Conservation Strategy, because the DEIS Appendix D only *listed* studies, while noting blandly that recent science “may warrant an assessment of the efficacy of the original conservation strategy design criteria. This type of assessment is outside the scope of the proposed Forest Plan” [2016 TLMP Amendment FEIS at D-4].

In the FEIS, the Forest Service did not respond to our comments about new science. The agency summarizes some of our concerns at CONS-1, but the agency does not actually address new science—or the agency’s obligation to evaluate it—in its response. [2016 TLMP Amendment FEIS at I-42–43]. Elsewhere, at BAS-1, the agency asserts that “Appendix D of the EIS touches on some of the new science related [to] these topic areas relevant to conservation planning on the Tongass National Forest. Information on these studies, other relevant studies and other best available science would be used to review the Conservation Strategy design if in the future, data from various sources suggest that the Conservation Strategy is no longer functioning as originally intended.” [*Id.* at I-58) (emphasis added)]. But that merely repackages the approach we were concerned with about the DEIS’s treatment of the issue.

We submit that assessment of new scientific studies is decidedly not outside the scope of the forest plan amendment process. The Forest Service’s position strains logic. How can the agency make any conclusions about the integrity of the Conservation Strategy *without* reviewing relevant science? With the 2016 TLMP Amendment, the agency has developed a plan that continues the logging of old-growth forest, while opening up previously off-limits areas to development. How can the agency authorize such a plan consistent with its NFMA and NEPA duties *without* assessing the best available science and ensuring that the decision is supported accurate scientific analysis and high quality information? [See Ref299-Smith (2016b) at 9 (“Therefore, any forest plan amendment or revision that proposes to continue the harvest of old-growth forest or impose canopy removal (e.g., clearcuts) in buffers (especially openings greater than 200 m) or other conservation elements without including a comprehensive analysis of the Wildlife Conservation Strategy is imprudent and irresponsible as it ignores the best available credible science.”)].

If data from current scientific studies shows *right now* that the Conservation Strategy is no longer functioning as originally intended, how can the agency avoid reviewing those studies and incorporating that information into this decisionmaking process? Simply put, the agency—when authorizing a major plan amendment—cannot simply bury its head in the sand. Because the agency is steadfastly refusing to *actually evaluate* new scientific information on the integrity of the Conservation Strategy, our objection here centers on the fact that this approach itself violates NEPA and NFMA.

We make two additional points here with respect to available scientific information. First, much of the new science that the Forest Service references—but does not evaluate—does *in fact* demonstrate that the Conservation Strategy is not functioning effectively. For example, Smith (2013) calls into question the very underpinnings of the Conservation Strategy with respect to the Queen Charlotte goshawk. [See 769_05-000530 (Smith (2013)) at 6 (“[The findings of this study increase uncertainty that northern goshawk breeding-season habitat objectives are being met in managed landscapes of Southeast Alaska”)]. The 2016 TLMP Amendment cites this study, and the core conclusions, but then punts on any meaningful analysis. [2016 TLMP FEIS at 3-227 (“[A] recent study suggests that some

uncertainty remains with respect to the ability of Forest Plan conservation measures to contribute sufficient habitat to sustain well-distributed, viable populations of northern goshawks throughout Southeast Alaska (Smith 2013). Continued inventories and monitoring of established nest protection buffers will help inform future decisions.”⁴⁵]

Person and Logan (2012) showed high levels of unsustainable wolf mortality across a number WAAs on Prince of Wales Island over a 25-year period. [Ref247 – Person & Logan (2012a) at 27 (“We believe harvest levels of wolves within the northcentral and central portions of Prince of Wales Island often were high and frequently unsustainable. Those areas encompass almost all major population centers on the island and most are connected to those towns by roads.”)]. The agency frequently has cited this study in project planning documents, but again, it has made no actual management decisions incorporating the information. Indeed, although the TLMP contains a specific Standard and Guideline directing the agency to implement a Wolf Habitat Management Program where wolf mortality concerns have been identified, [2008 TLMP at 4-95 (WILD1.XIV.A.1.)], the agency has interpreted this provision as a discretionary guideline, and has never convened a Wolf Task Force prior to authorizing projects.

The Forest Service cites—without analyzing—research on northern flying squirrels, [2016 TLMP Amendment DEIS at D-5 (citing Flaherty et al. 2008, 2010; Pyare et al. 2010; Shanley et al. 2013; Smith 2012; Smith et al. 2011)]. The agency notes that these studies “provide additional conservations regarding [species] conservation needs. [*Id.*]. *But the studies cut much deeper*—they specifically call into question core assumptions embedded in the conservation strategy. For example, Smith et al. (2011) “determined that at least half of the small old-growth reserves on POW are not functionally connected to other reserves or other old-growth set asides that comprise the OGR strategy.” [Ref299 – Smith (2016b) at 8]. Citing, but functionally ignoring, on-point scientific studies regarding the integrity of the Conservation Strategy is not an approach that accords with the agency’s duties under NEPA and NMFA.

Our second point here is the Forest Service only referenced a handful of new scientific studies when there currently exist many more that implicate the integrity of the Conservation Strategy. Indeed, in his comments, Dr. Winston Smith took the agency to task for referencing only *two of the nineteen* studies he personally has authored that bear directly on the elements of the Conservation Strategy. [See Ref298-Smith (2016a) at 2)]. “An essential prerequisite” to using the best available science in forest planning is “to review and consider all of the most current, available, credible science.” [*Id.*]. By failing to follow this basic approach, the agency’s 2016 plan amendment and FEIS are arbitrary, capricious, and contrary to law.

⁴⁵ We note that since this study was published, the Forest Service has cited the study using the exact same language. [See Ref351 USFS (2013h) at 3-133 (Big Thorne); 760-0675 at 32–33 (Mitkof Island); 740_1423 at 17 (Saddle Lakes); 634_1101_2016 [Wrangell BA/BE] at 18 (Wrangell Island)]. Not surprisingly, this has not actually affected any goshawk management decisions. [See, e.g. Saddle Lakes FEIS at D-537 (“Smith’s findings on the uncertainties are acknowledged in the Biological Evaluation page 17. Smith (2013) is cited multiple times in the goshawk section. The uncertainties of the Conservation Strategy are beyond the scope of this analysis.”); cf. Ref299 Smith (2016b) at 2 (“Where publications have been cited, it is not clear whether the Forest Service has selected policy or management consistent with the science, a stipulation of the new paradigm for developing forest plans (Everset et al 1997).”)].

c. Conclusion and suggested resolution.

While the agency has failed to cite any credible scientific information that the Conservation Strategy is working as intended, there exists considerable, credible scientific information that just the opposite is true. [See Ref298-Smith (2016a) at 3–4 (“To date, there is no published credible science that supports a conclusion that the TLMP-WCS is working as expected for any one (much less the suite) of concerned wildlife species or groups. Indeed, the only credible science that exists does not support key assumptions of the TLMP-WCS specific to northern goshawk (Smith 2013) or northern flying squirrels (Smith and Person 2007, Smith et al. 2011).”]. By failing to actively engage with the new science that calls into question the agency’s core assumptions about the “integrity” of the Conservation Strategy, and instead blindly moving forward with a plan to continue clear-cut logging and road building in old-growth forests, the agency has failed to comply with its substantive and procedural duties under NEPA and NFMA. The agency must go back and prepare a supplemental EIS that fully and fairly addresses the integrity of the Conservation Strategy, and, based on that information, develop a plan responsive to the viability needs of old-growth dependent species on the Tongass.

4. Objection Point 22. The 2016 TLMP Amendment’s changes to the Conservation Strategy violate NEPA and NFMA.

With the 2016 TLMP Amendment, the Forest Service has chosen to tinker with elements of the Conservation Strategy. As the agency acknowledged in its Plan Amendment FEIS Summary, “[c]hanges made to suitable lands designated for development and to plan components (e.g., standards and guidelines) may affect old-growth habitat for wildlife and the Tongass Old-growth Habitat Conservation Strategy and contributing elements to old-growth reserves (e.g., riparian, beach and estuary habitats.” [FEIS Summary at 9]. However, the agency has refused to undertake a comprehensive analysis of the efficacy of the Conservation Strategy—either before or after implementation of the amendments. Instead, the agency simply “assumed” (in a circular argument) that the integrity of the Conservation Strategy would be maintained, despite changes to its component parts: “It is assumed that integrity is maintained when the conservation strategy is expected to continue to function effective regardless of alteration or modification of individual parts, that is, its functioning as a whole remains unimpaired.” [2016 TLMP Amendment FEIS at D-2].

Proceeding on this assumption, the agency endeavored only to evaluate “individual proposed modifications to the contributing elements of the conservation strategy and the associated potential to affect its functioning.” [*Id.* at 3]. This was the wrong scope of analysis. Needed, instead, is an analysis of the *collective* proposed modifications to the contributing elements of the Conservation Strategy, as well as a review of the integrity of the Conservation Strategy as a whole.

Our objections over the 2016 TLMP Amendment’s changes to core elements of the Conservation Strategy, including Old-growth Reserves, beach fringes, and riparian buffers, closely track the feedback provided by expert scientists and partnering agencies who were a part of the development of the Conservation Strategy, and who have closely monitored its progress.

Dr. Winston Smith was a member of the team of the Pacific Northwest Research Station Scientists assigned to review and analyze all information used to address wildlife viability issues for the 1997 TLMP. Reviewing the proposed 2016 TLMP Amendment and DEIS, he specifically noted: “each part of the 1997 TLMP was inexorably linked to all other components, and thus a piecemeal effort to change portions of the forest plan (i.e., amending one portion of the Forest Plan without simultaneously[,] explicitly considering the

implications to other components) without a comprehensive analysis of the remaining components not only raises uncertainty about the credibility of the amended portions of the forest plan, it compromises the integrity of those essential components (e.g., Wildlife Conservation Strategy) that were not simultaneously analyzed and reconsidered.” [Ref298 – Smith (2016a) at 1]. We agree with Dr. Smith.

The Forest Service, too, has recognized this need in its summary of the 2013 Conservation Strategy summit [769_05_0544 at 15]:

"III. What has changed since 2008 that the Tongass NF should consider in its evaluation of the Conservation Strategy?

- New science – Since 2008, there have been 12 research publications that address the Conservation Strategy (regarding flying squirrels, goshawk, marten). Research has now called into question the validity of the assumptions underlying the strategy. This must be addressed. The recent petition to list the flying squirrel under the ESA is a result of this new science, and more petitions could result."

The 2016 TLMP Amendment’s changes to core elements of the Conservation Strategy cannot be reconciled with the agency’s substantive duties for wildlife management under NFMA. Nor can the changes—without a comprehensive evaluation of the integrity of the Conservation Strategy—be reconciled with the agency’s duties under NEPA to take a hard look at the environmental consequences of its action, to ensure the scientific integrity of the decisionmaking process, and to disclose accurate information to the public.

a. Statement referencing prior comments and content of objection and explaining how decision and/or analysis violate law or regulation.

In our comments, we requested that the agency abandon its proposal to allow logging in Old-Growth Reserves, beach fringes, and riparian management areas. [Ref167 at 84 (GSACC et al. DEIS comments)]. We commented that the Forest Service had failed to explain “how logging and road-building in non-development LUDs can be squared with the Conservation Strategy as codified in the Forest Plan, or with the strategy’s scientific underpinnings.” [*Id.* at 88]. We explained that young-growth stands within non-development LUDs have always been off limits to logging, and should remain so. [*Id.* at 86]. We questioned whether existing OGRs are already too small, and whether they can sustain logging without losing their habitat value. [*Id.* at 87].

We further commented that—like OGRs—beach and estuary fringes and riparian management areas have been off limits to logging under the Conservation Strategy, and we directed the agency to the 1997 and 2008 TLMP standards and guidelines, which recognized the value of beach fringe and RMAs as wildlife corridors, high quality habitat, and a connection between aquatic and forest ecosystems. [*Id.* at 88–89].

The 2016 TLMP Amendment FEIS does not make any specific attempt to address the problems raised in our DEIS comments, or the issues raised by expert agencies and scientists, which reflect many of our concerns. The Forest Service generally responded to these comments at CONS-3, which referenced CONS-1, CONS-2, PLR-2, FEIS Chapter 3, and Appendix D. [2016 TLMP Amendment FEIS App. I-44–45].

- CONS-3 parrots the argument that because less timber has been harvested over the past 20 years than expected in 1997 (due to market conditions and the Roadless Rule), “the substantially greater presence of old-growth on the landscape across the planning area

would outweigh the localize effects [sic] of young-growth harvest proposed in the Old-growth Habitat LUD, the beach and estuary fringe, and RMAs” [Id. at I-45].

- In CONS-3, the Forest Service argues that under the 2016 TLMP Amendment, very little young growth will be harvested in beach fringe, RMAs, and old-growth reserves, but the agency does not address our comments that these places should *not be opened at all* to logging. [See *id.* at I-44–45]. Instead, the agency provided the familiar response that less logging has occurred in the past 20 years than expected in 1997, and because a small percentage of these non-development LUDs (Forest-wide) would be logged in the future, “none of the alternatives would reduce the ability of the Conservation Strategy to maintain a functional and interconnected old-growth ecosystem.” [Id.].
- Similarly, in CONS-1 the agency stated that “Forest-wide, suitable acres of young growth in the beach fringe, RMA, and Old-growth Habitat LUD are about 2 percent, 4 percent, and 3 percent of the total acres in that component” [Id. at I-42]. Like the agency’s response in CONS-3, this suggests that logging a small percentage of these areas cannot hurt the Conservation Strategy’s effectiveness, but fails to answer our question of how logging these areas *at all* is consistent with the Strategy.
- In CONS-2, the agency reiterates its conclusory explanation that “young-growth harvest may locally alter forest structure and reduce connectivity, but the beach and estuary fringe and RMAs would continue to function as intended across the planning area by serving as ecological transition zones, maintaining freshwater and marine aquatic and terrestrial habitat, and providing landscape connectivity” [Id. at I-43].
- In PLR-2, the agency explained that “there would be no measureable change to the functioning of” beach and estuary fringe, or riparian areas, because of the “local” and “short term” nature of allowing logging in those areas. [Id. at I-29]. The Forest Service did not provide new explanations in PLR-2 to address our DEIS Comments of why the Forest Service now considers non-development LUDs to be appropriate to open up to commercial timber operations. Instead, PLR-2 quotes heavily from Appendix D for the contention that “[a]ll of the alternatives would maintain the integrity of the Conservation Strategy by maintaining the functioning of the system of old-growth reserves in the Old-growth Habitat LUD and other non-development LUDS” [Id. at I-30]. The Forest Service never addressed the decision to allow logging in Old-Growth Reserves in the section of its Response to Comments where it defended the decision to allow logging in fringe and RMAs. [Id. at I-29–30].
- In Appendix D, the Forest Service briefly addressed the modifications to the Conservation Strategy to allow logging in non-development LUDs. [Id. at D-9–14]. In that section, the agency argues that because it “*assumed*” the Conservation Strategy would work in 1997, and because the Alternatives allowing logging in non-development LUDS “*would be expected*” to have little effect on the Conservation Strategy, “[t]herefore, all of the alternatives *would* maintain the integrity of the conservation strategy” [Id. D-9] (emphasis added)]. But as we have explained in detail throughout this Objection, assumptions can’t take the place of reasons when it comes to applying principles of sound forest management.
- At CONS-15, the agency quoted verbatim our DEIS comments with respect to the 2016 TLMP Amendment’s inconsistency with the 1982 Rule [Id. I-52]. CONS-15, however, only refers the reader to PLR-1, PLR-2, CONS-1, and Appendix D, without providing any substantive response. [Id.]. PLR-1 addresses the process for amending provisions of the Plan and regulatory framework of 36 C.F.R. §§ 219.1-219.19, but does not address changes to the Conservation Strategy or mention the 1982 Rule. [Id. at I-24–26]. PLR-2

does mention the 1982 Rule, but only to state “[t]he Tongass Land and Resource Management Plan was developed under the 1982 [viability] rule. No obligations exist from the 1982 rule, as that rule no longer exists” [*Id.* at I-26]. CONS-1 mentions the changes to the Plan that would allow harvest in non-development LUDs, but never mentions the 1982 Rule. [*Id.* at I-42–43]. Appendix D does mention the 1982 Rule, but only to state that “the wildlife components of the Forest Plan remain under the 1982 Planning Rule, and specific updates to meet 2012 Planning Rule requirements are not proposed under this Forest Plan Amendment.” [*Id.* D-3].

The Forest Service made no changes between the draft and final 2016 TLMP Amendment that are responsive to our comments. The plan to allow intrusions into areas previously off-limits to commercial timber operations is simply not compatible with the Conservation Strategy. And none of the responses provided by the agency in the FEIS directly address this core issue: how can the agency allow development in “non-development” LUDs and other areas in the matrix off-limits to development, if the Conservation Strategy was developed to maintain the *minimum* amount of habitat necessary to maintain species viability? With the erosion of core features of the Conservation Strategy, the agency has not met its duties under NEPA or NFMA.

b. Statement of supporting reasons.

i) The modifications to contributing elements of the Conservation Strategy erode some of its central features.

The Conservation Strategy is a two-part management framework: (1) a forest-wide system of old-growth reserves, off-limits to development; and (2) management of matrix lands—where development is allowed—to protect important areas and provide for connectivity. [See 2008 TLMP FEIS at D-2]. This “reserve-based strategy” relies on blocks of intact, largely undisturbed habitats, but also depends on protecting habitat at smaller spatial scales. [*Id.* at D-3]. Moreover, landscape connectivity is an “integral feature” of the Conservation Strategy. [*Id.*].

To implement the Conservation Strategy, the 1997 TLMP and 2008 TLMP Amendment incorporated a “coarse-filter / fine-filter” approach. [*Id.* at D-6]. The coarse-filter involved a forest-wide system of habitat reserves that was allegedly designed to take into account the home range and dispersal capabilities of old-growth dependent species. [*Id.*].⁴⁶ The fine-filter involved matrix management prescriptions designed principally to maintain landscape connectivity. [*Id.* at D-10]. In particular “[b]each and estuary fringe, and riparian habitats, have special importance as components of old-growth forests, serving as wildlife travel corridors, providing unique wildlife habitats, and providing a forest interface with marine or riverine influences that may distinguish them as separate ecosystems within the larger old-growth forest ecosystem.” [*Id.*]. As such, the 1997 TLMP and 2008 TLMP Amendment included buffers to protect these sensitive habitats and to facilitate connectivity. [*Id.* at D-11].

With the 2016 TLMP Amendment, the agency is altering core elements of the Conservation Strategy incorporated into the 1997 TLMP and 2008 TLMP Amendment. Our

⁴⁶ “Allegedly” being the operative word here because, as we described in our DEIS Comments, while the design of “very-large” old-growth reserves was held out to the public as being responsive to the large home range and dispersal capabilities of wolves and brown bears, [see, e.g. 2008 TLMP FEIS at D-9], in reality, those reserves were designed arbitrarily with respect to ecology, habitat content, and connectivity for any species. [DEIS Comments at 105].

DEIS Comments specifically criticized the approach of authorizing intrusions into areas that were previously off-limits to development. [Ref167 at 85–89 (GSACC et al. DEIS comments)]. Simply put, the approach of allowing commercial logging operations in old-growth reserves, beach and estuary fringes, and riparian management areas is irreconcilable with the Conservation Strategy. [See *id.*]

The 2016 TLMP Amendment FEIS Appendix D largely restates the core components of the Conservation Strategy, but then, like the DEIS, proceeds to engage in a revisionist history of what was, and was not considered “important” in the development and implementation of the Conservation Strategy. Appendix D acknowledges that “[r]iparian, beach, and estuary habitats are considered contributing elements to the OGR component of the strategy in that they were designed to maintain landscape connectivity among large and medium OGRs and non-development LUD designations.” [2016 TLMP Amendment FEIS at D-1; see also *id.* at D-4 (repeating the assertion)]. But then, the agency attempts to justify its approach of allowing intrusions into non-development areas by noting, “[h]owever, at the time of its development in 1997 it was assumed that the conservation strategy would maintain a functional and interconnected old-growth forest ecosystem without the additional contribution of previously harvested areas, either as young-growth or over time as these stands matured to old-growth condition.” [*Id.* at D-3].

We systematically rebutted this justification in our DEIS Comments, [see Ref167 at 85–89 (GSACC et al. DEIS comments)], but the agency in its FEIS never responds head-on to our rebuttal. Below we add to our DEIS Comments (which we incorporate here by reference [see 219.54(b)(4)], to demonstrate that the areas protected under the Conservation Strategy—regardless of their then-present ecological state—were and continue to be integral to the functionality of the Conservation Strategy. Altering these core components of the Conservation Strategy to achieve timber objectives cannot be reconciled with the agency’s duties under NEPA and NFMA.

aa) Old-growth Reserves

The system of old-growth reserves consists of large, medium, and small reserves. Under the 1997 TLMP and 2008 TLMP Amendment, these reserves are off-limits to commercial logging operations.⁴⁷ Large reserves consist of a variety of non-development LUDs, including the Old-growth Habitat LUD, and are at least 40,000 acres in size and must include at least 20,000 acres of POG forest. [2008 TLMP Amendment FEIS at D-6]. Medium reserves consist of a variety of non-development LUDs, including the Old-growth Habitat LUD, and are approximately 10,000 acres and include at least 5,000 acres of POG forest. [*Id.* at D-7]. Small reserves are defined by Old-growth Habitat LUDs and generally contain at least 16 percent of the area of a VCU in a contiguous landscape, with at least 50 percent of the area in POG forest. [*Id.*].

Thus on its face, the Forest Service’s current position is highly suspect, that the Conservation Strategy was expected to “maintain a functional and interconnected old-growth forest ecosystem without the contribution of previously harvested areas, either as young-growth or over time as these stands matured to old-growth condition,” [2016 TLMP Amendment FEIS at D-3]. Why would the agency set certain size requirements for reserves, only to require 50 percent POG forest within them, if *only* the POG forest mattered for purposes of the Conservation Strategy? Why not *only* protect POG forest? Clearly, the

⁴⁷ With the exception of road building when no feasible alternative exists, and young-growth management to accelerate attainment of old-growth characteristics. [2008 TLMP at 3-61, 3-62].

precise habitat composition of the reserves was subordinate to their size and spacing. Otherwise, the agency would have only protected stands of old-growth forest.

Moreover, prohibitions on commercial logging operations within reserves were made exclusive of forest-type. The 1997 TLMP and 2008 TLMP Amendment were explicit in their prohibitions on commercial logging operations—without regard to an old-growth / young-growth distinction. Unsurprisingly, the fundamental premise behind the reserve strategy is protecting island areas across the landscape from development—i.e., “reserves.” Hence, the reserves on the Tongass are comprised of “non-development” LUDs. This is a rather straightforward principle that the agency is refusing to explicitly acknowledge.

Finally, the Goals and Objectives of the Old-growth Habitat LUD make clear that the intent was that second-growth stands would be allowed to evolve naturally to old-growth forest habitats, or would be managed to accelerate forest succession. [2016 TLMP Amendment at 3-58 (unchanged from the 2008 TLMP Amendment)]. And the Desired Condition for this LUD is that “[a]ll forest areas within this LUD have attained old-growth forest characteristics.” [*Id.*]. And yet the agency is proposing up to 44,507 acres of young-growth treatment in non-development LUDs (1,811 for the Selected Alternative), 31,640 of which would be clearcut (1,811 acres of partial cut for the Selected Alternative, with patches up to 10 acres in size). [2016 TLMP Amendment FEIS at D-9–10 (Tables 1 and 2)].⁴⁸ The agency concedes that “[e]ven-aged commercial young-growth harvest in [the Old-growth Habitat and other non-development LUDs] could increase habitat fragmentation or perforation and reduce the ecological contribution of young-growth stands to the reserve system by setting back the trajectory toward a late seral forest condition by delaying the development of old-growth stand characteristics such as snags, downed logs, and diverse tree canopy layers required by some POG-associated species (e.g., marten, goshawks, flying squirrels)”. [*Id.* at D-8]. The agency cannot square the intrusion into non-development LUDs with the plain language of the forest plan, which is the best evidence of the agency’s intent at the time it adopted the Conservation Strategy.

Even aside from the plain language of the forest plan, the agency’s current position cannot be squared with the scientific underpinnings of the Conservation Strategy. The team of reviewers from the PNW Research Station implored the agency to not log or build roads within reserves. [603_0009 at 8]. One reviewer specifically noted that even thinning and salvage logging within reserves should not be allowed because these “activities are likely to produce detrimental effects, including compaction and erosion from road building and movement of heavy machinery, destruction of snags and removal of future down woody material that are important to numerous old-growth species.” [*Id.* at 85]. In its response to the reviewers, the agency agreed that “logging and road building [should] be prohibited within HCAs.” [603_0010 at 9]. The 1997 TLMP and 2008 TLMP Amendment codified this approach by classifying forestland within Old-growth Reserves as “unsuitable for timber production.” [2008 TLMP Amendment at 3-60].

And yet, the 2016 TLMP Amendment dramatically alters this paradigm by classifying only “old-growth forest land” as not suitable for timber production. [2016 TLMP Amendment at 3-62]. Again, the agency attempts to minimize this significant shift by appealing to the fact that young-growth areas were not considered important to the functionality of the Conservation Strategy. [2016 TLMP Amendment FEIS at D-3]. But again, the agency simply

⁴⁸ The agency does not disclose the number of miles of road construction or reconstruction within non-development LUDs to access young-growth stands. The failure to provide specific information bearing on the scope and magnitude of environmental impacts violates NEPA. [*See Or. Nat. Res. Council v. Brong*, 492 F.3d 1120, 1134 (9th Cir. 2007)].

cannot reconcile this position with the Conservation Strategy. Indeed, the agency crosses itself up elsewhere in the FEIS, where it notes that there is “growing recognition, which was acknowledged during the development of the 1997 Forest Plan, of the ecological function that young-growth stands and matrix lands in general play in conservation.” [2016 TLMP Amendment FEIS at I-192 (emphasis added)].⁴⁹

In sum, the Conservation Strategy is premised on a “reserve-based approach,” codified into the 1997 TLMP and 2008 TLMP FEIS through LUDs and Standards and Guidelines that prohibit commercial logging operations within large, medium, and small old-growth reserves. The agency is now dramatically altering this paradigm by removing protections for non-

⁴⁹ The agency again stumbles over itself later in Appendix D where it recognizes that young growth stands were indeed recognized in the development of the Conservation Strategy where they contributed to the beach and estuary fringe. [2016 TLMP Amendment FEIS at D-4].

On a related point, we note here the agency’s attempt to minimize the ecological value of the young-growth stands in the OGRs, non-development LUDs, beach and estuary fringes, and RMAs. [See, e.g., 2016 TLMP Amendment FEIS at I-29 (“Within the Old-growth Habitat LUD and other non-development LUDs, young-growth forest stands do not have ecological value.”)]. The agency uses this proposition as justification for its intrusion into previously off-limits areas.

We dispute the proposition. The areas of the Tongass with the oldest young-growth stands—that the agency is now opening up to commercial logging operations—are the most biologically productive sites. [See, e.g., *id.* at 3-195 (“Low elevation, larger-tree stands have been disproportionately harvested on the Tongass National Forest. These highly productive and economical sites (i.e., those easiest to access) were targeted in the early years of commercial timber harvest because they tended to be adjacent to the beach and within floodplain riparian areas where large Sitka spruce were available and abundant.”); see also *id.* at I-180 (“Some of the oldest young-growth stands are located in RMAs and the beach fringe, where past harvest occurred, but where the current Forest Plan prohibited commercial harvest.”)].

The agency asserts that “harvest of young-growth in these areas would pose a zero to very low risk, depending on the selected alternative, to the function and integrity of the Tongass Conservation Strategy that maintains old-growth associated species.” [*Id.* at I-29]. But there is a critical need for the previously logged stands—in highly productive areas—to be allowed to regenerate. These are the areas that once contributed the best habitat conditions on the Tongass, and permitting entry now will simply “sentence them to an infinite cycle of more logging.” [Ref198-Letter from Kirchhoff to TAC at 8]. Indeed, that appears why the agency in the 1997 TLMP and 2008 TLMP FEIS specifically favored early seral habitat that previously supported high volume stands for placement in reserves where insufficient POG was available. [See 603_1592 at D-7].

Moreover, the agency seems to be basing the relative habitat contributions of older young-growth stands only on certain species, like deer. While the stem exclusion phase has negative habitat implications for those species, 70-year-old stands may be OK for others. [See, e.g., 603_0009 at 27–28]. The agency itself recognizes that “young-growth forests provide a range of functions that may be impacted by repeated harvest. These may include serving as dispersal corridors between old growth forest patches, providing buffers between areas of suitable habitat and human activity, softening edge effects, and serving as thermal cover which may be reduced by harvest.” [2016 TLMP Amendment FEIS at 3-204; see also *id.* at 3-205 (noting that “older young-growth stands in particular provide connectivity and also can also buffer edge effects to old-growth stands (i.e., when located between areas of even-aged harvest and old-growth forest”)].

In short, the agency’s position in the Response to Comments that young-growth stands—even those in the most highly productive areas of the Tongass—have zero habitat value and do not in any way support the Conservation Strategy—is inaccurate and misleading. [See *Animal Def. Council v. Hodel*, 840 F.2d 1432, 1439 (9th Cir. 1988) (presenting inaccurate and misleading information in an FEIS is a NEPA violation).

development LUDs and permitting clearcut⁵⁰ logging operations. And yet, outside of a highly suspect justification about the alleged “intent” of the drafters of the Conservation Strategy with respect to second-growth within non-development LUDs, the agency has not provided a detailed explanation of its change in position, or delivered a thorough and searching analysis of why the framework of the Conservation Strategy will remain intact. In any event, the agency’s current position with respect to young-growth logging operations in non-development LUDs cannot be squared with the plain language of the forest plan or the scientific underpinnings of the Conservation Strategy. Modifying this critical component of the Conservation Strategy required a hard look under NEPA, and specific justification under NFMA for how the alterations were consistent with the agency’s wildlife management obligations. Because the agency provided neither, it has violated both statutes and their implementing regulations.⁵¹

bb) Beach and Estuary Fringes and Riparian Management Areas

The Forest Service recognized that the “reserve-based approach” needed supplementation in order to effectively provide for species viability. Accordingly, the agency—on the recommendations of the PNW Research Station reviewers—incorporated more explicit management protections for matrix areas. This included some spatially explicit measures, such as the 1,000-foot beach and estuary fringe, and the riparian buffers for maintaining the integrity of the aquatic and riparian ecosystems. [603_1592 at D-10; *see also* 2016 TLMP

⁵⁰ We use the term “clearcut” even with respect to the Selected Alternative, which permits partial cutting 10-acre “patches.” Studies show that while “very light” selective logging may retain a stand’s value, removal of all or nearly all of the mature tress in an area as small as a third of an acre, creates a stand response indistinguishable from that of a clearcut. [Ref197 at 15–16]. Moreover, while studies have shown that “gap treatments,” i.e., creating artificial canopy gaps in second-growth stands, of less than a half-acre can yield habitat benefits, [see Ref034], the Forest Service cites no scientific support for the 10-acre management prescription.

In fact, in the Response to Comments, we see that the actual basis for the 10-acre prescription is not habitat-driven, but rather, economic: “The created openings of up to 10-acres in the Old-growth Habitat LUD beach buffers and RMAs was to provide more economical offerings to allow a more rapid transition to young-growth management.” [2016 TLMP Amendment FEIS at I-48]. Ironically, the team of Forest Service scientists who implemented the Conservation Strategy as part of the 1997 TLMP specifically warned *against* uneven-aged management techniques. [See 603_0858 at 4 (noting that uneven-aged management techniques lead to highgrading)].

⁵¹ We also point out here the effect of the Sealaska land transfer on OGRs in 16 VCUs. The significant impacts from the land transfer include reducing the size, fragmenting, and in some cases, eliminating OGRs. This land transfer alone should have compelled a full re-evaluation of the entire Conservation Strategy, given the significant scale at which impacts are felt.

Instead, the agency simply chose to follow the approach outline in Appendix K of the Forest Plan for modifying OGRs at the project level. We object to the use of this approach for such a large-scale modification of the OGR system, and maintain that the agency should have engaged in a much more robust evaluation on the impact to the Conservation Strategy. [Cf. State of Alaska DEIS comments at 8 (“Although Appendix D of the DEIS states that a review of the scientific basis for the current conservation strategy is outside the scope of this amendment, ADF&G recommends the USFS use its science review process to assess the new and modified OGRs before issuing the [FEIS]. If the review of the modified OGRs indicates they are unlikely to meet the OGR system intent, especially in heavily-logged areas, and more old-growth logging occurs on nearby USFS land, the opportunity to create a more effective system in those areas may be lost.”)].

Moreover, we dispute that the modifications to the affected OGRs adopted by the Selected Alternative provide for “comparable achievement” of the Old-growth Habitat LUD.

Amendment DEIS at D-4 (“Ecological values within the matrix are protected by standards and guidelines such as the beach and estuary fringe and riparian buffers, which provide physical connectivity via protected forested corridors.”)].

The agency has long acknowledged the “special importance” of beach and estuary fringes and riparian habitats. [See, e.g., 603_1592 at D-10]. These areas serve as wildlife travel corridors, provide unique habitats, and provide a forest interface with marine or riverine influences. [Id.]. Riparian areas provide connectivity within watersheds, and the beach fringe is a component of the major travel corridor used by many species. [Id.]. Indeed, the Forest Service recognized explicitly the importance of connectivity, and the contribution of beach and estuary fringes and riparian areas to help this further conservation objective. [See 603_1323 at 9; see also 603_1692 at D-11 (“Together, the beach and riparian habitat management features and the mapping of small reserves represented a substantial response to the landscape linkage element of conservation planning and significantly contributed to the management of the overall mix among habitat reserves.”)].

The 1997 TLMP and 2008 TLMP Amendment protected these areas by classifying the area around approximately 1,000 feet slope distance from mean high tide around all marine and estuarine coastline as unsuitable for timber harvest. [603_1593 at 4-4 (BEACH1.I.B., C.), *id.* at 4-5 (BEACH2.II.A.6)]. And the 2008 TLMP contains an entire Appendix devoted to explaining the criteria for implementing standards and guidelines related to riparian buffers.⁵²

It is therefore surprising (and disturbing) that the 2016 TLMP Amendment promotes an intrusion into these important buffers / connectivity corridors. The agency is proposing up to 21,871 acres of logging in the beach and estuary fringe⁵³ (3,903 acres under the Selected Alternative⁵⁴), and 26,030 acres with Riparian Management Areas (1,089 under the

⁵² We do appreciate the idea of a buffer around anadromous lakes, but a 100-foot buffer is not sufficient. [2016 TLMP Amendment FEIS at I-63 (“In addition, under Alternative 5, a 100-foot no harvest buffer has been applied around anadromous lakes.”). It is difficult to tell, in any event, whether this represents an actual change from the 2008 TLMP. [Compare 603_1593 at D-17 (“No commercial timber harvest that counts toward the allowable sale quantity is allowed within 100 horizontal feet of the lake margin or within the RMA.”) with 2016 TLMP Amendment at D-17 (“No commercial timber harvest is allowed within 100 horizontal feet of the lake margin or within the RMA.”). Either way, a 100-foot buffer is essentially meaningless to protect the highly valuable lakeshore habitat.

⁵³ Under Alternative 2, the agency proposes to maintain an approximate 1,000-foot wide protected corridor adjacent and inland to any harvest within the beach/estuary fringe. [2008 TLMP Amendment FEIS at D-14]. The agency argues that this would “maintain some level of connectivity.” [Id.]. The agency provides no scientific support for its “inland buffer” approach. Indeed, where the beach buffer was designed to protect the forested area adjacent to saltwater shorelines—a transition zone between interior forest and salt water influences [603_1592 at D-10]—it is difficult to see how an inland buffer would provide any comparable achievement whatsoever. [See *Pac. Coast Fed’n of Fisherman’s Ass’ns v U.S. Bureau of Recl.*, 426 F.3d 1082, 1091 (9th Cir. 2005) (agency action is arbitrary and capricious where the agency fails to articulate a rational connection between the facts found and the decision made)].

⁵⁴ We note a discrepancy in the number of acres that would be logged in the beach and estuary fringe under Alternative 5. In the body of Appendix D, the Forest Service states that “only 3,550 acres of young-growth are projected to be managed” in beach and estuary fringe under Alternative 5. [2016 TLMP Amendment FEIS at D-14]. However, in a Table on the same page, the agency increased the number of acres to be logged by more than 350 acres. [Id. (showing that the projected harvest over 100 years is 3,903 acres under Alternative 5)].

Selected Alternative. [2016 TLMP Amendment FEIS at D-14, D-18]. And the agency is proposing up to 624 miles of road construction and re-construction (281 for the Selected Alternative) in the beach/estuary fringe and Riparian Management Area. The agency explicitly recognizes in Appendix D that young-growth harvest in the beach and estuary fringe “has the potential to locally decrease buffer width and reduce its effectiveness in facilitating the movement of organisms across the landscape and providing habitat for wildlife species that are negatively affected by edge.” [*Id.* at D-13; *see also id.* at D-17 (repeating assertion with respect to Riparian Management Areas)].

The Forest Service thus faces an uphill climb to reconcile its approach with the Conservation Strategy. The agency notes that it can be “assumed that the integrity of the conservation strategy is maintained when the beach and estuary fringe continues to provide the functions of a transition zone between interior forest and saltwater influences, landscape connectivity, and water quality and habitat benefits to the marine environment.” [*Id.* at D-13 (emphasis added)]. But the agency provides no support for the proposition that by allowing commercial logging and roadbuilding, buffer areas will be able to “continue to provide” their critical connectivity functions. Indeed, the agency should have asked as a question the converse of its assumption: will beach and estuary fringes be able to continue to provide connectivity functions if logging and roadbuilding is permitted within them? The answer is clearly “no.”

The agency recognized in 1997 that “[b]uffer zones along waterways and coasts are clearly important to the success of the plan as well as to the successful conservation of several species of special concern.” [603_0009, at 92]. The size of the buffer zones was a hotly debated topic in the development of the Conservation Strategy. After feedback from the PNW Research Station reviewers clearly demonstrated the need for larger buffer zones, the VPOP team set out to establish corridors between Large reserves of 1,600 feet, and between Large and Medium Reserves of 1,000+ feet. [603_0010 at 10]. Additional feedback from PNW Research Station reviewers specifically disavowed later proposals to reduce corridors to 600-feet in width. [Ref271 at 5]. The 1997 IDT settled on a 1,000-foot beach and estuary fringe area. [603_858 at 6]. PNW Reviewers remained dissatisfied, noting that corridor standards should protect a no-cut zone of 2,000 feet in width. [Ref272-Powell, et al. (1997) at 9]. But the 1,000-foot buffer was incorporated in the 1997 TLMP, and carried forward to the 2008 TLMP Amendment.

What was clear, however, is that whatever the width of the buffers, these would be areas off-limits to commercial logging operations. The VPOP Committee recognized that corridors would be areas “in which logging is not allowed.” [603_0010 at 10].⁵⁵ In summarizing the development of the Conservation Strategy, the Forest Service in Appendix D of the 2008 FEIS explained that the beach and estuary fringe was to be protected as a “1,000-foot no-harvest beach and estuary fringe corridor.” [*Id.* at D-11]. And Appendix D of the 2008 TLMP contains explicit prohibitions on commercial timber harvest within Riparian Management Areas. [See, e.g., 603_1593 at D-6 (“No commercial timber harvest that counts toward the allowable sale quantity is allowed” in the Flood Plain and Glacial Outwash RMA)].

⁵⁵ PNW Research Station reviewers had even commented that “[t]hinning of second-growth, and salvage logging within HCAs and within narrow riparian and seaside buffers should not be allowed. These activities are likely to produce detrimental effects, including compaction and erosion from road building and movement of heavy machinery, destruction of snags and removal of future down woody material that are important to numerous old-growth species.” [603_0010 at 85]. And so the agency protected “buffers,” devoted to “maintaining the integrity of the aquatic and riparian ecosystems.” [603_1592 at D-10].

Simply put then, the agency's approach of permitting commercial logging operations in beach and estuary fringes and Riparian Management Areas stands the entire buffer concept on its head. The agency notes that "Alternative 5 also includes a 200-foot-wide forested buffer along the shoreline adjacent to harvest units which would continue to protect forest in the beach and estuary fringe for connectivity and habitat while the harvested stand matures." [2016 TLMP Amendment FEIS at D-14]. Moreover, the agency postulates that in Riparian Management Areas, "TTRA buffers would maintain elevational connectivity," but offers no support for the proposition that a 100-foot buffer could effectively function as a migration corridor. [*Id.* at D-17].

In fact, the PNW Research Station reviewers specifically pointed out that "[t]here is no evidence" that narrow corridors (consisting of 500-foot beach buffers and 100-foot riparian buffers) "would be effectively used by species of concern, and if they are, that they would not be subject to serious degradation by edge effects including erosion and wind throw." [603_0009 at 84-85; *see also id.* at 87 ("The spider web of narrow riparian and beach buffers may be inadequate to promote effective dispersal among HCAs."); *id.* at 89 ("A streamside buffer of 100 m. wide is recommended when the data suggest this should be 200 m."); *id.* at 96 (riparian and coastal buffer zones should be about 300 meters in width); *id.* at 164 ("So why on earth should buffers be only 100 m on each side of streams?")]. The reality is that "[s]ubstantial barriers to wildlife dispersal already exist on the Tongass National Forest, including steep topography, highly dissected vegetation, and isolation of islands by water." [Ref272-Powell et al. (1997) at 3]. Where "no evidence exists" that even a 600-foot buffer would function adequately for old-growth associated species on the Tongass, [Ref271-Powell et al. (1996) at 5]], the agency's appeal to 100- and 200-foot buffers cannot withstand scrutiny.

The Forest Service also attempts to promote the habitat benefits of logging operations in the corridors previously off-limits to development. In responding to comments such as, "[h]arvesting young-growth forest and building roads in buffers will seriously harm the Conservation Strategy," the agency touts young-growth "treatments" in beach fringe, RMAs, and the Old-growth Habitat LUD, that "should accelerate the stand toward old-growth characteristics. [2008 TLMP Amendment FEIS at I-47. The agency is disingenuous in promoting the habitat benefits of logging in the protected corridors. [See Ref198 - Letter from Kirchhoff to TAC ("Please be forthright. You are proposing to relax standards and guidelines to provide timber to the industry.")].

Indeed, the agency neglects to mention that habitat treatments in corridors and non-development LUDs was expressly permitted under the previous forest plan. Under WILD2.A., the agency was to "[m]anage early seral forest stands for purposes of wildlife habitat development. Allow techniques such as thinning, pruning, and planting to accelerate development of advanced seral structure, including maintenance of shrub and forb understory." [2008 TLMP at 3-62]. In the beach and estuary fringe, BEACH2.II.10 provided that "[w]ildlife habitat restoration of young-growth conifer stands is encouraged to accelerate development of advanced seral structure. Treatments may include thinning of young stands, release, pruning, and fertilization." [*Id.* at 4-5].

Opening up important corridors and non-development LUDs to commercial logging operations is not about facilitating habitat improvements, it is about promoting economic timber sales. [See 2016 TLMP Amendment FEIS at I-48 ("The created openings of up to 10-acres in the Old-growth Habitat LUD, beach buffers and RMAs was to provide more economical offerings . . .")]. Indeed, Alternative 2 calls for clearcutting in the beach and estuary fringe, and Alternative 5 calls for removing up to 35% of the original stand acres, with openings up to 10 acres; these are not habitat "treatments." During a scientific

“consultation” on the 2016 TLMP Amendment, the Forest Service heard from reviewers that while “there may be some potential with commercial thinning to continue that trajectory toward the late seral forest condition and meeting the objectives . . . allowing 33 percent basal area removal (Alt. 2) and removal of up to 35 percent of the original harvested stand and up to 10 acre opening[s] (Alt. 5) would set the area back to ‘type zero’ in terms of the trajectory toward the desired future condition.” [706_05_00176 at 11].

In short, the economics and habitat benefits of commercial logging in the protected corridors are simply not interchangeable. The agency could have carried forward its approach of permitting habitat treatments in the protected corridors, but instead, it chose to open these areas up to commercial logging operations. Ever since the adoption of the Conservation Strategy, commercial logging operations have not been compatible with the buffer concept of the beach and estuary fringes and Riparian Management Areas. The agency’s dramatic change in course with the 2016 TLMP Amendment finds no support in the scientific literature, and more importantly, cannot be reconciled with bedrock principles of the Conservation Strategy. Because the agency has entirely failed to address important aspects of the problem, and has failed to adequately support its conclusions, the agency’s decision is arbitrary, capricious, and contrary to NEPA, NFMA, and the two statutes’ implementing regulations.

cc) Localized impacts are the problem—not a justification

The agency primarily attempts to justify opening up non-development LUDs and critical corridors to commercial logging and roadbuilding by appealing to large geographic scales. This approach was arbitrary. What matters for wildlife conservation purposes—especially for species with small home ranges—are localized impacts. The fact that “forest-wide,” only a relatively small number of acres would be harvested in the beach and estuary fringe does not matter for the species dependent on the critical migrational corridors slated for logging. A further problem of measuring the impacts of the 2016 TLMP Amendment on forest-wide statistics is that the agency entirely overlooks the functionality of individual components of the Conservation Strategy, like specific OGRs. The system of OGRs was “spatially explicit,” meaning that the size and spacing of individual reserves, and the connectivity between them, was critical to the functionality of the strategy as a whole. [See *generally* 2008 TLMP Amendment FEIS Appendix D]. That only 0.3% of the forestland acres in OGRs will be subject to commercial logging operations on the North Central Prince of Wales Biogeographic Province under Alternative 5 says nothing about the individual OGRs that will be opened-up to logging, and whether their functionality would be retained.

Furthermore, by looking at the impacts of the 2016 TLMP Amendment in isolation, the agency masks overall impacts. The overall functioning of the interconnected Conservation Strategy system depends on the how well each of the elements interact. An isolated reserve may have some habitat value, but for purposes of the Conservation Strategy, it was recognized that ensuring connectivity to and from reserves and along protected riparian areas and shorelines was critical to the effectiveness of the strategy. As the agency itself has explained, “It is important to note that although individual components of the conservation strategy were designed to serve a specific function, it is the integration of all these components that makes the conservation strategy fully functional.” [603_0007, at 2]. Thus while the agency in Appendix D disclosed separately the young-growth harvest acres in OGRs, non-development LUDs, beach and estuary fringes, and RMAs, it should have assessed explicitly the total amount of harvest and road-building within areas previously off-limits to development

Throughout Appendix D, the agency recites that there “may be localized reductions in the ability of the beach and estuary fringe to function as intended under the conservation strategy under each of the alternatives but Forest-wide effects would not measurably reduce the functioning of this contributing element of the conservation strategy.” [2016 FEIS App. D-15; *see also id.* at D-17 (same with respect to RMAs); *id.* at D-17]. The agency also compares, within each biogeographic province, *the amount of young-growth to be harvested* within OGRs, other non-development LUDs, beach and estuary fringes, and Riparian Management Areas *to the total amount of acres* of those same conservation components. [See *id.* at D-11, D-12, D-16, D-18–19]. At CONS-1, the agency notes that “[f]orest-wide, suitable acres of young growth in the beach fringe, RMA, and Old-growth Habitat LUD are about 2 percent, 4 percent, and 3 percent of the total acres in that component, respectively.” [*Id.* at I-42].

The result is seemingly small numbers, but this view of the actual level of impacts is distorted. Under Alternative 5, the agency finds that only 0.6% of the total amount of forest land in Riparian Management Areas in the North Central Prince of Wales Biogeographic Province will be harvested. But that figure masks entirely the spatial extent of impacts.⁵⁶ For example, because the 2016 TLMP Amendment retains the 100-foot TTRA buffer, the 2016 TLMP Amendment only applies to those RMAs with a larger buffer (for certain stream classes, up to an additional 40 feet). Thus, if logging is occurring only within a 40-foot buffer, there is the potential for logging a significant amount of linear miles along stream courses. Missing from the Forest Service’s analysis is any explanation of the number of RMAs that would be open to harvest, and where they are located. [See *WildEarth Guardians v. Montana Snowmobile Ass’n*, 790 F.3d 920, 926 (9th Cir. 2015) (NEPA violation on facts showing a lack of disclosure of critical site-specific information in the FEIS: “the Wildlife Habitat section of the EIS lists the percentage of big game winter range protected in each landscape area, but provides virtually no information about where the big game winter range is actually located, nor the concentration of game in each area”)].

Moreover, the agency’s isolated 0.6% figure does not take into account the 815 acres of young-growth logging within beach and estuary fringes, or the 622 acres of young-growth logging within the Old-growth Habitat LUD in the North Central Prince of Wales Biogeographic Province. In other words, the agency is not looking at the “integration of all these components that makes the conservation strategy fully functional.” [603_0007, at 2]. The agency’s conclusion thus rings particularly hollow that “there may be localized reductions in the ability of the RMAs to function as intended under the conservation strategy under each alternative, but Forest-wide effects would not measurably reduce the functioning of this contributing element of the conservation strategy.” [2016 TLMP Amendment FEIS at D-17]. [See 769_05_000839 (Suring 2015, an invited review of the Conservation Strategy) at 5 (“Total amount of habitat, even within biogeographic provinces, can be deceiving; [the] amount needs to be linked with size of patches, distribution of patches, and connectivity (i.e., these elements should not be considered subordinate to amount).”).

The agency concludes Appendix D with its overarching position on the “integrity” of the Conservation Strategy, noting that the “substantially greater spatial extent of old-growth forest on the landscape and fewer roads across the planning area would outweigh the local, adverse effects of young-growth harvest proposed in the Old-growth Habitat LUD, the beach and estuary fringe, and RMAs.” [2016 TLMP Amendment FEIS at D-20]. In other words, the agency’s position is that because there are more areas outside of reserves that have not been

⁵⁶ This point applies with equal force to the agency’s approach to disclosing impacts for OGRs, other non-development LUDs, and the beach and estuary fringe.

logged (by virtue of the Roadless Rule and the decline of the timber industry), the Conservation Strategy is “functioning under conditions that represent stronger conservation practice than anticipated at the time of its development.” [*Id.*]. The agency misunderstands the Conservation Strategy by offering this non sequitur. Just because there are more old-growth acres generally across the Tongass, it does not follow that the *Conservation Strategy* is functioning more strongly, or that it was adequate in the first place.

The Conservation Strategy was based on a mapped design that specifically integrated landscape-level and site-specific features. Put differently, it was deliberate in identifying conservation features at specific intervals across the Tongass. Indeed, “the size, design, and habitat quality of habitat reserves [are] critically important if well-distributed and viable populations of wildlife species are to be maintained.” [Ref272-Powell, et al. (1997) at 3]. In comparison to the methodical approach to the size, spacing, and distribution of the Conservation Strategy features across the Tongass, the agency now appeals to the additional old growth across the landscape—of arbitrary size, spacing, and distribution. These are not interchangeable.

Lowell Suring, a principal drafter of the Conservation Strategy, specifically commented on the agency’s statement that, “[i]n addition to formal Old Growth Reserves, the evaluation must consider the potential contribution of formal Roadless Areas.” [769_05-000839]. His response: “Probably not, unless the Roadless Areas are part of the Conservation Strategy and in most instances, they probably are not.” PNW Research Station reviewers back in 1997 held similar sentiments: “TLMP documents defend this approach in large measure by pointing to the absolute number of acres that will not be directly logged. This analysis ignores the adverse consequences of fragmenting habitat. Highly fragmented habitat may provide little or no benefit for many wildlife species.” [Powell, et al. (1997) at 2].

In sum, the Forest Service justifies the intrusion into areas protected by the Conservation Strategy by citing to the additional acres of old growth on the Tongass. But the appeal to “absolute acres” really has no bearing on the integrity of the Conservation Strategy, which depends on the size, spacing, distribution, and composition of core habitat elements for its overall functionality. The agency’s approach to measuring the integrity of the Conservation Strategy is arbitrary, capricious, and contrary to NEPA, NFMA, and the two statute’s implementing regulations. See *Pac. Coast Fed’n of Fishermen’s Ass’ns v. Nat’l Marine Fisheries Serv.*, 265 F.3d 1028, 1035–37 (9th Cir. 2001) (holding that an agency cannot try to ‘minimize’ the environmental impact of an activity by simply adopting a scale of analysis so broad that it marginalizes the site-specific impact of the activity on ecosystem health)].

ii) The 2016 TLMP Amendment alters the Conservation Strategy and implicates Section 219.9 of the 2012 Planning Rule.

As we clearly establish above, the 2016 TLMP Amendment makes significant and enduring changes to the Conservation Strategy. The agency admits that there will be “localized impacts” to contributing elements like OGRs, beach and estuary fringes, and RMAs. Although the agency concludes (without support) that the “integrity” of the Conservation Strategy will be maintained, that conclusion does not change the fact that the 2016 TLMP Amendment clearly implicates wildlife, thus making subsection 219.9 of the 2012 Planning Rule clearly applicable.

The agency abruptly concludes in the Response to Comments that the 2016 TLMP Amendment would not “change” the Conservation Strategy, and so does not require application of 219.9. [2016 TLMP Amendment FEIS at I-26]. The draft ROD similarly

concludes: “Because the Selected Alternative maintains the integrity of the Conservation Strategy it does not require the application of section 219.9.” [2016 TLMP Amendment draft ROD at 18]. This reasoning is severely flawed for three principal reasons.

For one, as discussed in detail throughout this objection, the agency’s conclusion about maintenance is assumed, not proven. The agency has not undertaken any effort to reevaluate the integrity of the Conservation Strategy despite its age, questionable scientific underpinnings, and a series of contemporary scientific studies casting serious doubt on its functionality for certain species. And now, with the 2016 TLMP Amendment, the agency is dramatically altering the Conservation Strategy’s very foundation. Where the Conservation Strategy focused on setting aside protected blocks of habitat—i.e., areas that were off limits to commercial logging operations, [see, e.g., 1997 TLMP FEIS at 2-5]—the agency is now opening these areas up to commercial young-growth logging operations. In short, simple assumptions about the integrity of the Conservation Strategy do not serve as a valid basis for dismissing the need to apply subsection 219.9. [See *Motor Vehicle Mfrs. Ass’n. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (agency must provide a rational connection between the facts and the decision)].

Second, whether or not the integrity of Conservation Strategy will be maintained is not actually dispositive of the question of whether subsection 219.9 is applicable. The agency concluded that the timber, renewable energy, and transportation and utility corridor provisions were “applicable” to the 2016 TLMP Amendment because the agency was adding new plan content related to those subjects. But the 2016 TLMP Amendment “adds standards to protect the Aleutian Tern and black oystercatcher, which were identified as sensitive species since the plan was last amended.” [2016 TLMP Amendment FEIS at I-27]. Why was subsection 219.9 also not “applicable?”

Moreover, there can be no dispute that the new plan content related to timber, renewable energy, and transportation and utility corridors will affect wildlife. Indeed, the agency admits that allowing young-growth logging in OGRs, beach and estuary fringes, and RMAs will have “localized impacts” on the Conservation Strategy, and by extension old-growth dependent species. The intent behind the 2012 Planning Rule was that its substantive provisions would be applied harmoniously. [See, e.g., 36 C.F.R. § 219.11 (“While meeting the requirements of §§ 219.8 through 219.10, the plan must include components, including standards or guidelines, and other plan content regarding timber management within Forest Service authority and the inherent capability of the plan area.”)]. The agency had a duty to develop plan content regarding timber, renewable energy, and transportation and utility corridors in a manner that accorded with the substantive provisions of subsection 219.9.⁵⁷

In a last-ditch effort to excuse its failure to apply subsection 219.9, the agency suggests that the 2016 TLMP Amendment will be “at least as protective as 36 CFR 219.9.” [2016 TLMP Amendment FEIS at I-26; see also 2016 TLMP Amendment draft ROD at 18].

⁵⁷ An example serves to illustrate this point. 36 C.F.R. § 219.11(a)(1) relates to the identification of lands not suitable for timber production. The agency must identify lands not suitable for timber production if timber production “would not be compatible with the achievement of the desired conditions and objectives established by the plan for those lands.” [*Id.* § 219.11(a)(1)(iii)]. The exercise of applying subsection 219.9’s wildlife requirements was a required first step before determining which land were not compatible with timber production. Indeed, OGRs, beach and estuary fringes, and RMAs were previously found to be incompatible with timber production under the 1997 TLMP and 2008 TLMP Amendment developed under the 1982 Rule. The agency thus has no regulatory basis for changing its suitability determinations.

The 2012 Planning Rule establishes a very specific and deliberate approach to ensuring ecosystem integrity and diversity. It requires the agency to develop plan components to “maintain or restore the ecological integrity of terrestrial and aquatic ecosystems.” [36 C.F.R. § 219.9(a)(1)]. Amongst other obligations, it requires the agency to develop plan components to “maintain or restore the diversity of ecosystems and habitat types throughout the plan area.” [Id. § 219.9(a)(2)]. It requires the agency to develop additional, species-specific standards and guidelines to “contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern within the plan area.” [Id. § 219.9(b)(1)].

In short, subsection 219.9 sets forth a comprehensive methodology, a “complementary ecosystem and species-specific approach to maintaining diversity of plant and animal communities and the persistence of native species in the plan area.” Here, the agency has ignored that comprehensive methodology and replaced it with assumptions about the integrity of the Conservation Strategy. This approach is arbitrary, capricious, and contrary to NFMA. [See *Lands Council v. McNair*, 537 F.3d 981, 994 (9th Cir. 2008) (en banc) (“The Forest Service must explain the conclusions it has drawn from its chosen methodology, and the reasons it considers the underlying evidence to be reliable.”)].

Because the 2016 TLMP Amendment clearly implicates wildlife, the agency had a duty to apply the substantive provisions of subsection 219.9. The failure to do so constitutes a violation of NFMA.

iii) The changes to the Conservation Strategy cannot be reconciled with the agency’s wildlife viability obligations.

Because the agency chose not to apply the 2012 Planning Rule’s substantive provisions with respect to wildlife management, the agency was obligated to demonstrate how the 2016 TLMP Amendment is consistent with the 1982 Rule. The agency did not provide this required consistency analysis, and therefore, the 2016 TLMP Amendment was adopted unlawfully. [See *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 961 (9th Cir. 2002) (“In providing for multiple uses, the forest plan must comply with substantive requirements of the Forest Act designed to ensure continued diversity of plant and animal communities and the continued viability of wildlife in the forest, including the requirement that “wildlife habitat shall be managed to maintain viable populations of existing native and desired nonnative vertebrate species in the planning area.”) (citing 16 U.S.C. § 1604(g)(3)(B); 36 C.F.R. § 219.19(1999))]. The agency offers several conclusory assertions regarding its NFMA duties, but all of them are wide of the target. The agency has not provided the level of analysis necessary to demonstrate that viable, well-distributed populations of wildlife species will be maintained on the Tongass.

First, there can be no dispute that the agency did not provide a specific evaluation of the ability of the 2016 TLMP Amendment alternatives to provide for wildlife viability on the Tongass. The agency relies heavily on the viability assessments of the 1997 TLMP FEIS. [See, e.g., 2016 TLMP FEIS at I-75 (“A thorough viability analysis was conducted during the 1997 Forest Plan revision.”)]. But it was arbitrary, capricious, and contrary to NFMA to rely on decades-old viability analyses without any explanation or assessment as to why those analyses remain relevant and scientifically sound. [See *Lands Council v. McNair*, 537 F.3d 981, 994 (9th Cir. 2008) (holding that “the Forest Service must support its conclusion that a project meets the requirements of the NFMA and relevant Forest Plan with studies that the agency, in its expertise, deems reliable. The Forest Service must explain the conclusions it has drawn from its chosen methodology, and the reasons it considers the underlying evidence to be reliable”)].

The agency's only justification as to the reliance on the outdated viability assessments is that its projections from 1997 must be conservative, given the fact that logging has occurred at lower levels than expected in 1997. This justification is nothing more than a non sequitur. The agency points to no scientific studies, empirical data, or any other evidence to show that the Conservation Strategy—on which the viability assessments were based—was valid at the time of its adoption, or that it has functioned as intended over the last 20 years. [See Ref298-Smith 2016(a) at 4 (explaining the significant flaws of the viability assessments)]. In fact, the only reliable data on the subject show just the opposite. [See 769_05_0918 (USFWS 2015) (finding regulatory mechanisms inadequate for the GMU 2 wolf population; 769_05_000530 (Smith (2013) at 6 (“[The findings of this study increase uncertainty that northern goshawk breeding-season habitat objectives are being met in managed landscapes of Southeast Alaska”); 603_3344 (Smith and Person 2007) (concluding that small OGRs do not have a high probability of supporting flying squirrel populations in isolation for long periods of time)].

Second, the agency extrapolates from the “conservative” viability assessments to cobble together viability conclusions for the 2016 TLMP Amendment. The agency offers the banal suggestion that because the agency predicted the forest plan would maintain viable populations in 1997, and because less old-growth logging has occurred than was predicted in 1997, the 2016 TLMP necessarily will necessarily maintain species' viability. The agency's flawed, syllogistic reasoning is arbitrary, capricious, and contrary to NFMA for the same reasons just described. If the agency has no basis to suggest that the Conservation Strategy—and thus the viability assessments—was valid at the time of its adoption and has no basis to suggest that the Conservation Strategy currently is functioning as intended, then the agency simply has no basis to make any conclusions about the integrity of the Conservation Strategy—regardless of whether or not there is more old-growth on the landscape today.⁵⁸

Third, the agency actually goes one step further, relying on an additional set of assumptions. The agency cites uncritically the assumptions that “if the integrity of the [Conservation Strategy] is maintained, there is a high likelihood that the Forest Plan Amendment would continue to provide habitat sufficient to support viable well-distributed wildlife populations and therefore maintain the diversity of plant and animal communities.” [2016 TLMP Amendment draft ROD at 23 (emphasis added)]. The agency continues: “if the Forest Plan Amendment maintains the key habitat factors identified as important to maintaining viability by the panel assessments for each species or species group, then there is a high likelihood that the Forest Plan Amendment would be at least as likely as the 2008 amended Forest Plan to maintain viable, well-distributed populations of these species or species groups in the planning area.” [*Id.* (emphasis added)]. The agency determined, based on these assumptions, that none of the 2016 TLMP Amendment alternatives would compromise the integrity of the Conservation Strategy—due to more absolute acres of old growth across the Forest, and the fact that the Conservation Strategy's coarse filter/fine filter approach would only be subject to “localized impacts.” [See *id.*; see generally 2016 TLMP Amendment Appendix D].

The agency's conclusions crumble where the predicate assumptions are unproven. For one, there is simply no basis to assume the maintenance of integrity of the Conservation

⁵⁸ We underscore a point made throughout this objection letter that the agency's appeal to the absolute number of acres that have not been harvested since 1997 actually has no bearing on the Conservation Strategy, the integrity of which depends on habitat composition and distribution across the landscape.

Strategy—historically or at present. [See Ref298-Smith 2016a at 3 (explaining that there was no credible science at the time of the 1997 TLMP supporting an expectation that habitat reserves and other undeveloped areas in a managed matrix could sustain wolves, marten, or endemic small mammals; *id.* at 3–4 (explaining that the only credible science that exists does not support key assumptions of the Conservation Strategy specific to northern goshawks or northern flying squirrels)]. In addition, there is simply basis to assume the maintenance of “key habitat factors” (*i.e.*, the Conservation Strategy’s contributing elements) where the 2016 TLMP Amendment opens up previously off-limit areas to commercial logging operations.

Indeed, the habitat elements of the Conservation Strategy were defined as the “minimum” necessary to support viable populations as required by the 1982 Rule. [603_1323 at 2; *see also* 603_0010, at 9 (Conservation Strategy was developed to “maintain *minimum* amounts of habitat necessary to maintain viable populations, well distributed across the Tongass National Forest”)]. If these elements represent the viability “floor,” the agency cannot—consistent with its NFMA obligations—authorize an intrusion into the contributing elements of the Conservation Strategy. As Dr. Winston Smith points out,

all modifications to the TLMP-WCS that do not demonstrably increase habitat, improve functional connectivity, or reduce fragmentation or landscape resistance to movement will almost certainly substantially increase the risk to wildlife viability across the planning area. Therefore, it follows that any forest plan amendment or revision that proposes to continue harvesting old-growth or impose clearcut logging within any of the conservation elements, such as second-growth stands in buffers, will require a comprehensive analysis of the 1997 TLMP Wildlife Conservation Strategy.

Dr. Smith’s conclusions are empirically derived; the Forest Service’s are based on unsupported assumptions. Without any comprehensive analysis, the agency has simply assumed viability. NFMA and the 1982 Rule require more certainty:

Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.

36 C.F.R. § 219.19 (2000).

Finally, in the FEIS and draft ROD, the agency also offers a novel suggestion about the maintenance of viability. The agency suggests that it can provide ecological conditions to support viable populations of fish, plants, and wildlife by maintaining “20 to 50 percent of the habitat on the landscape.” [2016 TLMP Amendment draft ROD at 22]. The agency cites Fahrig (1997, 1999, 2003), Flather et al. (2002), and Andren (1994) for this proposition, but provides no explanation as to which species those studies covered, or whether the studies are even applicable to the Tongass.⁵⁹ The agency notes blandly that “all of the biogeographic

⁵⁹ In any event, the agency notes that the studies show that after reaching this threshold, the “likelihood of extinction” may increase. That makes these studies entirely irrelevant. NFMA’s viability provisions kick in well before there is any risk of extinction. The Forest Service manages for viable populations to prevent the need for listing under the Endangered Species Act. [2016 TLMP Amendment at 2-1 (“Viable populations of sensitive and rare species and their habitats are considered and maintained as to preclude the need for listing species as threatened or endangered.”)].

provinces on the Tongass would maintain at least 57 percent of the original (1954) POG.” [2016 TLMP Amendment FEIS at 3-289]. The agency makes no effort to apply this generic statement to any actual wildlife species.

While the agency “may meet wildlife viability requirements by preserving habitat, it may only do so where both the Forest Services’ knowledge of what quality and quantify 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.” [*Lands Council v. McNair*, 537 F.3d 981, 998–99. General statements about “habitat on the landscape,” unthured to the needs of any old-growth dependent species on the Tongass, is plainly not sufficient under NFMA.

c. Conclusion and suggested resolution

The 2016 TLMP Amendment was adopted unlawfully, and the FEIS and draft ROD are arbitrary, capricious, and contrary to NEPA, NFMA, and their implementing regulations. We request that all of the amended Standards and Guidelines that implicate the wildlife and the Conservation Strategy (which likely is most all of the new plan content) are removed from the 2016 TLMP Amendment, until the agency goes back and either (1) applies all of the substantive provisions of the 2012 Planning Rule; or (2) establishes how the 2016 TLMP Amendment is consistent with the 1982 Rule.

5. Objection Point 23. The Forest Service failed to specifically discuss and respond to responsible opposing views in the FEIS.⁶⁰

NEPA places an affirmative duty on every agency to “discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency’s response to the issues raised.” 40 C.F.R. § 1502.9(b). This requirement ensures that the agency makes “available to the public high quality information, including accurate scientific analysis, expert agency comments, and public scrutiny, before decisions are made and actions are taken.” [*Western Watersheds Proj. v. Kraayenbrink*, 632 F.3d 472, 492 (9th Cir. 2011) (citing *Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157 (9th Cir. 2003))]. As the Ninth Circuit has made clear, the FEIS must “disclose and discuss responsible opposing scientific viewpoints in the final statement.” [*Ctr. for Biological Diversity*, 349 F.3d at 1168].

Here, the FWS, State of Alaska, Dr. Winston Smith, and others provided specific feedback to the Forest Service on the proposed 2016 TLMP and DEIS, and yet their expert opinions were not specifically disclosed in the FEIS. The agency’s lack of disclosure of key scientific opinions and information violates NEPA and 40 C.F.R. § 1502.9(b).

There can be no dispute that the views of Dr. Smith and the FWS are “responsible.” Dr. Smith was a member of the PNW Research Station team specifically assigned to review and analyze all information used to address wildlife viability issues for the 1997 TLMP. [Ref298 – Smith (2016a) at 1)]. Over the following 10 years, he designed and implemented

Under the ESA, an “endangered species” is one “which is in danger of becoming extinct throughout all or a significant portion of its range,” while a “threatened species” is “likely to be come an endangered species within the foreseeable future.” 16 U.S.C. § 1532(6), (20). If NFMA only required that a species does not face a “likelihood of extinction, the protections of the ESA would kick in long before NFMA ever imposed substantive limitations on the management of Forest Service lands. Just the opposite is true.

⁶⁰ This issue is one “that arose after the opportunities for formal comment.” 36 C.F.R. § 219.53(a).

experimental research testing critical underlying assumptions of the Conservation Strategy, the findings of which were presented at scientific conferences and published in numerous articles in national and international peer-reviewed journals. [*Id.*]. Indeed, Dr. Smith’s CV demonstrates that he is a recognized expert in wildlife ecology with a special emphasis on forest habitats. [Ref301 – Smith (2016d)]. The FWS is the expert wildlife agency. In the draft ROD, the Forest Service states that information from the “U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service was [the] best available scientific information because it was accurate, reliable, and relevant.” [2016 TLMP Amendment draft ROD at 33].

Nor can there be any dispute that the views of Dr. Smith and the FWS were not “adequately discussed” in the DEIS. The DEIS does contain citations to some of Dr. Smith’s work in the body of the document, and cites some of Smith’s publications in the References. [See 2016 TLMP Amendment DEIS at 3-112 (“[A] recent study suggests that some uncertainty remains with respect to the ability of the Forest Plan conservation measures to contribute sufficient habitat to sustain well-distributed, viable populations of northern goshawks throughout Southeast Alaska.”]. And Appendix D of the DEIS cites two of Dr. Smith’s studies in mentioning generally that some studies since 2008 showing that a review of the efficacy of the original conservation strategy “may” be warranted. [*Id.* at D-4].

But these limited and equivocal statements do not rise to the level of disclosure that NEPA requires in order to inform the public of and the decisionmaker of scientific controversy. [See 40 C.F.R. § 1502.9(a) (“The agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view of the environmental impacts of the proposed alternatives including the proposed action.”)]. And the DEIS contains no disclosure of the FWS’s views on the Conservation Strategy—despite that agency being elevated to “cooperating agency” status for the NEPA process. [See *id.* § 1501.6].

Both Dr. Smith and the FWS submitted extensive comments on the DEIS that specifically questioned the Forest Service’s views on the integrity of the Conservation Strategy, and the impacts of 2016 TLMP Amendment on the functioning of contributing elements of the Conservation Strategy. [See 40 C.F.R. § 1502.9(b) (agency must address “opposing views” in the FEIS)]. For example,⁶¹ as to the agency’s refusal to fully re-evaluate the integrity of the Conservation Strategy, Dr. Smith characterized the agency’s approach as “fundamentally flawed.” [Ref298 – Smith (2016a) at 1].⁶² And where the Forest Service offered the conclusory assertion in the FEIS that “under all alternatives the integrity of the conservation strategy would be maintained,” [2016 TLMP Amendment FEIS at D-21], the FWS in its DEIS Comments raised its concern that “some elements of the proposed action, or the Forest Service’s preferred alternative, could significantly weaken the conservation strategy, conflicting directly with the expectation stated in the NOI.” [FWS DEIS Comments at 2 (emphasis added)].

The Forest Service proceeded under the assumption that the integrity of the Conservation Strategy would be maintained under any of the alternatives, but Dr. Smith

⁶¹ These examples are illustrative, not exhaustive, in line with the direction from Objection Regulations to provide a “concise statement explaining the objection.” [36 C.F.R. § 219.54(c)(6)]

⁶² In addition to the comments he submitted [Refs298 to 300], due to his unique and in-depth experience Dr. Smith should have been consulted by the Forest Service concerning the Conservation Strategy, at the time it requested reviews by Drs. Roloff, Suring and Schmiegelow. [769_05_0838 through 0840; see also _0837].

pointed out that there is no scientific basis to assume that the Conservation Strategy is actually working at all:

To date, there is no published credible science that supports a conclusion that the TLMP-WCS is working as expected for any one (much less the suite) of concerned wildlife species or groups. Indeed, the only credible science that exists does not support the key assumptions of the [Conservation Strategy] specific to northern goshawk (Smith 2013) or northern flying squirrels (Smith and Person 2007, Smith et al. 2011).

[Ref298 – Smith (2016a) at 3–4]; *see also*: Ref299 (Smith 2016b) and Ref300 (Smith 2016c), respectively concerning deficits in the Conservation Strategy regarding endemic small mammals (with the POW flying squirrel as a specific example) and northern goshawks.

On the specific alterations permitted by the 2016 TLMP Amendment with respect to OGRs, RMAs, and the beach and estuary fringe, FWS underscored the importance of corridors, and challenged the Forest Service to provide a scientific basis for its management changes. FWS expressly noted, “[m]anagement actions that reduce long-term habitat values (by clearcutting in riparian areas, beach fringe, or OGRs) or disrupt movement of animals through logged landscapes could undermine the intent and functioning of the conservation strategy. We recommend against allowing such actions, which we believe seriously compromise the integrity of the conservation strategy.” [FWS DEIS Comments at 3]. The Forest Service provided no such scientific support in the FEIS.

Where the Forest Service noted that the 2016 TLMP Amendment would lead only to “localized reductions” in the ability of critical components of the Conservation Strategy to function, [See 2016 TLMP Amendment FEIS at D-15], Dr. Smith explained that it is impossible to evaluate the impact to one element of the Conservation Strategy without simultaneously evaluating the implications for all of the other component parts. [Ref298 – Smith (2016a) at 1]].

On species-specific issues, the agency’s disclosure and response also was inadequate. For example, where the DEIS cited one of Dr. Smith’s publications, the agency injected unwarranted uncertainty over the results. [2016 TLMP Amendment DEIS at 3-233 (“However, many reserves on Prince of Wales Island may be too small or spaced too far apart to support Prince of Wales flying squirrels over the long term or maintain functional connectivity to support a back-and-forth exchange between flying squirrel populations (Pyare and Smith 2005, Smith et al. 2011).”]. In his DEIS comments, Dr. Smith specifically critiqued the agency’s characterization, explaining that the narrative was misleading with respect to the implications of studies which had reported “deficiencies and uncertainties in the ability of the Tongass Wildlife Conservation Strategy to function as intended, with compelling, credible (i.e., published in peer-reviewed journals) scientific evidence contradicting fundamental assumptions” [Ref298-Smith (2016a) at 2]. However, the FEIS repeats the exact same language as the DEIS—without any additional explanation or clarification. And the Response to Comments make no mention of Dr. Smith’s specific critiques.

Where Appendix D of the DEIS concluded that “components of the old-growth ecosystem are maintained through standards and guidelines designed to provide for important ecological functions such as dispersal of organisms, movement between forest stands, and maintenance of ecologically valuable structural components,” [2016 TLMP Amendment DEIS at D-2], Dr. Smith specifically commented that these assertions “are without merit because of the absence of supportive evidence for most wildlife species and because it is unsupported by published credible science on endemic small mammals (i.e. northern flying squirrels; Pyare et al. 2010, Smith et al. 2004, 2011).” [Ref298-Smith (2016a) at 3]. But again, the FEIS carries forward the exact same language, without any additional explanation or explanation, and Dr.

Smith's specific critiques are absent from the body of the FEIS or the Response to Comments.

In sum, scientific experts in the field provided feedback on the Forest Service's draft forest plan and DEIS that specifically disputed the Forest Service's core assumptions about the integrity of the Conservation Strategy, and the potential for the changes made by the 2016 TLMP Amendment to impact the functionality of the Conservation Strategy.

In its FEIS, the agency "must respond explicitly and directly to conflicting views in order to satisfy NEPA's procedural requirements." See *Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1172 (9th Cir. 2006) *abrogated in part on other grounds*, *Winter v. Natural Res. Def. Council*, 555 U.S. 7 (2008)). When an agency solicits public comment, "and then offers no meaningful response to serious and considered comments by experts, the agency renders the procedural requirement meaningless and the EIS an exercise in form over substance." *W. Watersheds*, 632 F.3d at 492-93 (citations omitted). Here, the FEIS is devoid of any mention of the substantive concerns raised by expert agencies and scientists. But the agency has an obligation under federal law to disclose to the public the full range of scientific views and to fully and fairly discuss them before making a final decision. The Forest Service's failure to disclose opposing views renders the FEIS invalid under NEPA and its implementing regulations.

6. Objection Point 24. The Forest Service has Violated 36 C.F.R. § 219.3 By Failing to Consider the Best Available Science in Amending the TLMP

a. Statement referencing prior comments and content of objection and explaining how decision and/or analysis violate law or regulation.

Our DEIS Comments explained that the agency must consider and explain the "best available science" to inform the amendment process. [DEIS Comments at 28, 30-31, 38, 45, 67-68, 84, 98-99, 124, 127, 135, 154, 156-57]. We also pointed out that the FWS submitted comments urging the Forest Service to use the "best available science" in managing goshawk nesting habitats and in considering changes to the Conservation Strategy to allow logging in OGRs, RMAs, and beach and estuary fringes. [See generally FWS Comments]. Dr. Winston Smith similarly explained in his DEIS Comments that the agency must apply the best science available. [Ref298-Smith (2016a) at 2]. The Objection Point above concerning disclosure of expert opinions dovetails with this Objection Point, and we incorporate those points here by reference.

The Forest Service has failed to meet its duties under 36 C.F.R. § 219.3, despite parroting the language of the regulation. The agency responded comments over the best available science requirement at BAS-1. [2016 TLMP Amendment FEIS at I-58]. There, the agency notes that the "record of decision (ROD) will include documentation of how the best available scientific information was used to inform planning, the plan components, and other plan content" [*Id.*]. The agency also notes "numerous refinements and updates were made to the EIS between the DEIS and the FEIS," but the agency does not provide citations to specific page numbers or sections of the FEIS. [*Id.*]. The agency's Response to Comments also referenced the Wildlife and Biodiversity sections of the FEIS Appendix D, the 1997 Forest Plan, and "the Interagency Forest Plan Conservation Strategy Review (USDA Forest Service 2007) conducted for the 2008 Forest Plan Amendment." [*Id.*]. The agency concluded in BAS-1 that "[i]nformation from [new science], other relevant studies and other best available science would be used to review the Conservation Strategy design if in the future, data from various sources suggest that the Conservation Strategy is no longer functioning as originally intended." [*Id.*].

Meeting the best available science requirement requires more than citing outdated reports, providing hollow references to “refinements and updates,” and promising to review relevant scientific information in the future.

b. Statement of supporting reasons.

The Forest Service did not use “best available science” to inform the TLMP Amendment process. [See 36 C.F.R. § 219.3 (2012) (The Forest Service “*shall* use the best available scientific information to *inform* the planning process”) (emphasis added.)]. Our objection here is threefold. First, the agency has not explained how best available science supports its decision to continue relying on the Conservation Strategy 20 years after its development. Second, the agency has failed to explain how the changes to the Strategy—to allow logging in OGRs, RMAs, and beach/estuary fringe—are supported by the best available science. Third, the agency failed to even consider a large body of relevant scientific information, and selected from an improperly narrow pool of “available science” for the purposes of 36 C.F.R. § 219.3.

In the Response to Comments, the agency notes that it will inform the public of its best available science documentation in the Record of Decision. [2016 TLMP Amendment FEIS at I-58]. But in the draft ROD, the Forest Supervisor passes again passes the buck: “the interdisciplinary team reviewed the information available concerning the issues analyzed in the EIS and determined what information was most accurate, reliable, and relevant to disclosing the effects of the alternatives. That information is cited in the Final EIS.” [2016 Draft ROD at 33]. But the FEIS contains no section on the “best available science,” meaning the public is simply asked to take at face value the fact that the “best available science” was applied. The 2012 Planning Rule requires more. [36 C.F.R. § 219.3 (“The responsible official shall document how the best available scientific information was used to inform the assessment, the plan decision, and the monitoring program.”) (emphasis added)].

i) The Forest Service has not shown that the best available science supports its decision to not reconsider the Conservation Strategy

Rather than demonstrating specifically how the best available science was integrated into the planning process, and explaining why the best available science supports its decision, the Forest Service asks the public to trust its assumptions. In particular, the agency has decided to *assume* that the Conservation Strategy is working as intended, and therefore, has decided a review of the integrity of the Conservation Strategy—based on the best available science—is not necessary. In essence, the agency punts its duty to apply the best available science to some unspecified, future date. [See 2016 TLMP Amendment FEIS at D-5 (noting that the “best available science *would be used* to review the conservation strategy design if, *in the future*, data from various sources suggest that the conservation strategy is no longer functioning as originally intended. However the results of the analysis in this appendix indicate the conservation strategy currently functions as intended and is expected to function regardless of which alternative is selected.”) (emphasis added)]. In fact, although the agency asserts “the results of the analysis in [Appendix D]” show the Strategy is working, [*id.*], the agency never actually weighs *any science* in this determination. Instead, the agency repeatedly “assumes” the Strategy has ensured and will continue to ensure wildlife viability. [See *id.* at D-2, D-3, D-6, D-9, D-13, D-17].

In the section of Appendix D titled “Acknowledgement of New Science,” the agency never explains how its decision to continue relying on the Conservation Strategy is consistent with

the best available science. [2016 TLMP Amendment FEIS at D-3–5]. The Forest Service cites several studies apparently showing “additional considerations” about the needs of old-growth dependent species, but the agency chooses not to analyze them or apply their results to the 2016 TLMP Amendment planning process. This choice to effectively ignore the best available science regarding the integrity of the Conservation Strategy violates 36 C.F.R. § 219.3.

ii) The Forest Service did not rely on the best available science in changing key components of the Conservation Strategy

Moreover, the agency failed to acknowledge or apply the best available science with respect to its decision to open “non-development” areas of the Tongass to commercial logging operations. 36 C.F.R. § 219.3 requires the agency to identify the best available science regarding its decisions, explain its determination of what science is the “best available,” and explain the application of that science to the agency’s decision. Appendix D contains the agency’s discussion of changes to the Strategy that would allow logging in OGRs, RMAs, and beach/estuary fringe, yet nowhere in this section of the agency’s analysis do we find the term “best available science.” [See 2016 TLMP Amendment FEIS App. D-7–22]. Simply put, the agency has provided no scientific support for the proposition that allowing commercial logging operations in OGRs, beach and estuary fringes, and RMAs will maintain the integrity of the Conservation Strategy.

Several examples illustrate this point. Where the agency proposes an “upland” corridor, intended to mimic the habitat contributions of the beach and estuary fringe, the agency cites no scientific support for its proposal. Given that the explicit purpose of the fringe is to provide “a transition zone between upland forest and saltwater influences,” any effort to replace these shoreline fringes with upland corridors is contrary to logic—and not supported by any science.

In addition, where the agency concludes that the changes to the Conservation Strategy will result only in “localized reductions”—thus maintaining the “overall” functionality of the Conservation Strategy, the agency cites no scientific support for its conclusion. The agency cites forest-wide statistics, and the contribution of inventoried roadless areas, [*id.* at D-7], but roadless areas generally are not part of the Conservation Strategy. [769_05_000839 (Suring (2015) (“Habitat within the Roadless Areas of course contributes to the maintenance of ecological function on the Tongass National Forest, but they do so outside of the effect of the elements of the Conservation Strategy”))]. The agency never explains how best available science supports the agency’s decision to change the Conservation Strategy and instead rely on extraneous resource protection measures to make up the difference.

Moreover, the agency relies on the alleged habitat “benefits” of young-growth logging operations on OGRs—asserting that thinning could be used to “to accelerate old-growth characteristics.” [2016 TLMP Amendment FEIS at D-8]. Again, the agency cites no scientific support for this proposition, let alone the “best available.” Indeed the agency contends that “commercial thinning would enhance the habitat value of [OGRs] by promoting the development of fewer, larger trees.” [*Id.*]. But the agency cites no scientific support for the proposition that the impacts of allowing commercial logging intrusions into OGRs would be outweighed by the habitat benefits of thinning, or that “fewer, larger trees” would actually create better habitat conditions in any event, where old-growth dependent species generally rely on forest complexity.

iii) The Forest Service ignored a large body of scientific information in determining the best available science

In the draft ROD, the Forest Supervisor, notes that the IDT concluded that “scientific information from State agencies such as the Alaska Departments of Fish and Game (ADF&G) and Environmental Conservation, and Federal agencies such as the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service was [the] best available scientific information because it was accurate, reliable and relevant.” [2016 TLMP Amendment draft ROD at 33]. First of all, we challenge that proposition on its face: we heavily dispute the fact that information from government agencies, which generally has not gone through the rigorous scientific peer review process, can unequivocally constitute the “best available scientific information.”

Moreover, without providing an explanation for why that information is the best, to the exclusion of other available scientific information, the agency has not fulfilled its duties under the 2012 Planning Rule. [36 C.F.R. § 219.3 (agency must explain the basis for determining what information was the best available science)]. Indeed, the agency fails to mention the wide body of scientific literature directly relevant to the TLMP that was not prepared by the government. Notably, the agency gives *no explanation* of why it has disregarded the scientific information conducted by non-government scientists, much of which suggests that the Forest Service (a) cannot continue to rely on the Conservation Strategy without reevaluating it, and (b) cannot change the Conservation Strategy to allow logging in non-development LUDs consistently with best available science. [See, e.g., Ref298-Smith (2016(a)). Why does the agency not consider studies conducted by non-government scientists—which have undergone the rigorous peer-review process—the best available scientific information? [Cf. *Ecology Ctr., Inc. v. United States Forest Serv.*, 451 F.3d 1183, 1194 n.4 (10th Cir. 2006) (explaining that although the Forest Service need not collect new data, it should seek out and consider all existing scientific evidence relevant to the decision and it cannot ignore existing data)]. The agency’s rejection out of hand of the wide body of relevant, peer-reviewed scientific information—simply because it was not prepared by the government—was flatly inconsistent with 36 C.F.R. § 219.3

c. Conclusion and suggested resolution

We object to the agency’s interpretation and narrow application of subsection 219.3. The agency must go back and thoroughly integrate the best available science in the planning process, and provide a detailed explanation for how it has completed this task. In particular, the agency must explain how the “best available science” supports its decision to continue relying on the Conservation Strategy, as well as allowing logging in key components of the Strategy, including beach/estuary fringe, RMAs, and OGRs, maintains the integrity of the Conservation Strategy. In doing so, the agency must specifically analyze and apply directly relevant, peer-reviewed scientific studies; merely stating, without providing any support, that information prepared by the government is the “best available” does not accord with 36 C.F.R. § 219.3.

7. Objection Point 25. The agency’s deferral of the analysis of the 2016 Amendments’ impacts to the Conservation Strategy to project-level decisions is arbitrary, capricious, and contrary to NEPA and NFMA.

Agencies have a duty to provide up-front disclosure and analysis of the impacts of their actions. Here, the Forest Service has acknowledged that the 2016 TLMP Amendment would cause localized impacts to contributing elements of the Conservation Strategy. Yet the FEIS effectively punts the duty to ensure the integrity of the Conservation Strategy to future project-level decisions. [See 2016 TLMP Amendment FEIS at D-21 (“The responsibility for ensuring the effectiveness of the conservation strategy at finer scales (i.e., biogeographic

provinces or groups of island [sic]), falls on decisions made at the project scale taking into account the configuration of individual landscapes.”]. This approach is arbitrary, capricious, and contrary to NEPA and NFMA.

a. Statement referencing prior comments and content of objection and explaining how decision and/or analysis violate law or regulation.

Our DEIS Comments raised a significant flaw with the agency’s proposed approach to analyzing the impacts of the 2016 TLMP Amendment on the fabric of the Conservation Strategy.⁶³ We explained that the agency cannot implement the 2016 TLMP Amendment while deferring the duty to ensure consistency with the conservation strategy to project-level decisions. [Ref167 at 91 (GSACC et al. DEIS comments)]. We explained that the agency must analyze the 2016 TLMP Amendment’s cumulative effects on the Conservation Strategy up-front, rather than at the level of future, site-specific projects. [*Id.* at 92]. We further explained that any decision to postpone analysis of the Amendment’s effects on the Strategy until project-level review would be unlawful. [*Id.* at 92–93].

The agency cursorily addressed our comments at Response to Comments CONS-16. [2016 TLMP Amendment FEIS at I-53]. The Forest Service takes the position that “[t]he proposed Forest Plan does not change the old growth Conservation Strategy, although effects to elements of the Conservation Strategy may occur” [*Id.*]. The agency retains the approach of evaluating localized impacts during project level review. [See *id.* (noting that “cumulative effects during project analysis look at past, present, and reasonably foreseeable projects in the analysis area to further ensure the Conservation Strategy is maintained during project implementation”). The agency references Appendix K, the interagency review process for modifying old-growth reserves during project-level decisionmaking. [*Id.*]. And yet the agency maintains that it has not deferred any analysis here, stating “[t]he FEIS and Appendix D did not defer the effects analysis of the Conservation Strategy to the project level but acknowledged that *additional* site specific analysis occurs at the project level.” [*Id.*] (emphasis added).

Our Objection therefore covers two points: (1) the approach of deferring analysis to site-specific projects is unlawful, and (2) the agency’s programmatic analysis in the FEIS falls well short of the agency’s duty to take a hard look under NEPA.

b. Statement of supporting reasons.

i) Review must occur at the programmatic stage

The segmented approach outlined by the agency in Appendix D places the burden on project-level decisions to ensure the effectiveness of the Conservation Strategy. [2016 TLMP Amendment FEIS at D-21 (explaining that “the responsibility for ensuring the effectiveness of the conservation strategy at finer scales (i.e., biogeographic provinces or groups of islands) falls on decisions made at the project scale”)]. This approach is inconsistent with NEPA, which requires up-front analysis. As the Ninth Circuit has instructed, “it is not appropriate to defer consideration of cumulative impacts to a future date when meaningful consideration can be given now.” *Kern v. U.S. BLM*, 284 F.3d 1062, 1072 (9th Cir. 2002).

Simply put, the agency may not defer meaningful analysis of the 2016 TLMP Amendment’s impacts on the integrity of the Conservation Strategy to project-level decisions. The problems with the agency’s approach are clear. For example, there would be no effective mechanism for evaluating cumulative effects across the landscape. [See *Klamath-Siskiyou*

⁶³ We incorporate those comments here by reference.

Wildlands Ctr. v. U.S. BLM, 387 F.3d 989, 993 (9th Cir. 2004) (finding cumulative impacts analysis inadequate where it considered only the effects of the very project at issue and did not take into account the combined effects of multiple projects). Similarly, there would be no way to contextualize the significance of project level decisions. [See *Or. Nat. Res. Council. Fund v. Brong*, 492 F.3d 1120 (9th Cir. 2007 (explaining that one of the “specific requirements of NEPA is that an agency must consider the effects of the proposed action in the context of all relevant circumstances, such that where several actions have a cumulative . . . environmental effect, this consequence must be considered in an EIS”)]].

In support of its proffered approach, the agency holds out Appendix K of the Forest Plan—which outlines the procedures for modifying old-growth reserves at the project level—as a mechanism for addressing site-specific impacts to the Conservation Strategy. [*Id.*]. As we explained in our DEIS Comments, the Appendix K process is not an effective mechanism for alleviating site-specific impacts. We pointed out how the agency for the Saddle Lakes project had modified the small old-growth reserve in VCU 7470, but ignored the recommendations of the interagency team of biologists who decided that the modification did not provide for comparable achievement of the old-growth habitat LUD goals and objectives. [DEIS Comments at 92]. In short, the agency has been using the Appendix K process not to enhance the integrity of the Conservation Strategy, but rather, to promote timber objectives. [See *id.*].

We also object to the agency’s deferred analysis approach on account of the agency’s common practice of “tiering” site-specific analyses back to the programmatic analysis. The agency consistently minimizes the magnitude of site-specific impacts from various projects on account of the fact that the impacts “were within the range of effects” disclosed in the programmatic analysis. [Ref167 at 93 (GSACC et al. DEIS comments)]. Here, the agency’s failure to sufficiently vet the integrity of the Conservation Strategy at the programmatic level forecloses the option of tiering site-specific project analyses to the coverage in this Forest Plan programmatic EIS. And yet, given the agency’s consistent application of the approach, there is no reason to believe the agency will stop relying on the practice of “tiering.” Accordingly, the failure to provide a collection of data and analysis of sufficient detail to fully and fairly discuss programmatic impacts (to which future site-specific project analyses could tier) is unlawful.⁶⁴

ii) The Forest Service has not taken the requisite hard look.

The agency contends that the analysis provided in Appendix D was all that was required at the programmatic stage, and that project-level decisions simply would provide “additional” analysis. [2016 TLMP Amendment FEIS at I-53]. That is patently not the case, and the problems embedded in the agency’s approach are borne out in the record.

In defending the “integrity” of the Conservation Strategy, the agency appeals to raw numbers of harvest levels across the entire forest. [2016 TLMP Amendment FEIS at I-53] (citing relatively small percentages of harvest acres within the total acres of reserves, beach

⁶⁴ This is especially the case where the agency relies on programmatic documents in support of viability conclusions. For example, for the Big Thorne Project, despite the fact that every project-area WAA was below the TLMP Standard and Guideline providing for maintenance of 18 deer /mi², the agency dismissed the low deer habitat capability numbers on grounds that the values were within the range analyzed and disclosed by the 2008 TLMP FEIS. [See Ref352-USFS (2013i) at 21–22; see also 603_1591 at 3-284 (table in 2008 TLMP FEIS comparing alternatives in terms of their long-term ability to meet the wolf guideline in providing sufficient habitat to support 18 deer/mi² after 100 years of forest plan implementation)]. Here, without sufficient detail and analysis provided at the programmatic stage, the agency may not later avail itself of the practice of tiering.

and estuary fringe, and RMAs across the entire forest over 100 years). The agency concludes that this level of harvest will maintain the integrity of the Conservation Strategy. [*Id.*; see also *id.* at D-21]. The common refrain from the agency is that while there may be localized impacts, the Conservation Strategy as a whole will remain sound. [*See id.*]. As we have explained in detail elsewhere in this objection, however, localized impacts are the problem—not a justification. The functionality of the Conservation Strategy depends on the combined inner-workings of its component parts, and the ability to maintain ecosystem integrity at the varying spatial scales critical for the suite of old-growth dependent species. Where a specific logging project reduces the ability of the Conservation Strategy to function effectively in that area of the Tongass, that logging project will undermine the ability of the Conservation Strategy to provide for viable populations of wildlife species well distributed across the Tongass.

To provide the requisite hard look under NEPA at this programmatic decision stage, the agency had a duty to fully and fairly evaluate the combined and synergistic effects of the 2016 TLMP Amendment on the integrity of the Conservation Strategy. [*See W. Watersheds Proj. v. Kraayenbrink*, 632 F.3d 472, 494 (9th Cir. 2001)]. Where the Tongass National Forest at the programmatic decision stage for the 1997 forest plan did not provide a thorough and detailed analysis of the impacts of high-grading on federal and non-federal forest plan, the Ninth Circuit held that the agency's EIS failed "adequately to consider the cumulative effects of disproportionate high-volume logging . . ." [*Nat. Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 815 (9th Cir. 2005)]. The Ninth Circuit stated that "A cumulative effects analysis in a programmatic EIS is necessary here for the Forest Service and public to make a rational evaluation of this proposed federal action balancing the competing goals of timber harvest, environmental preservation, and recreational use in the Tongass." [*Id.* at 816].

That is plainly the case here: the agency had a duty at the programmatic stage to take a hard look at the cumulative effect of "localized impacts" to the Conservation Strategy. Without addressing the nature, extent, location, and scope of the "localized impacts," the agency simply had no basis to assume that the integrity of the Conservation Strategy—and by extension the viability of old-growth dependent species—would be maintained.

To justify the fact that a more detailed programmatic analysis was not provided, the agency remarks that "because individual project and activities are not yet proposed, site specific information is not available for the programmatic review." [2016 TLMP Amendment FEIS at I-53]. The agency goes on to state that "cumulative effects during project analysis look at past, present, and reasonably foreseeable projects in the analysis area to further ensure the Conservation Strategy is maintained during project implementation." [*Id.*]. This justification fails. First of all, the Ninth Circuit has specifically rejected this same justification:

The Forest Service argues that the Plan only establishes guidance for future actions that may have impacts, and that those impacts will be studied in conjunction with impacts from past, present, and future actions on both federal and non-federal land when those future actions are proposed. However . . . the Forest Service is required to address cumulative impacts in the EIS, and where several foreseeable similar projects in a geographical region have a cumulative impact, they should be evaluated in a single EIS . . . NEPA's purpose requires that the NEPA process be integrated with agency planning at the earliest possible time, and the purpose cannot be fully served if consideration of the cumulative effects of successive, interdependent steps is delayed until the first step has already been taken.

[*Nat. Res. Def. Council*, 421 F.3d at 815 (citations omitted); see also *Kern v. U.S. BLM*, 284 F.3d 1062, 1072 (9th Cir. 2002) ("An agency may not avoid an obligation to analyze in an EIS environmental consequences that foreseeably arise from a [land management plan] merely by

saying that the consequences are unclear or will be analyzed later when an EA is prepared for a site-specific program pursuant to the [land management plan].”].

Moreover, it is demonstrably not the case that there is insufficient site-specific information for meaningful programmatic review. At Table C-2 of FEIS Appendix C, the agency lists “present/reasonably foreseeable actions.” [*Id.* at C-8–21]. The agency defines “reasonably foreseeable future actions” as “those federal or non-federal activities not yet undertaken, for which there are existing decisions, funding, or identified proposals.” [36 C.F.R. § 220.3 (emphasis added)].

The agency lists a series of Forest Service timber sales on the immediate horizon. Though the numbers are not tallied at Table C-2, we see that the agency has specific plans to offer about 650 MMBF over the next ~5 years. Notable is the location of the projects—they all occur within the Wrangell, Petersburg, Ketchikan-Misty Fjords, and Thorne Bay Ranger Districts. [See 2016 TLMP Amendment FEIS at C-9–11]. In other words, most, if not all, of the volume will come out of just five or six (out of 23 total) biogeographic provinces. Moreover, we see an additional 300+ MMBF of harvest occurring in these same areas on State of Alaska lands (not including additional logging on Native Corporation land). In short, there are specific plans to harvest over a billion board feet of timber from specific logging projects occurring in the southern Tongass. The cumulative effect of these projects, and the “localized impacts” to the Conservation Strategy, should have been specifically and comprehensively evaluated in this programmatic EIS.

“In assessing cumulative effects, the Environmental Impact Statement must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment (emphasis added). [*Lands Council v. Powell*, 379 F.3d 738, 745 (9th Cir. 2004)]. Here, the agency has concluded that the changes proposed by the 2016 TLMP Amendment pose a very low risk to the integrity of the Conservation Strategy, but no detailed supporting analysis is provided. Required here is a hard look by the agency to look closely at the impacts the 2016 TLMP Amendment would have on contributing elements of the Conservation Strategy, at the spatial scales where specific logging projects are proposed. In other words, it was arbitrary and contrary to law for the agency to measure the impacts of the 2016 TLMP Amendment forest-wide, where the localized impacts are in large part what matter. [See *Pac. Coast Fed’n of Fishermen’s Ass’ns v. Nat’l Marine Fisheries Serv.*, 265 F.3d 1028, 1035–37 (9th Cir. 2001) (holding that an agency cannot try to ‘minimize’ the environmental impact of an activity by simply adopting a scale of analysis so broad that it marginalizes the site-specific impact of the activity on ecosystem health)].

c. Conclusion and suggested resolution

The agency’s programmatic review of the impacts to the Conservation Strategy was inadequate. The agency plainly had sufficient information to provide a robust and detailed cumulative effects analysis, but instead chose to appeal to raw numbers taken from meaningless spatial scales. Moreover, the agency’s approach of deferring specific analysis of the integrity of the Conservation Strategy to project-level decisions was unlawful. The agency must prepare a supplemental FEIS that takes a hard look the full programmatic impacts of the 2016 TLMP Amendment.

B. The DEIS and LRMP failed to analyze or develop management measures to respond to risks to Queen Charlotte Goshawks (“QCGs”)

Our scoping and DEIS comments noted that it is imperative to revisit Forest Plan protections for goshawks. As explained in our broader discussion of wildlife, the Forest Service needed to identify species of concern and develop appropriate plan components under the 2012 planning rule. The 2008 TLMP Amendment made several changes in the forest retention standard and nest protections that weakened standards and guidelines adopted under the 1997 TLMP Revision. Thus, existing measures fail to assure species viability under the 1982 planning rule. But the FEIS provides only a one-page general discussion of goshawk habitat features and a two-page discussion of potential impacts to the QCG [FEIS at 3-226, 258-259]. It measures those impacts primarily in terms of a landscape scale POG and high volume POG across the entire Alexander Archipelago and southeast Alaska mainland. [*Id.* at 3-258]. The biological evaluation concludes that implementation of programmatic alternatives would maintain species viability because the alternatives include “beneficial effects” that would offset negative effects. [PR 769_05_001146 at 23-24]. The rationale for the “beneficial effects” offset appears to be that because there were lower old-growth removals than anticipated in the 2008 FEIS and there will be lower than anticipated levels of old-growth removals in the future, the species will benefit because the conservation strategy anticipated overall higher levels of old-growth removals over time.

This conclusion is arbitrary and reflects a cursory treatment of impacts in the environmental analysis that violates NEPA and NFMA in numerous ways. Most importantly, the conclusions are flawed because: (1) the analysis ignored important spatial considerations and the distribution of the species, particularly on the central and southern Tongass where the Forest Service has been actively logging or planning logging in the immediate vicinity of the few known nest sites, areas where there have been QCG sightings, or high risk VCUs; (2) the analysis ignored likely significant and foreseeable direct, indirect and cumulative adverse impacts on a highly vulnerable population; (3) the FEIS failed to reflect an appropriate level of scientific analysis, including review of both current and new scientific materials related to QCG viability and habitat needs and (4) the FEIS failed to disclose that both the 2008 TLMP Amendment and proposed LRMP actually weaken the conservation strategy for QCGs.

1. The FEIS violated NEPA by failing to take a hard look at impacts to the QCG and disclose uncertainties and unknown risks

There are significant uncertainties about the current status of goshawk populations and the adequacy of nest protection measures. The FEIS does not provide any direct, indirect and cumulative effects conclusions but instead concludes only that the proposed LRMP will “benefit” QCGs in several ways relative to the 2008 TLMP. [FEIS at 3-258-259]. Thus, even though the Forest Service intends to log over 43,000 acres of POG, the FEIS arbitrarily concludes that the LRMP Amendment will be beneficial to the species. But the FEIS failed to provide a spatial analysis of impacts to habitat in high risk VCUs, or in the vicinity of known or potential goshawk nest areas despite significant scientific concern about eliminating important foraging and breeding habitat in the vicinity of known nests and intensively logged areas. [PR 769_05_000530 (Smith 2013); REF274 at 18 (QCG Recovery Team 2008)].

2. Objection Point 26. The FEIS failed to provide a reasonable analysis of QCG populations and trends and uncertainties about the spatial and temporal scale of impacts

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments explained that the analysis failed to acknowledge the considerable uncertainty about QCG populations and trends in southeast Alaska. [Ref167 at 94 (GSACC et al 2016c)], It mentions that the British Columbia population of QCGs is threatened under the ESA, but erroneously states that the Forest Service’s conservation strategy protects the southeast Alaska population. [FEIS at 3-226, 3-260]. Our comments also explained that the analysis failed to analyze the particular vulnerability of QCG populations, habitat needs and relevant risk thresholds in central and southern Tongass islands and subdivisions of those islands (VCUs and WAAs) where recent, ongoing and prospective logging has created the types of intensively disturbed landscapes referenced in Dr. Smith’s critique of the conservation strategy. [Ref167 at 99 (GSACC et al 2016c)]. Finally, we explained that the analysis failed to consider the additional risks associated with logging recovering second growth forests that the agency was aware or soon will be old enough to provide nesting habitat. [*Id.* at 101].

The findings of FWS status reviews, prior risk assessments and more recent scientific reviews demonstrate the risks of continued and serious population decline associated with further loss of habitat caused by old-growth logging and future logging of recovering forests – yet the FEIS failed to consider, analyze, or respond to these risks, violating NEPA. The FEIS failed to disclose known and likely environmental risks posed to the QCG or evaluate fundamental scientific uncertainties about the predicted consequences in the FEIS. [*Seattle Audubon Society v. Moseley*, 798 F.Supp. 1473, 1478, 1482 (W.D. Wash. 1992); *Ecology Center v. Austin*, 430 F.3d 1057, 1067 (9th Cir. 2005)(explaining that a general statement regarding possible impact and risk involved does not constitute a hard look)]. The failure to adequately assess and respond to specific risks to the species also means that the Forest Service has failed to meet its species diversity requirements under NFMA. [16 U.S.C. § 1604(g)].

b. Statement of supporting reasons

i. The FEIS fails to discuss population vulnerabilities

QCGs are a small, isolated and almost certainly declining population. Both compositional analyses and radiotelemetry studies show that breeding pairs of QCGs “in managed landscapes of southeast Alaska likely rely almost entirely on productive old-growth forests as foraging and nesting habitat” to meet life history needs and avoid second-growth or non-forested habitats.” [PR 760_05_000618 at 7 (Smith 2013)]. Intensive clearcutting in southeast Alaska “has converted many watersheds to very low quality habitat, or non-habitat, for goshawks. Loss of this habitat has likely contributed to at least local declines in QCG populations.” [PR 769_05_0000487 at 81 (FWS 2007)].

Population levels are unknown; according to the Fish and Wildlife Service, southeast Alaska may support just a few to several hundred breeding pairs. [*Id.* at 48-49].⁶⁵ Survey

⁶⁵ The FWS does note that based on one model, habitat in southeast Alaska could “potentially support” higher numbers of QCGs but that model overestimates habitat capability by considering territories with as little as 20% old growth as suitable. In fact, QCG breeding and activity is unlikely to be detected in a landscape with less than 60% old growth. Also, designated Wilderness and roadless

efforts during the 1990s identified only 62 known nest areas. [Ref142 at 27-29 (Flatten et al. 2001). 27 nest areas were in the central portion of the Alexander Archipelago (Wrangell and Petersburg Ranger Districts). [*Id.*] 14 nest areas were in the southern portion (Ketchikan, Craig and Thorne Bay Ranger Districts). [*Id.*]. By 2005, experts had identified only 72 unique nest areas, with most them reportedly inactive, and new nests were not being found. [Ref343.7a & .7b) at 9–12 (Goshawk New Info. Panel, Conservation Strategy Review 2006, PPT and video)]. **It is beyond dispute that implementation of the amended TLMP will occur in the southern and central portions of the Alexander Archipelago. [769_05_000028 at 14 (Alexander 2008)].**

QCGs select primarily for very highly to moderately productive old-growth (250 years or older). [Ref184 at 43 (Iverson et al. 1996)]. There is very little use of low productivity forests, and QCGs actively avoid clearcuts, non-forested areas, and “mature sawtimber” stands (75 – 150 year old stands). [*Id.* at 43]. The Fish and Wildlife Service’s 2007 status explained that QCGs 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.” [PR 679_05_0487 at 8-9 (USFWS (2007)].

Further, a 2005 study of QCGs on the Haida Gwaii concluded that QCGs experience more breeding failures than other northern goshawks, and raised the concern that “at the present rate of productivity, insufficient young are possibly being produced to allow the population to be maintained.” [Ref126 at 1-2 (Doyle 2005) at 1-2]. Doyle’s study identifies a number of risks that were highly relevant to the analysis, including risks associated with low productivity, specific flaws with the use of the high probability foraging habitat methodology and uncertainties about using different timber management prescriptions to mitigate population effects:

- (1) QCGs produce few young fledglings per breeding attempt relative to other northern goshawks, and were possibly not producing sufficient young in the study area (Haida Gwaii), raising the question of whether small insulated island populations with low breeding rates can maintain a viable population;
- (2) successful breeding may require greater than 60% productive old growth and
- (3) because of an absence of nest activities outside of known nests, it is unreasonable to rely on measurements of highly productive habitat as goshawks are not being detected in those areas.

Similarly, British Columbia’s QCG recovery team explains that “the level of threat is not merely a calculation of the balance between habitat loss and recruitment because [QCGs] have high fidelity to their breeding areas and so habitat loss within home ranges may have long-lasting effects on breeding pairs.”

The rationale in the FEIS for its no impact determination - the lower than anticipated logging levels under the 2008 TLMP and proposed LRMP – ignores the adverse impacts caused by implementation of the 2008 TLMP Amendment. The implementation of timber projects under the 2008 TLMP disproportionately resulted in significant adverse impacts to the few known historic populations of QCGs.⁶⁶

areas are unlikely to support QCG populations or buffer population losses caused by timber harvest. [Ref184 at 26 (Iverson et al. 1996)].

⁶⁶ We refer here to final decisions on the Logjam, Tonka, Navy, Big Thorne and Heceta projects, and projects in the planning stage or with final decisions pending, including the Kosciusko, Saddle Lakes and Wrangell projects. Additionally, although the Forest Service withdrew its decision on the Mitkof

ii. The FEIS fails to consider species viability in light of 2008 TLMP amendment implementation and recent logging of nest and foraging areas and breeding home ranges

There is little question that QCGs on Prince of Wales Island are uniquely vulnerable due to prey deficiencies and the cumulative loss of over half of the high volume POG. [PR 769_05_000487 at 39, 65; FEIS at 3-218-219]. The Forest Service has previously recognized that the Sealaska conveyance would require revision of the Forest Plan and that it had significant ramifications for species viability based on the condition of the POW landscape and scale of the selection. [TLMP FEIS, Appx. C at C-3-4]. Indeed, Dr. Smith's comments on the project opposed any further logging in that biogeographic province at all:

Further logging of POW will further reduce habitat for breeding QCG and increase the risk of extirpation of the POW subpopulation of QCG, which ultimately increases the risk of extinction of the already threatened DPS (USFWS 2007). [Ref297 at 5 (Smith 2012)].

Central Alexander Archipelago QCGs – potentially among the most important remaining populations - are also particularly at risk relative to other areas managed by the Forest Service. The Forest Service's 1996 Conservation Assessment 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" [Ref184 at 75 (Iverson et al. 1996); FEIS at 3-218-219 (showing that central southeast Alaska regions rank in the top five of 21 biogeographic provinces in terms of habitat loss)]. Importantly, the Conservation Assessment considered the 33% threshold at a much finer scale than the FEIS. [Ref184 at 84 – 86 (Iverson et al. 1996)]. Thus, it is impossible to compare the relevant thresholds without using an appropriate scale of analysis – by VCU or by WAA, for example. Although most of the watersheds exceeding the 33% threshold are on POW, there are others, and FEIS masks these impacts by considering POG removals only at the larger, biogeographic province level.

Since 2008, the Forest Service has planned, authorized and/or implemented large scale logging projects in many high risk areas, and particularly in the vicinity of historic, known nests or observations of QCG activity:

- (1) The 2009 Logjam project logged QCG foraging and post-fledgling habitat and alternative nest sites in the vicinity of the one known nest;
- (2) the 2012 Tonka project logged QCG foraging and post-fledgling habitat and alternative nest sites in the vicinity of the Duncan and Mitchell Creek nests [Ref331 at 111-120 (TCS et al 2012)];
- (3) the 2013 Big Thorne project authorized logging foraging and post-fledgling habitat and alternate nest sites around the one known nest, and failed to identify another probable nest identified by the FWS, meaning that it likely authorized logging that nest site and surrounding habitat [Ref077 at 118-120 (Cascadia et al 2013)];
- (4) the 2015 Navy project authorized logging in one of the most consistently active QCG territories on the entire Tongass National Forest [Ref147 at 21 (Greenpeace and Cascadia 2015)];
- (5) the rescinded 2014 Mitkof project would have authorized logging foraging and post-fledgling habitat and alternative nest sites adjacent to the three known historical nest sites on the island [Ref161 (Greenpeace et al 2014c)];

project, the project would have authorized Viking to eliminate foraging habitat for historic goshawk populations on the island had it not been litigated.

- (6) both the planned Saddle Lakes and Kosciusko projects may authorize logging in the vicinity of recent QCG observations without even a 100 acre buffer for the nest site [Ref083, Ref084 (Cascadia et al 2015c, 2015d); Ref165 (Greenpeace 2015)];
- (7) the planned Wrangell project will occur in the vicinity of three goshawk nest sites [Ref085 (Cascadia et al 2015)].

In all of these cases, the environmental analyses determined that the logging would likely adversely impact individuals, but was not likely to reduce species viability.⁶⁷ But the FEIS relies solely on overall logging volumes, assumes those impacts would be spread evenly across the region, and ignores the impact of specific logging projects on the few remaining populations.

The previously listed projects, as well as prospective projects under the proposed LRMP, would provide at best, a mere 100 acres of habitat protection – the nest buffer - to QCGs in the southern and central portions of the Alexander Archipelago. Worse, the nest buffer only applies *if* Forest Service personnel survey for and identify an active nest before Alcan’s or Viking’s reality TV show “Axe Men” chop down the nest tree. At what point does the number of individual QCGs adversely impacted by logging rise to a level where species viability is in question? The FEIS never considers this question and thus fails to develop an appropriate reference point or threshold to inform its conclusions.

iii. The FEIS failed to consider uncertainties about the future impacts of second growth logging

The proposed LRMP will likely maintain an excess amount of early seral forest (90 – 100 years old), and increase viability risks to QCGs. It is clear that clearcut and early seral stage habitats do not provide critical habitat features for Queen Charlotte goshawks. [PR 769_05_0487 at 103 (FWS 2007)]. Thus, in its 2007 Status Review, the Fish and Wildlife Service stated that “[f]orest management *must*... emphasize continued existence of *mature* and old forest to ensure preservation of the species.” [*Id.* emphasis added)]. Scientists who considered the influence of forest rotations on the long-term viability of the species “generally agreed that older second growth resulting from timber rotations of 200 to 300 years could provide useful habitat, and would reduce risk to goshawks, as compared to 100-year rotations.” [*Id.* at 105]. The proposed LRMP would authorize immediately clearcutting of some of the oldest second-growth forest in the region. But the analysis of impacts to QCGs focuses exclusively on old-growth removals, and thus ignores the risk associated with the loss of potential future nesting habitat in a heavily fragmented area with barely enough old-growth forest currently to meet applicable habitat thresholds. [See, e.g. PR 769_05_000530 (Smith 2013)].

Moreover, the analysis failed to respond to these risks with an evaluation of timber rotations that would in the long-term address these risks. The review of the TLMP conservation strategy anticipated ecological rotations of 300 years as likely to sustain goshawks (i.e. 1/3 of the forest in second growth <100 years old, 1/3 of the forest <200 years old, and 1/3 >200 years old), but noted this scale masked localized effects which would create gaps in distribution. [PR 769_05_0487 at 74]. The FWS anticipated that habitat quality could improve over the long-term as recovering forests mature – but not under a 100 year rotation as proposed here. [*Id.* at 76-78]. If left alone, or thinned only from below [See Ref097 at 12 (Coastal Forest 2012)], second-growth stands could provide suitable habitat in

⁶⁷ See, www.fs.usda.gov/projects/tongass/landmanagement/projects for links to the relevant analyses.

the long-term that equate to 15% of the habitat value of productive old-growth. [PR 769_05_0487 at 99]. These findings are consistent with recent studies showing successful Queen Charlotte goshawk utilization of mature second-growth forests. [*Id.* at 102]. Further fragmentation, however, reduces the potential value of mature second growth for goshawk habitat needs. [*Id.* at 102]. The FEIS suggests that second-growth logging would have primarily “localized effects, [FEIS at 3-259], but never considers how these localized effects increase extirpation risks due to the low numbers and known risks to the species.

c. Conclusion and suggested resolution

In sum, there are unknown but small and vulnerable QCG populations on the Tongass National Forest that rely on significant proportions of old-growth forest in their foraging and breeding areas, raising substantial questions about the possibility of significant adverse environmental impacts arising from the implementation of the proposed LRMP on the few remaining breeding pairs – perhaps two-thirds of the known populations have been or are at increased risk due to the implementation of the 2008 TLMP Amendment and proposed LRMP amendment. The premature removal of recovering forests at the scale proposed in programmatic alternatives significantly diverges from the assumptions about rotations the formed a critical part of the conservation strategy. Further NEPA analysis needs to analyze habitat loss for QCGs at a finer scale and in areas at-risk of further habitat loss and provide the public with an appropriate level of analysis about the impacts of logging recovering forests.

3. Objection 27. The FEIS failed to respond to responsible scientific opinion about the adequacy of the conservation strategy

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments questioned whether current TLMP standards and guidelines and conservation strategy effectively sustain QCG viability and requested that the analysis respond to expert scientific critiques of the strategy as it pertains to QCGs. [Ref167 at 96 (GSACC et al 2016c)]. NEPA requires agencies to “insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” [40 C.F.R. § 1502.24]. The FEIS wrongly asserts that the conservation strategy adequately ensures species viability, and mentions that “a recent study suggests some uncertainty remains” about whether the conservation strategy works. This brief disclosure is not an adequate review of relevant scientific information. [FEIS at 3-227]. An EIS must “inform the decision-maker of the full range of responsible opinion on environmental effects” and “disclose and respond to ‘the opinions held by well respected scientists concerning the hazards of the proposed action’” [See *Seattle Audubon Society*, 798 F.Supp. at 1479 (citations omitted)]. The FEIS and BE base the effects determination on TLMP standards and guidelines and the conservation strategy, but never respond to the scientific opposition to the TLMP measures, which federal and state wildlife agencies believe will reduce conservation standards and necessitate a reconsideration of the 2007 status review. [2008 TLMP FEIS, Appx. H at HA 14, 17, 39].

The FEIS violated NEPA because it fails to respond to contrary scientific opinion regarding programmatic impacts to QCGs and “fails to explain the differences between the Forest Service’s view of likely impacts and the view of others in the scientific community.” See, e.g. *League of Wilderness Defenders v. Forsgren*, 184 F.Supp.2d 1058, 1066 (D. Or. 2002). NEPA requires the Forest Service to ensure that it has “fully contemplated the environmental effects of its action” provided the public with sufficient information to review its conclusions.

[*League of Wilderness Defenders*, 184 F.Supp.2d at 1068 (citing *Idaho Sporting Congress*, 137 F.3d at 1150 (“[a]llowing the Forest Service to rely on its own expert opinions without providing hard data either vitiates a plaintiff’s ability to challenge an agency action or results in the courts second guessing an agency’s scientific conclusions. As both of these results are unacceptable, we conclude the NEPA requires that the public receive the underlying environmental data from which a Forest Service expert derived her opinion”).

b. Statement of supporting reasons

Dr. Smith’s analysis indicated that risks to QCGs under the TLMP are likely even greater than anticipated under the 1996 risk assessments. [PR 769_05_000530 at 6]. Specifically, the 1996 risk assessment assumed that the TLMP conservation strategy, particularly the reserve system, would in part mitigate habitat loss from excessive timber harvest. [*Id.*]. However, Dr. Smith’s study indicates that contributions from reserves and other conservation elements (buffers) “might not mitigate the cumulative habitat loss in intensively managed landscapes.” [*Id.*]. Dr. Smith added that there is “evidence on nearby islands that extensive loss and fragmentation of habitat from clearcut logging contributed to population declines of QCGs.” [*Id.*]. In those heavily logged areas, TLMP standards and guidelines “are unlikely to meet breeding-season habitat objectives established for goshawk populations” in other areas. [*Id.* (citing (Reynolds et al. 1992); Ref213 (McClaren et al. 2005)(recommending that “[m]ultiple PFAs within one goshawk home range should be managed to create an area that maintains connectivity among alternate nests and to adjacent stands of similar habitat (i.e. reduce stand isolation) to minimize possible edge effects, facilitate food transfers from adults, and provide dispersal corridors”)].

In a 2012 letter to the Forest Service regarding the Big Thorne Project, Smith explained that these findings “increase[d] uncertainty about conservation measures contributing sufficient habitat to sustain well-distributed viable populations of [QCGs].” [Ref297 at 5 (Smith 2012)]. Specifically, Smith’s study showed that:

- TLMP conservation measures contribute about half the secure habitat recommended for post-fledgling areas of breeding pairs in other portions of the northern goshawk’s range
- Guidelines for northern goshawk populations in other areas may underestimate habitat needed by QCGs due to limitations in prey resources
- Breeding pairs in southeast Alaska “likely rely almost entirely on productive old-growth forest as foraging and nesting habitat as few mammal species inhabit low-volume or managed forests and the structure of second growth stands renders prey unavailable to foraging QCGs. [(Exh. 12 (Smith 2013) at 6-7].

Dr. Smith’s comments on the forest plan amendment reiterate these points and expand on them:

- The best available science develops a conceptual framework for managing goshawk habitat based on critical components of the species nesting home range;
- The breeding home range should include multiple nest areas
- The 1997 conservation strategy “was fundamentally flawed from the outset”:

The most obvious shortcoming was the dependence on old-growth reserves and other old-growth set-asides in a matrix of cumulative, intensive regeneration harvest (i.e. clearcut logging) to provide sufficient breeding season habitat (Smith 2013). Although the network of old-growth reserves and old-growth set-

asides ... provide substantial old-growth habitat across managed landscapes, the size and spatial configuration of OGRs and set asides were not designed to accommodate the hierarchical structure and spatial scale of northern goshawk breeding ranges [...]. Furthermore, the assumption that there would be ample habitat with breeding pairs to sustain viable goshawk populations in non-developmental LUDs was not supported by an extensive systematic survey of breeding goshawks in wilderness and roadless areas of southeast Alaska [...]. Moreover, the network of old-growth reserves has never been implemented or developed as a conceptual framework to sustain viable populations of northern goshawks.

- TLMP standards and guidelines were “spatially inexplicit” with respect to known goshawk breeding pairs or territories – i.e. special areas, needs or landscape context.
- The one spatially explicit measure – the nest buffer – does not provide adequate nest and post-fledgling area habitat.
- “The findings of [Smith 2013] clearly demonstrate that contributions of old-growth reserves and other conservation elements (e.g., riparian or shoreline buffers) might not mitigate the cumulative habitat loss in intensively managed landscapes” as supported by scientific evidence from British Columbia. [Ref301 at 3-10 (Smith 2016d)]

c. Conclusion and suggested resolution

In sum, Dr. Smith’s study in particular as well as other studies excluded from the analysis identified significant uncertainties and adverse risks to QCGs associated that bear on the inadequacy of the conservation strategy. Indeed, Dr. Smith’s comments on the plan amendment clearly opposed the failure to update the strategy – and yet neither the text of the FEIS or even the response to comments (FEIS, Vol. II, Appx I at I-88-89), provide any indication the Forest Service even reviewed the materials. The FEIS thus clearly violated NEPA. The Reviewing Officer should direct the Responsible Official to rescind the draft ROD and FEIS and prepare an additional NEPA analysis that takes a hard look at the weaknesses of the conservation strategy for QCGs and would be sufficient to inform significant changes as needed to meet the agency’s substantive obligations under NFMA to provide for species viability.

4. Objection 28. The FEIS lacks a cumulative impacts analysis that considers the significance of individual QCGs to species viability or assess the impacts of non-federal logging

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments, [Ref167 at 97 (GSACC et al 2016c)], requested that further NEPA analysis should identify high risk VCUs, review the locations of known nest areas, [REF 142 (Flatten et al. 2001)], and goshawk observations in the survey database, and consider the cumulative impacts of other projects, including logging by private landowners and future state of Alaska logging. [See, e.g. Ref122 (DNR 2015a); Ref 125 (DNR 2016b)].

A cumulative impacts analysis “requires ‘some quantified or detailed information’ and “must be more than perfunctory; it must provide a useful analysis of the cumulative impacts

of past, present, and future projects.” *Klamath-Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 993-94 (9th Cir. 2004)(citations omitted). Given the low population numbers and known distribution of the species, the cumulative effects determinations should have considered three relevant spatial scales: regional, central southeast Alaska island ecosystems, and, as previously discussed, the cumulative effects of continued logging known or possible nest areas on a small and vulnerable population. Analysis at relevant spatial scales is particularly important in light of the ESA listing of the QCG in Canada because of the metapopulation structure of QCGs and conclusions that contributing populations in British Columbia have declined, resulting in increased risk to the metapopulation.

The Ninth Circuit has explained that individual impacts, such as impact to individual QCGs, can have more significant impacts in relation to other impacts on overall species viability – in the Etolin Islands and vicinity biogeographic province and adjacent island ecosystems, and 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. [*Klamath-Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 994 (9th Cir. 2004); see also *Pacific Coast Federation of Fishermen’s Associations v. NMFS*, 265 F.3d 1028 (9th Cir. 2001)(explaining that “[u]nless the effects of individual projects are aggregated to ensure that their cumulative effects are perceived and measured”, it was difficult to have any faith in regional wildlife viability conclusions).

b. Statement of supporting reasons

The discussion of environmental consequences in the FEIS did not provide a meaningful cumulative effects discussion for QCGs but instead generally referenced potential activities on other landownerships for wildlife in general. [FEIS at 3-286-287]. The cumulative impacts of geographic and high-volume POG highgrading have substantial, adverse, and long-term environmental impacts. The Forest Service never analyzed the trend toward intensive timber development on the southern and central Tongass in NEPA analyses done for the 1997 TLMP revision or the 2008 Amendment. Timber operators have removed disproportionate amounts of high-volume and large tree POG from the North-Central POW, Kupreanof/Mitkof, Etolin Island and vicinity, and Revilla Island biogeographic provinces. [FEIS at 3-209 – 3-212]. As a consequence the lower classes of old-growth forest have become more important as habitat (although tenuously so, because of their lower quality) as the logging has diminished the higher classes, and because the impact of habitat loss is non-linear.

On North-central Prince of Wales Island in particular is not suitable for further timber production. Timber operators have already extracted nearly half of the old growth and nearly 60% of the high value old growth in less than half a century. [Big Thorne FEIS at 2-23]. Implementation of that project would result in the cumulative loss of as much as 73% of winter deer and winter marten habitat capability in some WAAs and a cumulative loss of as much as 85% of goshawk habitat in some VCUs. [*Id.* at 2-24]. Road densities and watershed harvests already exceed threshold levels for fish and wildlife. [*Id.* at 2-24-25]. Other federal and non-federal logging projects have had cumulative similar habitat impacts in southern

and central biogeographic provinces, and yet the analysis never considers how these impacts would affect known nesting, foraging and breeding habitat.

Further, another study also is relevant to the analysis of cumulative effects. Sonsthagen et al indicate that a metapopulation framework actually suggests a heightened need for specific individual nest site protections because without those, the individuals would blink out, resulting in the loss of source populations and over time, the metapopulation would cease to exist. [Ref 303 (Sonsthagen et al 2012)].

c. Conclusion and suggested resolution

The Reviewing Officer should direct the Responsible Official to rescind the draft ROD and FEIS and prepare a cumulative effects analysis for QCGs that reflects an understanding of how metapopulation interact and considers the activities of other landowners in relationship to known QCG nest areas, foraging areas, and breeding home ranges.

5. Objection 29. The Forest Service failed to specifically discuss and respond to responsible opposing views.⁶⁸

NEPA places an affirmative duty on every agency to “discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency’s response to the issues raised.” 40 C.F.R. § 1502.9(b). This requirement ensures that the agency makes “available to the public high quality information, including accurate scientific analysis, expert agency comments, and public scrutiny, before decisions are made and actions are taken.” [*Western Watersheds Proj. v. Kraayenbrink*, 632 F.3d 472, 492 (9th Cir. 2011) (citing *Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157 (9th Cir. 2003))]. As the Ninth Circuit has made clear, the FEIS must “disclose and discuss responsible opposing scientific viewpoints in the final statement.” [*Ctr. for Biological Diversity*, 349 F.3d at 1168].

Here, the FWS, State of Alaska, Dr. Winston Smith, and others provided specific feedback to the Forest Service on the proposed 2016 TLMP and DEIS, and yet their expert opinions were not specifically disclosed in the FEIS. The agency’s lack of disclosure of key scientific opinions and information violates NEPA and 40 C.F.R. § 1502.9(b).

There can be no dispute that the views of Dr. Smith and the FWS are “responsible.” Dr. Smith was a member of the PNW Research Station team specifically assigned to review and analyze all information used to address wildlife viability issues for the 1997 TLMP. [Ref298 – Smith (2016a) at 1]]. Over the following 10 years, he designed and implemented experimental research testing critical underlying assumptions of the Conservation Strategy, the findings of which were presented at scientific conferences and published in numerous articles in national and international peer-reviewed journals. [*Id.*]. Indeed, Dr. Smith’s CV demonstrates that he is a recognized expert in wildlife ecology with a special emphasis on forest habitats. [Ref301 – Smith (2016d)]. The FWS is the expert wildlife agency. In the draft ROD, the Forest Service states that information from the “U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service was [the] best available scientific information because it was accurate, reliable, and relevant.” [2016 TLMP Amendment draft ROD at 33].

Nor can there be any dispute that the views of Dr. Smith and the FWS were not “adequately discussed” in the DEIS. The DEIS does contain citations to some of Dr. Smith’s

⁶⁸ This issue is one “that arose after the opportunities for formal comment.” 36 C.F.R. § 219.53(a).

work in the body of the document, and cites some of Smith’s publications in the References. [See 2016 TLMP Amendment DEIS at 3-112 (“[A] recent study suggests that some uncertainty remains with respect to the ability of the Forest Plan conservation measures to contribute sufficient habitat to sustain well-distributed, viable populations of northern goshawks throughout Southeast Alaska.”]. And Appendix D of the DEIS cites two of Dr. Smith’s studies in mentioning generally that some studies since 2008 showing that a review of the efficacy of the original conservation strategy “may” be warranted. [*Id.* at D-4].

But these limited and equivocal statements do not rise to the level of disclosure that NEPA requires in order to inform the public of and the decisionmaker of scientific controversy. [See 40 C.F.R. § 1502.9(a) (“The agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view of the environmental impacts of the proposed alternatives including the proposed action.”)]. And the DEIS contains no disclosure of the FWS’s views on the Conservation Strategy—despite that agency being elevated to “cooperating agency” status for the NEPA process. [See *id.* § 1501.6].

Both Dr. Smith and the FWS submitted extensive comments on the DEIS that specifically questioned the Forest Service’s views on the integrity of the Conservation Strategy, and the impacts of 2016 TLMP Amendment on the functioning of contributing elements of the Conservation Strategy. [See 40 C.F.R. § 1502.9(b) (agency must address “opposing views” in the FEIS)]. For example,⁶⁹ as to the agency’s refusal to fully re-evaluate the integrity of the Conservation Strategy, Dr. Smith characterized the agency’s approach as “fundamentally flawed.” [Ref298 – Smith (2016a) at 1].⁷⁰ And where the Forest Service offered the conclusory assertion in the FEIS that “under all alternatives the integrity of the conservation strategy would be maintained,” [2016 TLMP Amendment FEIS at D-21], the FWS in its DEIS Comments raised its concern that “some elements of the proposed action, or the Forest Service’s preferred alternative, could significantly weaken the conservation strategy, conflicting directly with the expectation stated in the NOI.” [FWS DEIS Comments at 2 (emphasis added)].

The Forest Service proceeded under the assumption that the integrity of the Conservation Strategy would be maintained under any of the alternatives, but Dr. Smith pointed out that there is no scientific basis to assume that the Conservation Strategy is actually working at all:

To date, there is no published credible science that supports a conclusion that the TLMP-WCS is working as expected for any one (much less the suite) of concerned wildlife species or groups. Indeed, the only credible science that exists does not support the key assumptions of the [Conservation Strategy] specific to northern goshawk (Smith 2013) or northern flying squirrels (Smith and Person 2007, Smith et al. 2011). [Ref298 – Smith (2016a) at 3–4]; *see also*: Ref299 (Smith 2016b) and Ref300 (Smith 2016c), respectively concerning deficits in the Conservation Strategy regarding endemic small mammals (with the POW flying squirrel as a specific example) and northern goshawks.

On the specific alterations permitted by the 2016 TLMP Amendment with respect to OGRs, RMAs, and the beach and estuary fringe, FWS underscored the importance of

⁶⁹ These examples are illustrative, not exhaustive, in line with the direction from Objection Regulations to provide a “concise statement explaining the objection.” [36 C.F.R. § 219.54(c)(6)]

⁷⁰ In addition to the comments he submitted [Refs298 to 300], due to his unique and in-depth experience Dr. Smith should have been consulted by the Forest Service concerning the Conservation Strategy, at the time it requested reviews by Drs. Roloff, Suring and Schmiegelow. [769_05_0838 through 0840; *see also* _0837].

corridors, and challenged the Forest Service to provide a scientific basis for its management changes. FWS expressly noted, “[m]anagement actions that reduce long-term habitat values (by clearcutting in riparian areas, beach fringe, or OGRs) or disrupt movement of animals through logged landscapes could undermine the intent and functioning of the conservation strategy. We recommend against allowing such actions, which we believe seriously compromise the integrity of the conservation strategy.” [FWS DEIS Comments at 3]. The Forest Service provided no such scientific support in the FEIS.

Where the Forest Service noted that the 2016 TLMP Amendment would lead only to “localized reductions” in the ability of critical components of the Conservation Strategy to function, [See 2016 TLMP Amendment FEIS at D-15], Dr. Smith explained that it is impossible to evaluate the impact to one element of the Conservation Strategy without simultaneously evaluating the implications for all of the other component parts. [Ref298 – Smith (2016a) at 1]].

On species-specific issues, the agency’s disclosure and response also was inadequate. For example, where the DEIS cited one of Dr. Smith’s publications, the agency injected unwarranted uncertainty over the results. [2016 TLMP Amendment DEIS at 3-233 (“However, many reserves on Prince of Wales Island may be too small or spaced too far apart to support Prince of Wales flying squirrels over the long term or maintain functional connectivity to support a back-and-forth exchange between flying squirrel populations (Pyare and Smith 2005, Smith et al. 2011).”). In his DEIS comments, Dr. Smith specifically critiqued the agency’s characterization, explaining that the narrative was misleading with respect to the implications of studies which had reported “deficiencies and uncertainties in the ability of the Tongass Wildlife Conservation Strategy to function as intended, with compelling, credible (i.e., published in peer-reviewed journals) scientific evidence contradicting fundamental assumptions” [Ref298-Smith (2016a) at 2]. However, the FEIS repeats the exact same language as the DEIS—without any additional explanation or clarification. And the Response to Comments make no mention of Dr. Smith’s specific critiques.

Where Appendix D of the DEIS concluded that “components of the old-growth ecosystem are maintained through standards and guidelines designed to provide for important ecological functions such as dispersal of organisms, movement between forest stands, and maintenance of ecologically valuable structural components,” [2016 TLMP Amendment DEIS at D-2], Dr. Smith specifically commented that these assertions “are without merit because of the absence of supportive evidence for most wildlife species and because it is unsupported by published credible science on endemic small mammals (i.e. northern flying squirrels; Pyare et al. 2010, Smith et al. 2004, 2011).” [Ref298-Smith (2016a) at 3]. But again, the FEIS carries forward the exact same language, without any additional explanation or explanation, and Dr. Smith’s specific critiques are absent from the body of the FEIS or the Response to Comments.

In sum, scientific experts in the field provided feedback on the Forest Service’s draft forest plan and DEIS that specifically disputed the Forest Service’s core assumptions about the integrity of the Conservation Strategy, and the potential for the changes made by the 2016 TLMP Amendment to impact the functionality of the Conservation Strategy.

In its FEIS, the agency “must respond explicitly and directly to conflicting views in order to satisfy NEPA’s procedural requirements.” *See Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1172 (9th Cir. 2006) *abrogated in part on other grounds*, *Winter v. Natural Res. Def. Council*, 555 U.S. 7 (2008)). When an agency solicits public comment, “and then offers no meaningful response to serious and considered comments by experts, the agency renders the procedural requirement meaningless and the EIS an exercise in form over

substance.” *W. Watersheds*, 632 F.3d at 492–93 (citations omitted). Here, the FEIS is devoid of any mention of the substantive concerns raised by expert agencies and scientists. But the agency has an obligation under federal law to disclose to the public the full range of scientific views and to fully and fairly discuss them before making a final decision. The Forest Service’s failure to disclose opposing views renders the FEIS invalid under NEPA and its implementing regulations.

6. Objection 30. The FEIS failed to consider the best available science pertaining to QCG habitat needs and relies on an arbitrary scale of analysis

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

Our DEIS comments explained that Dr. Smith’s findings and other scientific studies should have triggered the need for analysis of means to protect foraging habitat, alternative nest sites, and other habitat features. [Ref 167 at 98 (GSACC et al 2016c)]. For example, the absence of sufficient prey, particularly mammals, can lead to food stress and starvation. [PR 679_05_000571 at 41 (USFWS (2007)(identifying a number of females on Prince of Wales Island that died of starvation during a 2002 study)]. The FEIS and Biological Evaluation do not address substantial questions regarding serious risks to goshawks caused by logging in the vicinity of known nests or QCG sightings or in high risk VCUs in any way that would alert the public or decision makers to them. It simply rests on overall POG removals across the entire Tongass National Forest and the flawed conservation strategy. [FEIS at 3-258-3-260]. The FEIS failed to adequately explain or provide convincing reasons in support of the effects determinations for QCGs and further failed to provide the information necessary to understand and evaluate environmental impacts, in violation of NEPA. [See *Ecology Center*, 430 F.3d at 1068].

However, the analysis simply catalogued landscape scale POG removals. [FEIS Vol. II, Appx. I at I-88]. When the Forest Service relies on habitat as proxy, it “must both describe the quantity and quality of habitat that is necessary to sustain the viability of the species in question and explain its methodology for measuring this habitat.” [*Lands Council v. McNair*, 537 F.3d 981, 998 (9th Cir. 2008)(citing *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1250 (9th Cir. 2005)(adding that “the Forest Service’s method for measuring the existing amount of that habitat [must be] reasonably reliable and accurate”)]. The choice of analysis scale must represent a reasoned decision and cannot be arbitrary. [*Pacific Coast Fed. Fishermen’s Ass’ns v. Nat. Marine Fisheries Svc.*, 265 F.3d 1028, 1038 (9th Cir. 2001)].

b. Statement of supporting reasons

The FEIS relies on a broad scale of analysis – remaining forest-wide POG - to evaluate impacts to QCGs. [FEIS at 3-258-259]. It thus ignores the relationship between known nest and post-fledgling areas and area likely to be logged. [See Ref301 at 6-7 (Smith 2016d)]. The 1996 conservation assessment found that a “broad scale of analysis fails to consider distribution of habitat throughout southeast Alaska,” [PR 572_1148 at 76 (Iverson et al. (1996)); Ref 126 (Doyle 2005)(explaining that it is unreasonable to rely on habitat measurements outside of known nests)]. As previously noted, British Columbia’s QCG recovery team similarly explains that “the level of threat is not merely a calculation of the balance between habitat loss and recruitment because [QCGs] have high fidelity to their breeding areas and so habitat loss within home ranges may have long-lasting effects on breeding pairs.”

The FEIS never provides any analysis regarding whether the conservation strategy provides for alternate nests and post-fledgling habitat. Dr. Smith’s findings concluded that

the TLMP strategy prescribed the reserve based approach despite insufficient local information, and that “[m]ore importantly, the 1997 TLMP did not incorporate the concepts of nest area, post-fledging area, and foraging area habitat management that underpin the current paradigm of conservation planning to sustain viable populations of northern goshawks.” [PR 679_05_000530 at 7 (Smith 2013)]. Thus, “[p]lanners and managers may want to revisit assumptions that current standards and guidelines and other conservation measures provide sufficient breeding system habitat.” [*Id.*].

The FEIS failed to respond with an analysis that considered Smith’s 3 hierarchical biological components, “all of which need to be considered simultaneously in land-use planning or mitigation: ... 1) nest area; 2) post-fledging (family (PFA); and 3) foraging area.” [Ref297 at 5 (Smith 2012); *see also* Ref213 (Mclaren et al 2005)]. Dr. Smith’s review of the scientific literature showed that the majority of a PFA should provide, *at a minimum*, 60% old growth forest. [PR 679_05_000530 at 6 (Smith 2013); *see also* Ref297 at 4 (Smith 2012)](finding that the mean proportion of POG in nest areas was 71% when excluding nest trees on clearcut sites or natural features creating an abrupt forest edge (e.g. shorelines)]. The FEIS and record provide no indication that the Forest Service attempted to quantify needed habitat qualities for PFAs or foraging habitat.

c. Conclusion and suggested resolution

A revised NEPA analysis needs to responds to Dr. Smith’s study and other identified flaws with the conservation strategy.

7. Objection 31. The FEIS failed to meet LRMP standards for sensitive species and failed to consider and implement alternative nest management measures

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

The QCG is a sensitive species, meaning that habitat or population declines indicate a risk to long-term persistence of the species. [LRMP at 4-82, 4-92]. Our DEIS comments explained that the NEPA analysis and Amendment process needed to consider improvements to the standards and guidelines implemented under the 2008 TLMP amendment, such as increased buffers for nests and increased forest structure retention requirements. [**Ref167 at 101 (GSACC et al 2016c)**]. **Instead, the amended LRMP further weakens the conservation strategy relative to the 1997 Forest Plan.** As discussed in the preceding sections, the DEIS needs to provide a habitat quality analysis that takes into account all available information on differential utilization of various forest types and structures.

Sensitive species designations are a part of the Forest Service’s NFMA mandate “to provide for diversity of plant and animal species,” [*Ecology Center*, 430 F.3d at 1068; 16 U.S.C. § 1604(g)(3)(B)], which “appl[y] with special force to ‘sensitive’ species.” [*Friend of the Clearwater v. Dombeck*, 222 F.3d 552, 556 n. 2 (9th Cir. 2000)]. Sensitive species are designated as such because of population viability concerns as evidenced by ongoing or predicted declines in population numbers or density or current or predicted downward trends in habitat capability that would reduce a species existing distribution.” [PR 572_0620 (citing FSM § 2670.5)]. Thus, the Forest Service must maintain viable populations and habitat distributed throughout the species’ geographic range. [FSM § 2670.22]. TLMP goals for sensitive species reflect a statutory mandate to ensure adequate numbers and distribution of species and avoid extirpation and/or federal listing. [16 U.S.C. § 1604(g)(3)(B)]. The failure to adhere to TLMP standards violated NFMA. [*Inland Empire Pub. Lands Council v. U.S. Forest Serv.*, 88 F.3d 754, 757 (9th Cir. 1996); 16 U.S.C. § 1604(i)].

The LRMP guidelines require the Forest Service to:

Maintain an area of not less than 100 acres of productive old-growth forest (if it exists) generally centered over the nest tree or probably nest site to provide for prey handling areas, perches, roosts, alternate nests, hiding cover, and foraging opportunities for young goshawks. Vegetative structure should include, where available, multi-layered, closed (over 60 percent) canopy stands, a relatively open understory, with large trees (usually 20+ inches diameter at breast height) and low ground vegetation. ... Consider surrounding landscapes when managing for goshawk nest sites. [LRMP at 4-92].

b. Statement of supporting reasons

The FEIS never discloses that the both the 2008 TLMP Amendment and the proposed LRMP Amendment result in less protection for the QCG. The 2008 TLMP FEIS rejected expert scientific opinion calling for improvements to the standards and guidelines. During the 2008 TLMP Amendment process, ADF & G, the FWS, and the Forest Service's Pacific Northwest Research Station each recommended, at a minimum, a 500-acre buffer as needed to minimize risks to QCGs. The 2008 Amendment also withdrew permanent protection for nest areas despite the known difficulty in detecting nests, and the species' territorial fidelity. Now, if there are no observations of QCG activity around a historical nest, the Forest Service will eliminate the buffer. The 2008 Amendment also reduced the level of forest structure retention without any scientific basis for the "legacy" structure guideline, and reduced the number of VCUs where the guideline would apply relative to pre-2008 forest retention standards.

The FEIS insists that adding nest buffers and legacy structure in second growth forests "would provide greater protection to goshawks and their habitat." [FEIS at 3-259]. The 2008 TLMP Amendment did not contemplate commercial clearcutting of recovering, second-growth forests. Rather, its provisions for these forests relate to projects primarily aimed at benefitting wildlife. [See, e.g. 2008 TLMP at 4-97-4-98 (directing that the Forest Service improve wildlife habitat, understory forage production and increase the development of old-growth characteristics in young growth (WILD2.I.A.1)]. These provisions reflected the analysis in the TLMP FEIS, which identified pre-commercial thinning as the only common intermediate treatment used on the Tongass National Forest, and anticipated an increase in commercial thinning over the planning cycle. [TLMP FEIS at 3-342-343].

Moreover, the Forest Service has never evaluated the effectiveness of legacy structure despite significant opposition to the guideline. [TLMP FEIS, Appx. HA-14, HA-39; Big Thorne FEIS, Appx. B at B-151]. As explained in the Big Thorne Project supplemental information report, legacy structure as implemented has instead been used to meet other resource objectives, and even includes areas not suitable for timber production. [Ref079 (Cascadia et al 2014a)]. Thus, the only result of the changes is that they establish the same weak standards for logging recovering forests as are in place for logging old-growth. We maintain our previous concerns about the QCG and legacy standards and guidelines, and submit that analysis of meaningful, species specific forest structure retention measures and heightened nest buffers is essential to meeting the Forest Service's obligations to sensitive species.

More importantly, the proposed LRMP further weakens protections relative to the 1997 Forest Plan in two significant ways: (1) it shortens timber rotations relative to the 1996 risk assessment, which anticipated much longer rotations (up to 300 years) so that recovering forests would attain old-growth conditions over time; and (2) it allows for logging in the beach fringe and riparian areas. Riparian and beach zones are particularly important to QCG distribution and abundance. Iverson explained that a specific reason for the beach fringe buffer was to reduce risks to QCGs by providing additional foraging habitat, and to avoid an

ESA listing: “the extended ... beach fringe was a very key feature of the conservation strategy.” [Ref184 at 2 (Iverson 2006)].

Finally, the FEIS asserts that modifications to the old-growth reserves would improve protection of QCGs under the conservation strategy, based on an overall net increase in protected habitat. This conclusion masks the site-specific impact of the significant loss of goshawk nesting habitat in many small OGRs in VCUs on POW and surrounding islands (VCUs 5560, 5600, 5872, 5940, and 6850). [See, e.g. DEIS, Appx. E]. The 2008 TLMP FEIS concluded that the Sealaska conveyance would require a plan revision based on the changes and the inability to make up lands lost in the reserve system. [2008 TLMP FEIS, Appx. C at C-3]. It is arbitrary for the agency to reverse its previous position without an adequate explanation, and an overall net gain in protected habitat does not necessarily translate into adequate protections at an appropriate scale.

c. Conclusion and suggested resolution

In sum, the LRMP and 2008 TLMP Amendment weakened protections for the QCG, making it arbitrary to rely on the reserve system and standards and guidelines to ensure species viability. The need to fix these problems is even more compelling in light of significant changes in landownership on POW and surrounding islands. The FEIS fails to provide a reasonable analysis of these changes, and fails to consider changes to the LRMP which would meet the agency’s obligations to sensitive species under NEPA. The FEIS failed to meet the Forest Service’s NFMA and NEPA obligations to consider impacts to QCGs and the additive risks that the further old-growth logging poses to the few remaining local populations in central and southeast Alaska that escaped adverse impacts from implementation of the 2008 TLMP Amendment. The Reviewing Officer should direct the Responsible Official to rescind the FEIS and draft ROD, and prepare additional NEPA analysis that more thoroughly considers the Forest Service’s obligations to sensitive species and fully evaluate added protections, including larger buffers and reduced logging, particularly in high risk VCUs.

C. Issues Concerning Wolves, Deer and Hunting (Including Subsistence)

1. Objection 32. Whether sufficient deer habitat capability will be provided to sustain wolf populations & hunters.

a. Statement referencing prior comments and content of objection

In section VIII.C. of our comments on the TLMP DEIS [Ref167 at 104-123 (GSACC et al. 2016c)] we pointed out substantial problems with the analyses of impacts of the alternatives to deer, wolves and hunters. In subsection VIII.C.3 (“The DEIS Fails to Disclose Whether or Not Sufficient Deer Habitat Capability Will Be Reserved to Sustain Wolves and Hunters”)⁷¹ we specifically addressed problems with how the deer model was applied in the analysis. The problems we identified include that:

- 1) the analyses were overly-reliant on biogeographic province and forest-wide scales;
- 2) disclosure and consideration of the WAA scale was needed, but lacking or insufficiently done;

⁷¹ Note that the section begins on page 117, and that the section subsequent to it (on p.119) was mis-numbered, also as “3”.

- 3) heavy reliance on “NFS-only” lands instead of for “all lands” for in analyses of direct and indirect impacts was inappropriate for species with home ranges that commonly utilize lands in all ownerships, making those analyses artificial, irrelevant and misleading;
- 4) heavy reliance on percentage differences when more direct measures were available rendered the analysis of several topics misleadingly unrepresentative of the actual impacts, both generally and especially when the system involved has a non-linear response to the driver;
- 5) shortcomings of the deer model were not fairly disclosed and considered; and
- 6) because of the above failures, which have not been adequately remedied (and in some cases not at all) in the FEIS, it fails to take a hard look at the impacts of the existing Forest Plan and the intended Forest Plan amendment and fails to disclose or accurately portray the impacts that should be expected.

As a consequence of these problems, which exist in both the DEIS and FEIS, the document violates NEPA and a decision relying upon it will violate NEPA, ANILCA, and NFMA as well as being arbitrary and capricious.

b. Agency Response to Comments

1) The matter of analysis scale: Regarding excessive use of the broad Forest-wide and province scales of analysis and the need we identified to instead focus on the WAA-level for deer and wolf analysis, the Forest Service replied that WAA “information was summarized in the FEIS and is available by WAA in the project record. [FEIS at I-81]. First, our request was for the by-WAA information to be included in the EIS. There was no response to this request, and the information is not in the EIS. Inclusion of this information in the EIS is appropriate, as indicated by its inclusion in the 1997 TLMP FEIS, in Table 3-112 (which has data that is now out-dated). [See *Blue Mts. Biodiversity Proj. v. Blackwood*, 161 F.3d 1208, 1214 (9th Cir. 1998) (explaining that the FEIS “is where the Forest Service’s defense of its position must be found”)].

Second, the response failed to provide a citation for locating this information in the record, which caused a substantial waste of time in a thorough search of the record and its index which found that the requested information in fact does not exist in the record!⁷²

Third, our request was that the by-WAA information for “all lands” be included, and in units of deer/mi² (i.e. not as percentages and not in units of number of deer) in order to be directly comparable to LRMP standard and guideline XIV.A.2. The spreadsheet 769_05_0436 does provide by-WAA data; however, it is useless for considering cumulative impacts because its data is for “NFS-only” lands and is in units of number of deer and percentages that are not comparable to the standard and guideline. [See *Klamath-Siskiyou Wildlands Ctr. v. U.S. BLM*, 387 F.3d 989, 993–94 (agency must supply “quantified or detailed information” to provide a “useful analysis of past, present, and future projects”)].

The response to comments on this topic covered-over the fact that the FEIS is not responsive to our comments regarding the scale of analysis for impacts to deer, wolves and subsistence (and moreover the same problem pertains to some other species).

⁷² In the FEIS at 3-274 there is another vague reference to by-WAA deer model results being in the planning record, but again a specific document was not cited.

2) The matter of reporting “NFS-only” vs “all lands” data: The response to comments excuses the continued heavy reliance by the FEIS on NFS-only data on three premises, that: a) non-NFS land is managed differently than Tongass NF land; b) the Forest Service does not maintain data on non-NFS land and cannot “enter accurate data into the model;” and c) activities on those lands are not known over the 100-year rotation. [FEIS at I-81]. Nonetheless, as the response notes itself, FEIS Table 3.10-15 includes both kinds of data (but has region-wide instead of by-WAA data). The newly added Table 3.10-16 in the FEIS is entirely “all lands” data, which is good except that it is by-province instead of by-WAA. Therefore, all-lands data is available, and as evidenced by Table 3-112 in the 1997 TLMP FEIS it can be reasonably determined at the WAA scale. [Cf. *Nat. Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 815 (9th Cir. 2005) (holding, for previous TLMP FEIS, that the “EIS fails adequately to consider the cumulative effects of disproportionate high-volume logging on non-federal land because there is no catalog of past projects and no discussion of how those projects (and differences between the projects) have harmed the environment. Moreover, there is no discussion of the connection between individual [non-federal, high-volume] harvests and the prior environmental harms from those harvests”) (citations omitted)].

3) The matter of not reporting deer carrying capacity in deer/mi². The response to this topic deals only with use of percentage-change data in the EIS. [FEIS at I-82]. Excuses given for using units of percentage-change are that “the deer model is used as a relative comparison tool between alternatives” and for representing “a general trend across the planning area,” and that model results “are not actual deer known to inhabit the forest.” There were no responses to our contentions that: a) model results should not be reported in units of number of deer (as in DEIS and FEIS Table 3.10-10);⁷³ b) the model is used for direct comparison to TLMP standard and guideline XIV.A.2, not just for relative comparisons of alternatives; and c) units of deer/mi² are generally the units that should be used. [See 40 C.F.R. § 1500.1(b) (agency has a duty to supply accurate, high-quality scientific information)].

4) The matter of the deer analysis components, comprehensively: Both in the body of the FEIS and in its response to comments appendix, the document has failed to respond to the need to comprehensively utilize the analysis fundamentals we identified and requested in our comments. That is, to adequately explore the impacts of the Forest Plan alternatives, it is necessary to present and analyze deer model results at the WAA scale as well as the province scale, for all land ownerships, and in units of deer/mi² — and results need to be reported that way for the original condition, the current condition, and (at relevant posterior times) for all alternatives. This would allow easy comparisons across the whole spectrum of times and alternatives in such an analysis table, as well as to the threshold in standard and guideline XIV.A.2. In fact, in the 1997 LRMP FEIS, Table 3-112 afforded the public that comparison opportunity; an opportunity now denied by the present FEIS. [*Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 809–10 (9th Cir. 1999) (EIS must include “a useful analysis of the cumulative impact of past, present and future projects”)].

c. Statement of supporting reasons

(i) Background for why specific analysis by WAA is crucially important

⁷³ Moreover reporting the results with four significant digits exceeds the accuracy of the model (e.g. 6,187 deer capability for Province 1 in FEIS Table 3.10-10), and demonstrates a misunderstanding of the model’s capabilities. That results in misleading information being presented to public, and can result in a misinformed conclusions by the decisionmaker.

In the mid-1990s (prior to the recent deep decline of the wolf population in GMU2) it was estimated that “60 to 70 percent” of the region’s wolf population was in GMUs 2 and 3, and about 85% for the combination of GMUs 1A, 2 and 3 [Person et al. 1996 at pdf-p.5 (unnumbered) & 13]. Only the largest islands within those GMUs are believed to support wolf packs for periods of more than a few years, those being Prince of Wales, Kuiu, Kupreanof, Mitkof, Etolin, Revillagigedo, Kosciusko, and Dall Islands. [Id. at 1].⁷⁴

For North American wolves, including in Southeast Alaska, “home ranges are smallest and densities highest where deer are the principal prey.” [Person 2010, PPT slide 10 (*see* speaker’s note); *see also*, cite to Fuller (1989) in Ref264 at 9 (Person et al. 1997)]. In Southeast Alaska, “wolf abundance may be especially linked to deer abundance and availability on the islands in the archipelago (Smith et al . 1986b, 1987a, Suring and DeGayner 1988, Person 1993, Kohira 1995)” and is “expected to track the upward and downward fluctuations in deer populations in some time-lagged fashion (Van Ballenberghe et al. 1975).” [RefXXX at 16 (FWS 1997, AA wolf status review)].

“We combined the data from Prince of Wales and Revillagigedo Islands (n = 545 scats) and estimated the percentage of prey species by volume in the diet ... These data strongly suggest that wolves occurring on the islands of southeast Alaska depend on the availability of deer and raise questions about the ability of alternative prey to sustain wolves in the absence of deer.” [Person et al. 1996 at 8 (giving Kuiu, Kupreanof and Mitkof Islands as examples)].

In 1997 the US Fish & Wildlife Service concluded both that wolf populations in southeast Alaska are located primarily in the GMUs with the highest deer densities, and that those are also the GMUs “that have had the most timber harvest, and are projected to have the most timber harvest in the future.” [RefXXX at 41-42, *emph. added* (FWS 1997)]. That foresight regarding the relationship between logging activity and the location of the primary habitat for Alexander Archipelago wolves has proven true over the 19 years since then, regarding logging on all land ownerships including on the Tongass National Forest. The lists of foreseeable logging projects in Appendix C of the 2016 LRMP FEIS shows that logging will continue to be focused on that primary habitat for the foreseeable future and likely beyond that. [FEIS at C-9 to C-13]. The statement by FWS exposes the root of a *development/environment relationship* that requires a more detailed examination by the programmatic NEPA document than has been provided by the 2016 LRMP FEIS. GMUs (or similarly biogeographic provinces) are the sum of their parts, and to determine cumulative effects and their outcomes it is necessary to know how those parts – e.g. wildlife analysis areas (WAAs)⁷⁵ – respond to the impacts.

(ii) The FEIS violated NEPA by not analyzing impacts to wolves at the WAA scale

The analysis scales of the whole Forest, the game management unit or the biogeographic province are too broad for determining impacts of logging on deer as prey for wolves, a predator whose use of the landscape is a function of social structure and pack home range

⁷⁴ The report additionally notes that “Wolf packs may include several smaller islands (e.g., Baker, Lulu, Noyes, Tuxekan, Marble, Thorne) in their home ranges or may exclusively inhabit smaller islands for a few years, but they are unable to persist permanently (Klein 1996, Person and Ingle 1995).” [Person et al. 1996 at 3].

⁷⁵ WAAs generally are comprised of a few watersheds, and several decades ago ADF&G mapped the WAAs across the entirety of Southeast Alaska. Ever since, they have been the basis for monitoring and managing both wildlife and development, by all involved state and federal agencies, including the Forest Service.

size. The appropriate analysis scale, as the Forest Service has long recognized, is the wildlife analysis area (WAA) because in size, one or two WAAs approximate a wolf pack home range, a relationship that is crucial for analysis at both the project and programmatic levels of planning. The Forest Service previously recognized that programmatic analysis at the WAA scale is necessary by including Table 3-112 in the 1997 LRMP FEIS. For each individual WAA, the table gives the deer carrying capacities on all land ownerships in units of deer/mi² for the current condition and the expected outcomes of each of eleven alternatives (six more than the 2016 FEIS). It also displays for each WAA its total land area and the area of non-federal land.⁷⁶ In the 2008 LRMP amendment process, the Forest Service also recognized the need for by-WAA carrying capacity results in units of deer/mi² for all land ownerships, by including a table with that information in the planning record [PR# 603_0935]. WAAs were used in both FEISs because one or two WAAs generally approximate the size of a wolf pack home range.

The 2016 LRMP FEIS and planning record provide no by-WAA information that is useful concerning assessing impacts of the alternatives to wolves. All relevant tables in the FEIS and other data in the text of the FEIS are at the Forest-wide or province scale. Planning record document 769_05_0436 does provide deer model results by-WAA; however, the data is only for the National Forest System (NFS) lands in the WAA, and therefore has no relevance because wolves operate over their whole home range, not an arbitrary fraction of it that is merely a figment of a land ownership distinction. [See *Nat. Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 816 (9th Cir. 2005) (“Species are not impacted by the federal or non-federal character of the lands over which they are distributed, but the cumulative effect of “highgrading” on each type of land may determine whether species will retain viable, well-distributed populations in the Tongass.”)]. In addition, the spreadsheet’s deer model results are in units of number of deer, not deer/mi², and therefore cannot be compared to the threshold deer carrying capacity in LRMP standard and guideline XIV.A.2 (the prey portion of the wolf S&G).

It is crucial that carrying capacity analysis be done primarily at the WAA scale, even in programmatic planning:

Stochastic events, such as severe winters or reductions in the abundance and quality of suitable habitat, may perturb the conditions of equilibria and result in widely fluctuating wolf and deer populations. By limiting immigration and emigration of both deer and wolves, the insular conditions commonly encountered in southeast Alaska increase the probability that population fluctuations may end in local crashes of deer populations. [Person et al. 1996 at 15].

We caution that equilibrium does not necessarily imply stability, which is a measure of the tendency for a system to return to a condition of equilibrium after being perturbed (May 1974). ... The potential for equilibrium, and consequently stability, is diminished if habitat loss causes residual deer populations to exist at a lower density that is also closer to carrying capacity. Increased intra-specific competition for food within the remaining deer habitat will likely lower reproduction. ... As our simulations have shown, habitat changes that lower reproductive rates in deer will reduce the probability of equilibria between wolves and deer and increase the sensitivity of equilibria to perturbation. In planning timber harvests, efforts to minimize the loss of long-term deer carrying-capacity at geographic scales consistent with the size of wolf pack home ranges,⁷⁷ would likely reduce the probability of disequilibria between wolves and deer. [Person et al. 1996 at 19-20 and 22, emph. added].

⁷⁶ The table is not perfect; the original (1954) carrying capacity is missing but is also vital information.

⁷⁷ *i.e.*, at the WAA scale.

Following the adoption of the 1997 Forest Plan and its embedded Conservation Strategy, the principal authors of the Wolf Conservation Assessment (Person et al. 1996), sent letters to LRMP IDT leader Pendleton [Ref264, (Person et al. 1997)] and Regional Forester Janik, seeking corrections in the plan. In edifying on the ecological term “resiliency” as used in the 1997 FEIS and on some related topics, they pointed out that: (1) there are “no data” from GMUs 2 and 3⁷⁸ on the resiliency of wolf populations;⁷⁹ (2) the data “certainly don’t suggest a ‘resilient’ population” in either of those GMUs; and (3) that the GMU3 wolf population is apparently less resilient than the one in GMU2. [Id. 1997 at 9 (item 5, concerning FEIS pp.N-33 & 36)].

The portion of GMU3 comprised of Mitkof, Kupreanof and Kuiu Islands is a well-known example of a set of predator/prey ecosystems that have proven *unresilient* to several stochastic winters over the past three and a half decades, with the deer populations at very low numbers (and essentially extirpated on Kuiu Island) and resistant to recovery. [*e.g.*: Ref002 & 003 (Adams 2010); Ref018 (ADF&G 2012c); Ref209, 392, 393 (Lowell 2013a,b,c); Ref278 & 279 (Rosenbruch 2010)]. Low deer numbers have also been chronically low and resistant to recovery in GMU 1A, as reported by ADF&G to the Alaska Board of Game in recent years. [Ref017 (ADF&G 2012b, GMU 1A IM assessment; Ref396 to 398 (Porter 2013a,b,c)]. Thus, the resiliency and sustainability of deer populations is in question throughout the provinces (and GMUs) where the 2016 LRMP timber program is focused [see LRMP FEIS at C-9 to 13] — as are the wolf populations that depend on the deer — because of the cumulative past and foreseeable loss of habitat to logging, an effect additive to the nature factors involved.

“The recovery of deer populations depends on the reproductive potential of the survivors, immigration from other areas, and the numerical response of wolves and other predators (including humans) to declining deer density. If alternative species of prey exist so that wolf numbers do not decline sufficiently to permit deer to increase (or if mortality of deer from hunting or other predators remains high), or if the reproductive potential of the deer population is reduced because of habitat loss, then recovery of deer populations after a crash could take a long time (Van Ballenberghe and Hanley 1984).” [Person et al. 1996 at 16, *emph. added*].

The problem is not only one of recovery from present circumstances, but of what will result from future stochastic events after additional habitat has been lost. The dynamic factors that are involved, and which are centered on carrying capacity, have been explained by Dr. David Person, using the analogy of what he calls the Ball in the Box Model. [Ref255 to 257 (Person 2010b,c,d – transcript, PPT and video of 2010 presentation to Board of Game)]. His explanation is transcribed below in a single page, Frame 1.

⁷⁸ Nor, we note, is there such evidence for any other GMU in the region.

⁷⁹ And there still is no such data, other than that the GMU2 has not rebounded from its crash that progressed over the past decade.

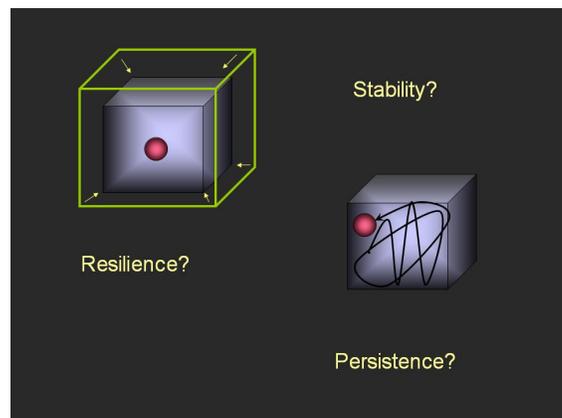
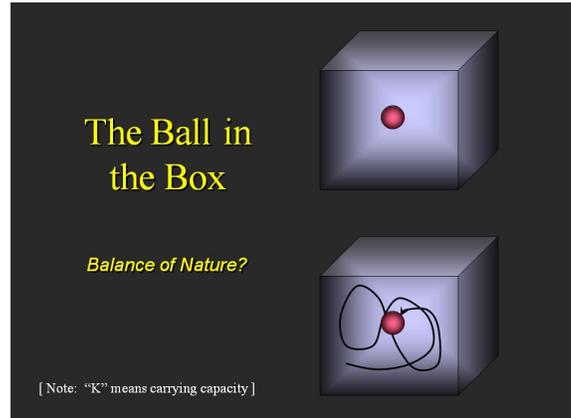
FRAME 1. Conceptualizing a non-linear, dynamic system — The Ball in the Box

To explain how stability, resiliency and species persistence function in the predator-prey systems of Southeast Alaska, Dr. David Person used what he calls his *Ball in the Box* model in presentations to the Alaska Board of Game, the Forest Service and fellow scientists at the 2006 Tongass Conservation Strategy Workshop and the Board of Game's November 2010 meeting. (Person 2006; Person 2010 – see also: Person 1996a,b).⁸⁰ What he said is best told with his own words and illustrations:

“I want to end my discussion by giving you a concept of the predator/prey dynamics that are here, and why we consider habitat to be such an important thing. I call this my ‘*Ball in the Box model.*’ If you think of the carrying capacity for deer and all the things that support deer as being this box, a three-dimensional box. And that ball in the center represents the populations and the dynamics of all the constituent players – the wolves, the people, the bears, and the deer – and what it’s going to do in space and time. And if you take that box – and that’s the space it all has to work in, it all has to be functioning in and moving about in – that ball is never at rest.”

“There’s no balance of nature. There is no balance of nature. Nature is always being perturbed by something. Something is changing – a bad winter, an overharvest of deer, a super abundance of wolves for some reason, disease – something is always perturbing. Logging, is always perturbing it. And that ball is always moving. But when carrying capacity is very large, that ball has a lot of room to move, without hitting a side and bouncing and perhaps collapsing the system, or finding some tremendous series of years of instability. So when K [carrying capacity] is big, it doesn’t necessarily mean that things are bottom-up, or top-down, but it provides the resiliency necessary for that system to function despite a lot of disturbance.”

“When you reduce K, which is what is happening because of timber harvesting in those areas in which harvest is extensive, you’re taking that box and you’re making it smaller. So now the activity of the dynamics of that ecological system is more likely to hit its barriers. And when it hits its barriers, its behavior may become erratic. There may be periods of time in which you have long-term suppression of deer numbers by predation, for example. You may have periods of time when one or more of those species drops out. You may have periods of time in which you have wild swings, and instability in that system. So any perturbation to this system, any disturbance – there’s less resilience in the system to deal with it. And that’s what we are trying to avoid here, for the long-term. We don’t want to become a Vancouver Island, which is a train wreck – an island that’s five-times the area of Prince of Wales, for example, but only seems able to support less than 50,000 deer. Prince of Wales Island has 60-70,000 deer. They claim they can only support sustainably perhaps 100 wolves, and we have perhaps as many as 250 to 300 on Prince of Wales Island. Other areas in Southeast, the densities are relatively similar. And so we don’t want to see that happen, because that’s a train wreck that everybody loses. And that’s the principal reason why our focus has been largely on these predator/prey issues that relate to habitat change.” [Person 2010, final two slides (orig. emphasis)].



⁸⁰ For each of his presentations there is at least a transcript and an audio file. For some there is also a video and a powerpoint.

The FEIS provides only a very limited view of the risk of stochastic perturbations to populations of any species and does not consider the dynamics of ecological communities. It mentions that there is “greatest concern for populations that are limited in number or distribution” [FEIS at 3-291], but does not identify the species involved,⁸¹ the size of the populations that may be of concern, or their locations. Moreover, the FEIS – elsewhere as well as in the above statement which was about severe snowfall winters – does not approach the problem comprehensively. First the FEIS does not disclose available information on recent extreme snowfall winters. [See: Ref209 at 12-15 (Lowell 2013, PPT for presentation to Board of Game); Ref079.23.Collection (news clips on record snowfall, 2006-2009); Ref071 (Brinkman et al. 2011)]. Second, there is no discussion of this with the integrated effects of predation, habitat loss, amplification of deer losses to predation due to fragmentation caused by habitat loss, and the fact that the response of the ecological system to habitat loss is non-linear. [Ref252, 253 (Person 2001); Ref069 (Bowyer et al. 2005); Ref255 to 257 & 395 (Person 2010b,c,d,e)].

The 2016 LRMP FEIS is arbitrary and violates NEPA, NFMA and ANILCA by not disclosing and not taking a “hard look” at these mechanics of the ecosystem, and particularly how cumulative timber activities have acted and may continue to act in concert with those mechanisms, specific to the various circumstances that exist from area to area across the Tongass. This is a crucial programmatic matter that cuts across many major aspects of the Forest Plan and the FEIS, including for example: where it may be reasonable to log and how much; the PTSQ; the Sustained Yield Limit; the economics of the timber program; and ultimately whether the alternatives that have been considered in detail in the FEIS are in fact reasonable and whether the Forest Service should instead be pursuing a different kind of transition on the Tongass as the proposed alternative.

(iii) The FEIS analysis of cumulative impacts to deer, wolves and hunters is arbitrary and violates NEPA

The 2016 LRMP FEIS acknowledges that the greatest impact of the continuing timber program will be in GMU2 and that each of the alternatives may result in a decline of the deer population there. [Id. at 3-287]. This ignores the adverse existing situations for deer in GMUs 1A and 3 as described above and in the exhibits we are providing with these comments, and it ignores what will happen to the deer in those units as a result of the timber program.

Even the disclosure regarding GMU2 is insufficient, however, because the FEIS fails to inform where in GMU2 – that is, specifically in which WAAs – the habitat loss that would lead to a deer population decline, and to what degree, and across all land ownerships in each of the WAAs. This information is needed as well for the WAAs of the other GMUs in wolf territory, and it needs to be in units of areal density (i.e. directly comparable to S&G XIV.A.2) not percent change. The Forest Service has demonstrated the ability to provide such information in the past, with Table 3-112 in the 1997 LRMP FEIS.

Instead, none of the deer carrying capacity information presented in the 2016 FEIS and the planning record⁸² meets the vital needs we have described above and in our DEIS

⁸¹ Although these remarks are in a section pertaining to deer and wolves, our concern in this discussion extends to all species on Tongass.

⁸² That the needed information is not even in the planning record is a point of interest; but the main thing is that the information needed to be in the body of the FEIS or at least in an appendix of the FEIS and then referenced in the FEIS body. Such information was included in the body of the 1997 LRMP FEIS.

comments. We show the particulars of this failure in Table-1,⁸³ in which a row with no bullets indicates a satisfactory kind of disclosure of deer model results. *There is no such row.*

Table 1. Documentation of FEIS failures to provide needed data on impacts to deer. Bullets indicate a failure.						
Table or file	Content	Forest-wide scale	Province scale	“NFS-only” lands	As percent change	As # of deer
Concerning the Deer Model						
3.10-2	Existing deer habitat capability		•	•	OK [1]	
3.10-5	Deer habitat capability		•	•	OK [1]	
3.10.10	Deer habitat capability, relative change		•	•	•	
3.10-14	Ability to meet deer carrying capacity S&G		•		OK [2]	
3.10-16	Relative change in deer habitat capability		•		•	
769-05-000436	Deer habitat capability in 2014 & +100 yrs			•		•
Concerning POG						
3.10.13	POG data, by elevation band	•		•		
3.9-12 to -14	Tables for all, hi-vol & big tree POG		•	•	• [3]	
3.9-16 to -18	Tables for all, hi-vol & big tree POG		•		• [3]	
NOTES						
[1]	OK because past & current data is in deer/mi ² ; the % change is the difference between.					
[2]	Data is given in both deer/mi ² and percent change.					
[3]	There should be separate tables for “Total” and “In Reserves,” by WAA, with both acres and percent change for the for the “Remaining” and alternatives columns.					

We also point out that there nothing wrong with additionally providing data at the province or Forest-wide scales, as long as WAA-scale data is also provided in the FEIS and if there is also an explanation of the relative utility of data at each of those other scales for assessing the impacts to deer, to the sustainability of wolf populations,⁸⁴ and to hunters. We note that in its comments on the LRMP DEIS, ADF&G also requested that the FEIS provide deer model results at the WAA scale:

Page D-5, paragraph 3: The USFS states that on a forest-wide basis, over 90% of the existing POG will be protected from harvest. Given the context, this statement implies that forest management will have little effect on old-growth associated species because

⁸³ The table also illustrates similar problems concerning POG data, which is a kind of data that is also of great importance in assessing impacts to deer, and consequently wolves. We also note that the FEIS is derelict in not providing tables of by-WAA data for cumulative impacts on average- and deep-snow winter habitat.

⁸⁴ As noted elsewhere in this objection letter and our DEIS comments, the Forest Service is unable to determine wolf viability Forest-wide and therefore uses the approach in LRMP standard and guideline XIV of acting to sustain wolf populations, to satisfy NMFA.

90% of their habitat will remain intact. However, populations of many old-growth associated species are confined to islands or biogeographic regions where a much higher proportion of POG has been or will be harvested. We recommend that relative to wildlife, such habitat summaries be presented at a scale that is meaningful to the species or populations being discussed.

[ADF&G (2016) at 10, *emph. added* (DEIS comments, page is at pdf-p.91 in LRMP FEIS Appen. I)]. In that regard, ADF&G said for deer: “Please include outputs (e.g. deer/mi²) from the habitat suitability index model at the wildlife analysis area level so that finer scale analyses can be made in areas where extensive old-growth harvest was conducted.” [Id. at 9, *emph. added*].

Further, as discussed elsewhere in this objection letter, there is little if any merit to providing “NFS-only” data even for assessing direct and indirect impacts because it is irrelevant to the scale of the landscape that a wolf pack utilizes. We note that 1997 LRMP FEIS Table 3-112 included NFS-only data in one column, which is appropriate and avoids the misleading inclusion in the FEIS of whole tables of NFS-only data. [See *Animal Def. Council v. Hodel*, 840 F.2d 1432, 1439 (9th Cir. 1988) (information presented in an EIS may not be incomplete or misleading)].

(iv) Concerning impacts to deer and wolves, the FEIS’ reliance on tables of by-province data is pernicious

The FEIS displays *twelve* tables of province-scale data related to the adequacy of deer habitat and the impacts upon that habitat. In all cases, the ranking of the data rows follows the biogeographic provinces’ arbitrary⁸⁵ identification numbers. *Seven* of these tables present data on productive old-growth forest (POG). [Tables 3.9-8, 12-14, & 16-18].⁸⁶ *Five* others present data on deer carrying capacity. [Tables 3.10-2, 5, 10, 14 and 16].⁸⁷ *One* table concerns the intactness of watersheds (as determined by a metric of POG). [Table 3.9-15, p.3-212]. The tables occur in the Biodiversity and Wildlife sections of the FEIS, in subsections either for direct/indirect or cumulative impacts.

The FEIS does not explain whether individual rows of data (i.e. provinces) in the tables *are* relevant – or *are not* – concerning impacts to deer and wolves (or other species) or the *degree* to which they are relevant. Moreover, the text of the FEIS actually depreciates the tables’ *by-province* data, by reducing it to very general *Forest-wide* statistics for disclosure, instead of using the data to its best advantage for disclosing and evaluating the impacts of the alternatives on deer and wolves (and other species) in those few provinces where logging activity is planned or expected to occur. See: *Or. Nat. Res. Council Fund v. Brong*, 492 F.3d 1120, 1130 (9th Cir. 2007) (agency cannot “dilute to insignificance” the impacts of a project by simply measuring impacts over an artificially broad area). Table 2, below, explains this depreciation problem by quoting representative example text that the FEIS used in discussing each of the tables.

⁸⁵ The arbitrariness is with respect to the conditions or impacts the tables seek to portray. The sequence in which the province I.D. numbers were assigned is primarily north to south and secondarily west to east.

⁸⁶ Found on these pages respectively: 3-201, 3-209 to 211, and 3-217 to 220.

⁸⁷ Found on these pages respectively: 3-231, 3-239, 3-264, 3-275, and 3-288.

Table 2. Usage by the FEIS of data in its POG and deer carrying capacity tables	
FEIS Table #	FEIS usage of the table's data
3.9-8	“Table 3.9-8 shows the distribution of POG and young-growth forest within the reserve system and matrix lands.”
3-9.12 to 14	“Forest-wide and assuming maximum timber harvest over the planning horizon, approximately 90 percent of the original total POG, 85 percent of the original high-volume POG, and 78 percent of the original large-tree POG would be maintained under Alternative 1 (Tables 3.9-12, 3.9-13, and 3.9-14).”
3.9-15	In Alternative 5, “[a]fter 100+ years the percentage of intact watersheds would be reduced from 68 percent to 61 (Table 3.9-15). ”
3.9-16 to 18	<p>“Cumulative Effects. ... Approximately 83 percent of the original POG would remain on the Tongass after full implementation of the 2008 Forest Plan (Alternative 1) and future non-NFS harvest in 100+ years (Table 3.9-16). Future representation of high-volume POG and large-tree POG would be expected to be approximately 76 and 63 percent of the original amount, respectively, after 100+ years under the 2008 Forest Plan (Table 3.9-17 and 3.9-18).</p> <p>POG harvest on NFS lands under Alternatives 2, 3, 4, 5 would all be less than Alternative 1, but would also maintain approximately 83 percent of the total original POG remaining on the Tongass after implementation of alternatives and future non-NFS harvest (Table 3.9-16). Future representations of high-volume POG and large-tree POG under the alternatives would be expected to be approximately 76 percent and 63 percent of the original amounts, respectively, under Alternatives 2, 4, and 5 after 100+ years, and 76 percent and 64 percent of the original amounts, respectively under alternative 4 after 100+ years (Tables 3.9-17 and 3.9-18).</p>
3.10-2	“Table 3.10-2 presents modeled deer habitat capability by biogeographic provinces. Forest-wide, approximately 89 percent of the original (1954) habitat capability remains, ranging from 72 to 100 percent depending on the biogeographic province. The greatest reductions in deer habitat capability have occurred in provinces where timber harvest has been concentrated (the North Central Prince of Wales, East Baranof, and Etolin Island biogeographic provinces).”
3.10-5	“Table 3.10-5 summarizes existing conditions by biogeographic province. Forest-wide approximately 89 percent of the original (1954) habitat capability remains, ranging from 72 to 100 by biogeographic province.”
3.10-10	“All of the alternatives would reduce deer habitat capability (based on Interagency Deer Habitat Capability model output) from existing conditions due to the harvest of mature young-growth and POG forest (Table 3.10-10). ... The transition to young-growth harvest under Alternatives 2, 3, 4, and 5 ... would dampen the long-term decrease in deer habitat capability predicted for Alternative 1 ... thereby maintaining more quality winter habitat for deer (Table 3.10-10). This is illustrated in the Interagency Deer Habitat Capability model results at both the 25-year and 100-year time steps, where Alternatives 2, 3, 4, and 5 maintain approximately 1 to 4 percent more of the existing habitat capability than Alternative 1 (the current Forest Plan). At the forest scale, all alternatives would maintain 99 percent of the existing deer habitat capability over the long term.”
3.10-14	“After 100 years of Forest Plan implementation all alternatives would reduce the percentage of WAAs with at least 18 deer per square mile by 14 percent. WAAs with the greatest potential impacts are located in South Prince of Wales, North Central Prince of Wales, Kupreanof/Mitkof Islands, Revillagigedo Island, and Chichagof Island biogeographic provinces (Table 3.10-14).”
3.10-16	“Cumulative effects to modeled deer habitat capability under the alternatives would

range from maintenance of 78 percent of the original level under Alternatives 1, 4, and 5 and slight increase to 79 percent of the original level under Alternatives 2 and 3 in 25 years; at 100 years, the current Forest Plan would maintain 77 percent of the original level whereas the alternatives would result in a slight increase, maintaining 78 percent of original levels (Table 3.1016).”
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In the next table, Table 3, we re-rank the provinces using a metric that is relevant to wolf issues, and we distinguish the provinces by placing them into three groups. The metric is the province’s area-weighted deer carrying capacity. The table further illustrates why the twelve FEIS tables and their use in the FEIS widely miss the “hard look” mark. The failing is particularly onerous concerning Table 3.10-16, from which most of its source data was obtained, because it is table that should be the nexus for analyzing cumulative impacts to deer, wolves and hunters.

To be clear, Table 3 is not a substitute for any table in the FEIS or for any analysis in the FEIS. It is instead an analytical view of how the FEIS has failed to grapple with indicators of the real impacts of the Plan alternatives, and of why the depreciated Forest-wide conclusions the FEIS draws from the twelve tables are meritless and misleading.

Our table shows with a white background the *six* provinces that don’t support wolf populations; with grey, the *seven* mainland provinces that have little past or projected logging and low-density wolf populations; and with orange, the *eight* island provinces that can or did⁸⁸ support high-density wolf populations and which bear the brunt of past and future logging. The index⁸⁹ used to rank the provinces is the product of a province’s original land area of productive old-growth forest (POG) and its original deer carrying capacity in units of deer/mi², divided by 100,000.

One thing the table exposes is the practical fallacy of the FEIS’ conclusion that, cumulatively across all land ownerships, 77-79% of the original (1954) deer carrying capacity in Southeast Alaska will remain after full implementation of the Forest Plan. [Table 3.10-16; and discussion of it at 3-287; and our Table 2 above]. It also is an indicator of why this other statement in the FEIS is equally deceptive: “all of the action alternatives would maintain 80 percent or more of the original (1954) total POG forest in 18 of 21 biogeographic provinces” over a 100 year period. [FEIS at 3-289, on the basis of T.3.9-16]. As our Table 3 makes transparent, the region-wide carrying capacity statistics in the FEIS are heavily skewed by the inclusion of the high-ranking non-wolf islands: Admiralty, east Chichagof and west Baranof (in the top half of the list), and all the provinces in the lower half, which either are not wolf territory or are low-density mainland wolf territory. And really, the FEIS should have used separate tables for wolf and non-wolf provinces, because the considerations regarding deer are entirely different, and standard and guideline XIV.A.2 (which includes the 18 deer/mi² threshold) applies only in wolf territory. [See *Pac. Coast Fed’n of Fishermen’s Ass’ns v. Nat’l Marine Fishereis Serv.*, 265 F.3d 1028, 1035–37 (9th Cir. 2001) (holding that an agency cannot try to minimize the environmental impact of an activity by simply adopting a scale of analysis so broad that it marginalizes the site-level impact of the activity on ecosystem health)].

⁸⁸ The case of provinces in GMU2, whose population recently crashed.

⁸⁹ This index is well-suited to issues of deer and wolves. Using some other index or available data would make sense for ranking for other species or resource issues.

TABLE __: Comparison of deer carrying capacities in 2016 TLMP FEIS Tables 3.10-14 and 3.10-16, and to the S&G

KEY:

8 wolf island provinces
6 non-wolf provinces
7 mainland provinces

1) The list is sorted by this index: (Orig. land area) x (Orig. carrying capacity) / 100,000.

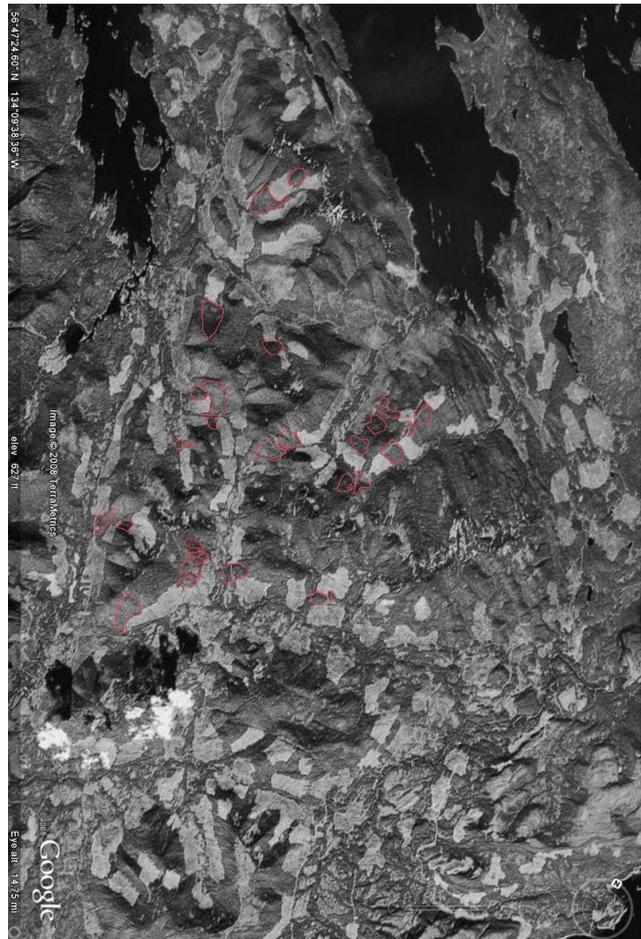
2) POG in Provinces 1, 2 and 21 "may not contain all the characteristics associated with old-growth stands."

Provinces (sorted by INDEX)	INDEX (Orig. POG-area) x (Orig. carrying capacity) / 100,000	Sourced Data	Calculations from sourced data				Sourced Data	Sourced Data	Sourced Data	Sourced Data
		Table 3.10-16 Stated Orig. (deer/mi ²) All lands	Table 3.10-16 Calc'd Curr. (deer/mi ²) All lands	Loss: Stated Original minus Calc'd Current. All lands	Current S&G shortfall All lands	Current % difference, All lands vs. NFS-only	Table 3.10-14 Stated Curr. (deer/mi ²) NFS-only lands	Table 3.10-16 Stated curr. as % of Original. All lands	Table 3.9-16 Orig. POG Land Area All Lands	769_05_1022 Curr. POG Land Area All Lands
14 North Central POW	224	24.7	13.3	11.4	4.7	-25%	17.7	54%	906,143	573,390
7 Admiralty I.	116	18.3	16.8	1.5	n/a	-4%	17.6	92%	634,873	604,715
11 Kuiu I.	91	27.7	24.4	3.3	-	-4%	25.5	88%	327,703	299,094
15 Revilla I. / Clevel. Pen.	88	13.6	10.7	2.9	7.3	-20%	13.5	79%	648,823	572,758
10 Kupreanof/Mitkof Is.	80	19.6	14.9	4.7	3.1	-12%	16.9	76%	406,907	333,029
3 East Chichagof I.	73	14.4	10.7	3.7	n/a	-9%	11.7	74%	507,958	428,086
13 Etolin I.	52	18.7	14.8	3.9	3.2	-6%	15.7	79%	275,571	233,424
16 Southern Outer Is.	45	31.8	25.8	6.0	-	-8%	28.1	81%	141,131	116,485
18 South POW	43	22.6	18.5	4.1	-	-15%	21.8	82%	192,458	168,857
17 Dall I. and vicinity	34	25.4	16.8	8.6	1.2	-45%	30.4	66%	135,765	92,956
6 West Baranof I.	34	13.7	11.4	2.3	n/a	-7%	12.2	83%	247,420	228,014
9 North Coast Range	28	7.2	5.5	1.7	12.5	-12%	6.2	76%	387,583	359,250
20 South Misty Fjords	26	8.2	8.2	0.0	9.8	-2%	8.4	100%	311,823	309,417
12 Central Coast Range	25	9.5	8.7	0.8	9.3	-3%	9.0	92%	259,558	251,461
1 Yakutat Forelands	17	13.6	11.4	2.2	6.6	-13%	13.2	84%	123,675	104,685
8 Lynn Canal	11	6.2	5.1	1.1	12.9	-6%	5.5	83%	180,172	174,200
4 West Chichagof I.	10	14.0	13.9	0.1	n/a	-4%	14.5	99%	72,958	72,978
5 East Baranof I.	9	8.3	6.7	1.6	n/a	-4%	7.0	81%	103,046	89,630
19 North Misty Fjords	8	3.8	3.7	0.1	14.3	0%	3.7	97%	207,657	200,272
2 Yakutat Uplands	1	2.3	2.3	0.0	n/a	2%	2.2	98%	45,426	44,053
21 Ice Fields	1	0.8	0.74	0.1	n/a	6%	0.70	93%	123,674	117,000
									6,240,324	5,373,754

Seven of the eight orange (wolf island) provinces are the only ones, as our table makes clear, that originally had a deer carrying capacity greater than the 18 deer/mi² threshold, with the exception on Admiralty Island which doesn't count because it is not wolf territory. All of the orange provinces have been heavily logged (18-46% loss of POG, and greater losses of the high-volume and large-tree components of POG), and will be where most logging will be focused on both federal and non-federal lands (see FEIS Appen. C). Currently, considering all lands in the region *only three provinces* – all orange ones – exceed the 18 deer/mi² threshold, a fact not disclosed in the FEIS.⁹⁰ On one of the three provinces, Kuiu Island, deer have been extirpated despite a current carrying capacity of 24.4 deer/mi² — and the loss and fragmentation of habitat was a contributing factor. [Ref209 (Lowell 2013); Ref386 & 387 (maps showing the extreme loss to date on Kuiu Island); Ref002, 003 (Adams 2010 BoG testimony); Ref278 & 279 (Rosenbruch 2010 BoG testimony); Ref 372 & 373 (Whitehead 2010 BoG testimony); Ref389 (satellite photo of extreme habitat fragmentation of Kuiu's WAA 5012)].

Photo to the right: WAA 5012 on Kuiu Island, in 2006. Kuiu Timber Sale project units are hand-drawn in red. Right now, the Forest Service has 30 mmbf of timber from this project out to bid, with a waiver pre-approved to allow 100% round-log export. The photo is Reef389.

Table 3 and the related supporting information show the clear need for analysis of impacts to deer and wolves at the WAA scale.



d. Conclusion and request for relief

In an internal Forest Service review of a 2007 draft of the eventual 2008 LRMP, Winifred Kessler (The then R10 Director Wildlife, Fisheries, Ecology & Watersheds) commented regarding treatment of the same wolf standard and guideline that is discussed above, saying:

⁹⁰ As shown in the table's headings, we had to calculate that column.

We were surprised to see the lack of content here. ... Deer habitat analysis has proven to be the single most contested and problematic issue in project after project on the Tongass NF.

[2008 PR# 603_1265 at 73]. It is even more surprising now, about a decade later and throughout the intervening time, that the Forest Service is still grasping at one gambit after another to avoid squarely confronting the impacts of its timber program on the deer-wolf-hunter community. The NFMA viability requirement is low bar. It does not require the maintenance of enough habitat to support truly abundant populations of deer, wolves and other wildlife, but only just enough to prevent extirpations. This is not what most Alaskans expect from their federal government's management of the people's resources, and it is not what other American citizens expect who come to visit Alaska or plan to, and it is not what World travelers expect who come here either. But even despite this low regulatory bar, it is clear to us that the Forest Service simply cannot provide even the appearance of justification for its current Tongass timber program or the transition (as currently planned) without distorting its standards of analysis beyond credulity. There simply is no excuse for the highly deceptive methods of so-called analysis that we have exposed above.

The 2016 TLMP Amendment FEIS and draft ROD are arbitrary, capricious, and contrary to NEPA, NFMA, ANILCA and their implementing regulations. The reviewing officer should rescind the FEIS and draft ROD and direct that a revised NEPA document be prepared, in order for NEPA's requisite hard look to be taken as discussed above.

And more so, we request that the purpose and need for the LRMP Amendment be reopened and broadened so that other kinds of transitions for the Tongass can be considered in a revised NEPA document – like the ones we have been proposing throughout this planning process and have proposed again, above in Section III.

2. Objection 33. The FEIS violates NEPA & NFMA, with a faulty road density analysis

a. Statement referencing prior comments and content of objection, and the agency's response

On pp.119-120 of our DEIS comments:

- 1) We asked that standard and guideline XIV.A.1(c) be changed so that it is enforceable. Response WOLF-10 categorically said the agency will not do that in a programmatic EIS, and dismissed the issue instead of exploring ways that enforceability could be improved. [FEIS at I-86]
- 2) We specifically stated that, for wolves, the road density analysis needs to be for habitat below 1,200 feet elevation, in accordance with the science. We also noted the many road density tables in various places in the EIS, and stated that those in non-wolf sections should include a statement concerning the elevation matter, to avoid their data being misconstrued regarding wolves. In response [see WOLF-10]], FEIS Table 3.10-15 does use the 1,200 foot criterion correctly, but table has other serious problems (as described below under supporting reasons). However, response RD-2 also directly addresses the road density issue concerning wolves, and stats that Table 3.10-4 in the FEIS suffices for satisfying road density issues regarding wolves. This table is even more flawed for addressing wolf issues than is Table 3.10-15 — for one thing (among several) it is for all elevations, ignoring the 1,200 foot criterion. Further, it exemplifies another problem we pointed out, that road density tables in non-wolf sections need to include a warning not to use the data for wolf analysis.

- 3) We noted the need to provide road density data at the WAA-scale, and even pointed out a way that the many road density tables could be consolidated in doing this, for economy of space in including this finer-scale data in the EIS. The EIS does not provide road density for the individual WAAs.

The responses are already noted in the above section.

b. How the FEIS is contrary to law

The analysis in the FEIS of road density related impact to wolves does not take a hard look because it relies on inappropriate data that is at an irrelevant geographic scale. The information used is not high quality. Consequently, NEPA has been violated. Issuing the ROD will cause an NFMA violation because the standard and guideline is unenforceable and because of that and the inadequate analysis of the potential impacts, the sustainability of wolf populations cannot be ensured. The LRMP relies on sustaining populations because scientists do not know how to ensure the viability of the Alexander Archipelago wolf. [See e.g. Ref263 (Person et al. 1996)]. Relevant citations to law and court decisions were presented in the prior Objection.

c. Statement of supporting reasons

Table 4 shows that in the Wildlife section of Chapter 3, none of the three tables that portray road density are suitable for assessing the potential for road density impacts to wolves.

Table 4. Documentation of FEIS failures to meaningfully report road density. Bullets indicate a failure.				
Table or file	Content	Forest-wide scale	As percent of WAAs	All Elevs.
3.10-4	Road density, all elevations, all lands	•	•	•
3.10-12	Road density (total & open), all lands	•	•	•
3.10-15	Road miles (total & open), all lands <1200'	•		

First, for reasons already explained in the prior point of objection, concerning impacts to wolves, the geographic scale of analysis is important. Evaluation needs to be done and presented in the EIS at the WAA scale. All of the tables provide data only at the Forest-wide scale. Merely disclosing the “percent of WAAs” in different road density categories does not suffice. That these are significant problems is made particularly clear by Table 3 in the prior section. Just as cumulative impacts of logging activities on deer carrying capacity are focused on particular parts of the region (the orange provinces and particularly the WAAs within them), high road densities and any increases in those densities are and will be focused on those places as well. Even if road density were to decrease when viewed at the Forest-wide scale, because logging activity is focused on particular areas, and because the programmatic plan is driving that, the EIS must consider the impacts at the scale where they will be evident. All of the tables are failures, some for multiple reasons with respect to the issue of road density and wolves.

Some related references: 769_05_0525; Refs245, 250-260, 263 & 267.

d. Conclusion and request for relief

This is a highly important issue, and the FEIS analysis flatly fails. A supplemental or revised DEIS is needed and requested.

3. Objection 34. Flaws in the wolf ESA decision must be considered.

a. Statement referencing prior comments and content of objection

On pp.120-121 of our DEIS comments we asked the Forest Service to take a “close look at key flaws in the recent Endangered Species Act (ESA) listing decision for Alexander Archipelago wolves.” We described eight key flaws in the decision, including four in a bulleted list. We asked the Forest Service to carefully consider those flaws when reviewing the public comments and preparing the FEIS, and noted that a new listing petition could raise those issues.

b. Agency Response to Comments

The agency responded at FEIS I-86. The response says merely that the FEIS “reviewed and incorporated information from the FWS’ status assessment and listing decision, believing it to be the best available science. The flaws we mentioned were not mentioned at all in the response. This violates law because the Forest Service has not considered all the facts before it and has not considered responsibly raised, relevant information.

c. Statement of supporting reasons

There are now two sets of flaws at play here. One is the set of flaws we pointed out in our DEIS comments, with the FWS’s assessment. The other set is with how the Forest Service has interpreted the FWS’ wolf status assessment. For example at 3-294 the Forest Service concludes:

In GMU 2 where past harvest has been concentrated and where there are already concerns about wolf viability, any decline in deer habitat capability could result in localized gaps in wolf distribution. However, the recent USFWS Alexander Archipelago Wolf Species Status Assessment notes that, even with the anticipated continued decline in the GMU2 wolf population, a viable population is still expected to be maintained in Southeast Alaska (USFWS 2015). With the transition to young-growth harvest, the likelihood of creating gaps in the wolf population in GMU2 under the action alternatives is less than under the current Forest Plan. Therefore, all of the Action Alternatives would be expected to be at least as likely as the 2008 Forest Plan to maintain a viable, well-distributed wolf population on the Tongass.

Several flaws are embedded in that statement. First, the 12-month finding for the AA wolf dealt with whether that species is threatened or endangered; the FWS’s 12-month finding made no conclusions about “viability” — as that term is defined by the NFMA regulations. Second, the 12-month finding found that the AA wolf was stable or slightly increasing across its range, which includes all of coastal British Columbia. At best, the FWS assumed population stability in non-GMU2 Alaska. The FWS did not find that the “a viable population is still expected to be maintained in Southeast Alaska.”

Importantly, the FWS’s finding presents significant implications for the Forest Service’s NFMA viability obligations. Under NFMA and the 1982 Rule, the Forest service must manage sufficient habitat for viable populations that are well distributed throughout the planning area. In other words, the habitat provided by the forest plan must be well distributed so that

reproductive individuals can interact with others in the planning area. But the FWS found that the GMU2 population likely has declined by 75%, is continuing to decline, and regulatory mechanisms are inadequate. Moreover, the FWS found that the GMU2 population is uniquely dependent on the Sitka black-tailed deer, owing to the fact that this is the only ungulate species in the region. Finally, the FWS found that the GMU2 population is isolated.

These findings raise significant questions as to whether the Forest Service can meet its obligations under NFMA by authorizing continued clear-cut logging of old-growth forest that provides critical habitat for the deer, the wolves' primary prey.

d. Conclusion and request for relief

The FEIS contains a specious and incomplete evaluation of the FWS wolf status assessment. Also, the FEIS does not consider at all the flaws we pointed out in the assessment, factors which we contend mean the assessment substantially underestimated threats to both the viability and persistence of the Alexander Archipelago wolf in southeastern Alaska. Accordingly, a supplemental or revised DEIS to take a hard look at how the LRMP will impact wolf populations in the region.

VIII. Objection Point 35. Analysis of Watershed Effects is Inadequate

a. Statement referencing prior written comments and content of objection and explaining how decision and/or analysis violate law or regulation

In our DEIS comments, commenters pointed out a number of important gaps in information related to watershed health and effects of logging, including known gaps in information with regard to (1) stream miles, (2) channel type, (3) stream class, and (4) watershed condition. See Ref167 at 133 – 36. We further explained how these information gaps result in a misleading picture of likely impacts of the proposed action on watersheds and fishery health.

In response, the agency made a few cosmetic changes but has largely elected to ignore this concern until the later project planning and implementation phases. We will address these responses specifically in the statement of reasons, below. Taken as a whole, the FEIS still has failed to meet its obligations under NEPA and NFMA to take a hard look at the best available information to guide the decision, and as a result remains misleading.

This objection point regards violation of NEPA's hard look requirement. It directly implicates the CEQ regulations regarding incomplete and unavailable information, 40 CFR 1502.22, and information quality, §1502.24.

b. Statement of supporting reasons

i. Stream and watershed information is essential to the decision

Watershed health is an important factor in the decision. Tongass watersheds, there is no dispute, contribute a wealth of salmon and other aquatic life, enriching human fishermen and numerous plant and animal species. A great many of the commenters have emphasized the importance of watersheds to their enjoyment of the forest, and expressed eagerness that they be protected.

In order to analyze effects, the EIS adopts a series of models and metrics that hinge on quantified information such as miles of stream, miles of road within 300' of streams, past

streamside harvest, amount of streams in certain classes and with certain channel types, and meeting various thresholds for watershed condition. Because the agency made the decision to analyze watershed-related effects by reference to miles of stream and acres of streamside habitat, the baseline information regarding miles of stream and acres of habitat is essential to the decision.

ii. Agency's response to comments is inadequate

In response to comments, the agency said:

The DEIS (and FEIS) discloses that streams may be missing from the corporate layer at the forest level. During project planning, field surveys are conducted to add and correct streams to support effects analysis and ensure stream protection during project implementation according to Forest Plan standards and guidelines. Field efforts place high priority on areas with high probability of unmapped fish streams. Standard field procedures are followed (USDA Forest Service 2015c).

During project planning, field surveys are conducted to add and correct streams to support effects analysis and ensure stream protection during project implementation according to Forest Plan standards and guidelines. Field efforts place high priority on areas with high probability of unmapped fish streams. Standard field procedures are followed (USDA Forest Service 2015c). Decisions at the project level will consider the additional streams and effects. Text was added to the water section to clarify the meaning of the percent water bodies in watersheds within 300 feet of roads and the footnote on Table 3.4-1 has been revised to state that additional unmapped streams are present, as opposed to unmappable.

FEIS I-62. The EIS remains deficient with regard to disclosure of the information gaps, notwithstanding the disclosure that streams may be missing from the “corporate layer” at the TLMP level. First, it is not true that streams “may” be missing; they *are known to be* missing from the agency maps. Worse, the missing data is known to be of a certain sort—that is, information tending to show additional miles of unmapped streams, and additional miles of fish habitat in streams that have been mapped— with the result that that dataset is known to be biased.

Additionally, the EIS fails to explain the nature of this gap in information, whether the information is essential to the decision, the reasons for it, or provide useful information to the decision-maker to deal with the data gap. Even where precise maps of headwater streams do not exist, for example, it is known that for every large class I stream there will be a much larger number of stream miles in the smaller Class III and IV categories. The data is not merely incomplete, it is biased and misleading because it is incomplete in a known, predictable way.

The assurance that additional surveys will be done according to standard field procedures during project implementation and planning is of little consequence. It is not the case that there is a “standard” procedure for surveying streams; in fact procedures are often discretionary. Streams are surveyed to varying levels of detail and specificity based on a host of factors, including logistics, funding, and personnel availability. “Standard procedures” can mean anything from detailed ground surveys with proper equipment in the ideal season, or it can mean no survey at all beyond a search of the Alaska anadromous atlas. The administrative record reflects this fact, containing detailed watershed information for some locations, and no information for others.

iii. Missing data results in misleading effects analysis

A critical error is that the EIS uses the existing, incomplete and biased dataset of stream miles, and then uses that metric to calculate likely effects. The obvious result is that impacts to watershed health are significantly under-represented.

In response to comments (S&W-2), the agency says (1) text additions were made to the FEIS, (2) directs readers to the project record and interactive map at <http://apps.fs.fed.us/nfs/nrm/wcatt/WCFMapviewer/>, and (3) says specific effects would be evaluated during project-specific analysis. FEIS at I-62.

The project record and other information regarding specific watersheds does not remedy the problems of the Forest Plan FEIS, which presents misleading statistics and aggregate information that under-counts watershed effects. Similarly, that watershed effects would be addressed during project development does not remedy the problem of misleading effects analysis in the Forest Plan EIS. The decision before us is a critical decision that will have significant effects, and it requires a hard look at the best available information regarding watershed effects.

Regarding the FEIS text, the analysis continues to hinge on data that necessarily includes baseline stream mapping. If accurately portrayed, likely effects to fisheries and watershed health might and ought to inspire the decision-maker to take a more cautious approach. Further logging will disturb acres more of riparian area and more miles of stream than is being portrayed, more miles of road are and would impact on streams, greater percentages of water bodies in watersheds would be within 300 feet of road, etc.

iv. Project-level guidelines for surveys are not a reliable substitute for baseline information

The FEIS relies on the assurance that “during the planning stages of a specific proposed timber management activity, detailed ground surveys...” would be done to delineate streams. FEIS at 3-52. First, as indicated in our DEIS comments, that is not actually done and so relying on planning-stage stream surveys is misleading and unwise. It has been the consistent experience of commenters that streams surveys are typically done during the *implementation* phase, if at all— not during the planning phase. This is significant for purposes of the Forest Plan because it means we cannot rely on later project phases to conduct the analysis and consideration of effects to watersheds; *at most* those later phases could be useful in implementing S&Gs (like stream buffers).

The FEIS and response to comments ignores this comment except to assert that surveys will be done, and referring to annual BMP monitoring results. The naked assertion that surveys will be done during planning is not responsive to our observation that, in fact, stream surveys are being done during implementation not planning. The Big Thorne and Wrangell Island projects both take that approach, to use the two most recent examples of large sales. Annual BMP monitoring is of not help to the agency here. None of the BMP monitoring reports have ever even attempted to monitor whether streams are adequately mapped and classified, let alone whether or not that is being done during the planning or implementation phase.

Furthermore, this approach conflicts with the chosen strategy of requiring watershed analysis prior to logging in the highest priority, sensitive watersheds.

v. FEIS analysis of the components of watershed effects is inadequate

Our DEIS comments raised a host of issues related to the particular components of effects to watersheds and fisheries. [See DEIS comments at 136 – 51.] Important factors include hydrologic connectivity between roads and streams, sedimentation, frequency of road-crossing work (ie. storage), increased use of roads, headwater streams, increased peak flow, increased stream temperature, loss of woody debris, and fish passage. These factors are all complicated by the proposal to log young-growth in previously-protected riparian areas,

beach fringe and old-growth habitat LUD. Cumulative effects, including synchronistic effects among various factors (e.g. loss of LWD and increased sediment load), are particularly important.

One of the more important components of watershed damage is sediment. Management-induced sediment delivery degrades a host of the beneficial stream conditions relevant to salmonids, including suspended sediment, turbidity, fine sediment levels in stream substrate, width/depth, and pool volume, depth, frequency, and quality (Richards, 1982; USFS et al., 1993; Rhodes et al., 1994; Spence et al., 1996; USFS and USBLM; 1997); (Krueger, 1981; Everest and Meehan, 1983; Meehan, 1991; USFS et al., 1993; Rhodes et al., 1994; Spence et al., 1996; USFS and USBLM; 1997; Suttle, 2004). The proposed action increases sediment delivery in many ways, perhaps none more important than via the transportation network. Roads that are hydrologically connected with streams will discharge sediment to them as they are used, when they are maintained, and when they are not. Road stream connectivity occurs in a number of ways, including at road crossings of streams⁹¹; drainage to hillslopes near streams, ditches, and gullies below drainage diversions⁹²; and via roadside ditches, which collect, concentrate and route runoff to discharge points such as culverts. See Ref276 at ¶10. (Ref276 Rhodes Declaration). When commenters commissioned an expert evaluation of the Big Thorne project, Dr. Rhodes estimated it was likely that more than 50% of the existing road network in that project area was hydrologically connected to streams, even with BMPs. *Id.* at ¶13. Where roads are located along streams, the sediment detention below runoff diversions is limited and can be quickly exhausted, resulting in delivery of sediment directly to streams. See *id.* ¶11; Ref383 (GLEC 2008, EPA contracted rept. on forest roads & water qual.). This is a particular concern for the second-growth transition because it will be using and maintaining roads along streams with greater frequency and for a longer period of time. It is likely that there are many areas where sediment and runoff delivered from roads was captured in drainage features downstream on the first entry. That means that sediment-capture is not available for future entries, and increasing amounts of water and sediment will be directly delivered to streams the more a connected road is used.

The EIS approach of breaking these impacts down into component parts, then terming all such impacts as merely temporary, is, as Dr. Rhodes termed it in the context of the Big Thorne project, “in direct conflict with available scientific information regarding the persistence and magnitude” of such effects. Ref276 ¶22. See also USFS et al., 1993; Rhodes et al., 1994; USFS and USBLM, 1997; Beschta et al., 2004.

[i]t is well-documented that the construction of roads, including “temporary” roads, vastly and immediately elevates erosion and subsequent sediment delivery, particularly in the first few years after construction. However, road erosion remains enormously elevated relative to undisturbed areas for many decades, even with decommissioning or obliteration (Beschta et al., 2004), as USFS assessments and cumulative effects methods acknowledge (Potyondy et al., 1991; USFS et al., 1993; Menning et al., 1996). Even many decades after obliteration, erosion rates on roads remain well above natural rates, as USFS cumulative effects methods indicate (Potyondy et al., 1991; Menning et al., 1996).⁹³ Reconstruction of unused or previously decommissioned roads also greatly elevates road erosion and subsequent sediment delivery in a highly persistent fashion (Beschta et al., 2004)

⁹¹ (Kattlemann, 1996; Rhodes and Baker, 2008; Plumas National Forest, 2010)

⁹² Wemple et al., 1996; Rhodes and Huntington, 2000; Gucinski et al., 2001; Great Lakes Environmental Center (GLEC), 2008

⁹³ USFS and USBLM, 1997b, Chapter 3, Effects of proposed alternatives on aquatic habitats and native fishes, *in* Evaluation of EIS Alternatives by the Science Integration Team. Vol. I PNW-GTR-406, USFS and USBLM, Portland, OR, notes that the approach in Menning et al. (1996) regarding the road-

Ref276 ¶22. Also, hydrologically-connected roads result in increased peak flows. *Id.* ¶16; La Marche and Lettenmaier, 2001; Jones and Grant, 1996; Grant et al., 2008. These effects persist over a long period of time, even after roads have been stored. Ref276 ¶16; Foltz et al. (2007). Peak flow impacts of roads tend to be most pronounced in smaller subwatersheds. Gucinski et al., 2001; Grant et al., 2008; Drake et al., 2008. The result is increased channel erosion of headwater streams. King (1989).

“Even relatively small changes in short duration peak flows in headwater streams can significantly increase downstream sedimentation because channel erosion and sediment transport are exponentially affected by streamflow (King, 1989; Dunne et al., 2001).” Ref276 ¶18.

Here, the selected alternative would specifically target riparian areas for logging, necessitating even more use of roads in proximity to streams. This decision flies in the face of the notion that impacts are temporary or short-term. Quite evidently, even the reserved areas are being subjected to continuous, sustained disturbance.

Headwater streams are consistently under-counted and under-valued in the EIS. The best available science concludes that headwater streams are critically important to watershed health in a host of ways. Small, headwater streams collectively provide much of the cumulative sediment and water to downstream fish habitats, due to their extent and position. *See* Ref276 ¶14 (Rhodes Decl.); Moyle et al., 1996; USFS and USBLM, 1997a; Rhodes et al. 1994). Given the scientific information showing the cumulative importance of headwater streams, it would be inaccurate to rely on the definition of Class IV streams to conclude that they have no cumulative importance to sediment. *See* Ref276 ¶15 (Rhodes Decl.); USFS & USBLM (1997). They do.

Another major problem is the failure to consider the loss of LWD that would result from proposed riparian area logging (including along headwater streams). The FEIS cites no studies and conducts almost no analysis explicitly addressing the issue of commercial harvest of second-growth on LWD. The suggestion seems to be that, even though LWD is known to be a critically important habitat feature, and even though past riparian harvest has diminished this feature on the targeted watersheds, and even though the proposal would worsen this problem by removing a huge percentage of the existing riparian vegetation in those areas, impacts nonetheless can be described with an adjective like “minor” and no attempt made to quantify or avoid them.

c. Conclusion and suggested resolution

The agency should issue a revised EIS that discloses and properly addresses gaps in information, in compliance with NEPA. Particularly, information gaps as to stream miles and classification should be addressed, with missing information gathered wherever feasible. An objective metric should be developed allowing for estimates of the miles of unmapped stream and acres of unmapped riparian area, and this should be applied to the predictive models.

Information regarding watershed condition should be addressed more explicitly.

related cumulative impacts to watersheds were consistent with the USFS’s experts’ assessments of the sediment-related risks from these activities.

X. Signatures

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A handwritten signature in black ink that reads "Larry Edwards". The signature is written in a cursive style with a large, stylized "L" and "E".

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(Verifiable signatures upon request)

Appendix 1 — List of submitted exhibits

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USFS_2006_Tongass Conservation Strategy Workshop - Agenda, PPTs, videos by Greenpeace
Ref001-Abrahamson (2013)_Private sector gives a continuing boost to Southeast (at 14-16).pdf
Ref002-Adams (2010) Testimony (AUDIO)_(Kuiu wolves, bear, deer)_BoG mtg_6Nov10.mp3
Ref003-Adams (2010) Testimony (Transcript)_(Kuiu wolves, bear, deer)_BoG mtg_6Nov10.docx

Ref004-ADEC (2007) Boyer Towing ip factsheet.pdf
Ref005-ADF&G (1990) Wolf population objectives for Units 1A, 1B, 1C, 1D & 2.pdf
Ref006-ADF&G (2000) Wolf Management Report__1996-1999_unlocked.pdf
Ref007-ADF&G (2003) Wolf Management Report__1999-2002_unlocked.pdf
Ref008-ADF&G (2006) Wolf Management Report_unlocked.pdf
Ref009-ADF&G (2009a) Wolf Management Report (1Jul05 to 30Jun08)(Searchable).pdf
Ref010-ADF&G (2009b) Tonka scopng comments_13Feb09.pdf
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Ref305-Steward et al (2013) Climate of Alaska (NOAA_NESDIS_Tech_Report_142-7).pdf
Ref306-TAC (2014) - 1_Member Erin Steinkruger application_Redacted.pdf
Ref307-TAC (2014) - 2_Member Jaeleen Araujo application_Redacted.pdf

Ref308-TAC (2014) - 3_Member Keith Rush application_Redacted.pdf
Ref309-TAC (2014) - 4_Member Kirk Hardcastle application_Redacted.pdf
Ref310-TAC (2014) - 5_Member Lynn Jungwirth application_Redacted.pdf
Ref311-TAC (2014) - 6_Member Philip Hyatt application_Redacted.pdf
Ref312-TAC (2014) - 7_Member Richard Peterson application_Redacted.pdf
Ref313-TAC (2014) - 8_Member Wade Zammit application_Redacted.pdf
Ref314-TAC (2014) - 9_Member Andrew Thoms application_Redacted.pdf
Ref315-TAC (2014) - 10_Member Brian McNitt application_Redacted.pdf
Ref316-TAC (2014) - 11_Member Carol Rushmore application_Redacted.pdf
Ref317-TAC (2014) - 12_Member Chris Maisch application_Redacted.pdf
Ref318-TAC (2014) - 13_Member Eric Nichols application_Redacted.pdf
Ref319-TAC (2014) - 14_Member Wayne Benner application_Redacted.pdf
Ref320-TAC (2014) - 15_Member Woody Widmark application_Redacted.pdf
Ref321-TAC (2014) - 16_Alternate Bob Mills application_Redacted.pdf
Ref322-TAC (2014) - 17_Alternate Chris Rose application_Redacted.pdf
Ref323-TAC (2014) - 18_Alternate Jason Custer application_Redacted.pdf
Ref324-TAC (2014) - 19_Alternate Kate Troll application_Redacted.pdf
Ref325-TAC (2014) - 20_Alternate Leslie Cronk application_Redacted.pdf
Ref326-TAC (2014a) - Charter_10Feb14 (SEARCHABLE).pdf
Ref327-TAC (2014b) - TAC Selection Process Summary.pdf
Ref328-TAC (2014c) - FOIA_AQM_TAC Applicants.pdf
Ref329-TAC (2014d) - Membership list_(stelprd3801571).pdf
Ref330-TAC (2015e) - Collection of public comments_January meeting.zip
Ref331-TCS et al (2012) Tonka timber project appeal (TCS, GSACC, GP, CBD, CW).pdf
Ref332-Tetra Tech (2013_ Big Thorne Climate Change Resource Report (Final, 4-28-13)__736_2223_.docx
Ref333-The Wilderness Society (2008) Appeal of the 2008 TLMP & exhibits.zip
Ref334-Thomas et al (2014) 2013 National park visitor spending - Contribs to states, communities.pdf
Ref335-Tidwell (2014) Transcript, Senate Approps hearing, FS budget_30Apr14.pdf
Ref336-TLMP DEIS - Table, p.C-17, Table C-2 (2015).pdf
Ref337-TWFG (2014) Old-growth Land Base Volume Analysis on TNF_24Jun14.pdf
Ref338-TWFG (2015) Strategies to Maintain a Viable Timber Industry in SE Ak_Jan-2015.pdf
Ref339-UFA (2014) Wrangell Alaska - Commercial fishing & seafood processing facts.pdf
Ref340-UN (2015) Adoption of the Paris Agreement_11Dec15.pdf
Ref341-Univ of Ak (2012) Aerial photo of land holding on Kosciusko (PW.EB.Edna Bay area photo).pdf
Ref342-Univ of Ak (2013) Edna Bay timber sale development and disposal plan.pdf
Ref343(a),(b),(c) - USFS (2006) - NOTE these are CSR Workshop folders on this & 2 other DVDs.pdf
Ref344-USFS (2013a) Five Year Plan, Tongass National Forest.pdf
Ref345-USFS (2013b) Trajectory to Young Growth (Region 10 document)_Jan 2013__(rec'd 15Feb13).doc

Ref346-USFS (2013c) OGR Criteria briefing document (Saddle Lakes doc. 740_0379)_8Apr13.pdf
Ref347-USFS (2013d) Soda Nick SIR.pdf
Ref348-USFS (2013e) Nine Tongass SIRs & CAs (2013) resulting from Greenpeace v Cole.zip
Ref349-USFS (2013f) Deer Model Results 17-May-2013__(Big Thorne project).xlsx
Ref350-USFS (2013g) Notes from Big Thorne after-action review meeting, 15Nov13.pdf
Ref351-USFS (2013h) Big Thorne FEIS Chapter 3_unlocked.pdf
Ref352-USFS (2013i) Big Thorne ROD_unlocked.pdf
Ref353-USFS (2013j) Mitkof Island project, scoping report & cover letter_29Aug13.pdf
Ref354-USFS (2014a) Big Thorne SIR and WTF final docs.zip
Ref355-USFS (2014b) RF decision on 100% export waiver, Alcan's Skipping Cow & Frenchie sales_8Apr14.pdf
Ref356-USFS (2015a) Response to Kirchhoff's 19Apr15 comment letter_(21Apr15).pdf
Ref357-USFS (2015b) AA wolf briefing paper__29May15.pdf
Ref358-USFS (2015c) Two log map__TLMP open_house__(updated by Spores)_24Jan15.pdf
Ref359-USFS (CY-09) Export_reported_summary.xls.pdf
Ref360-USFS (CY-10) Export_reported_summary.xls.pdf
Ref361-USFS (CY-11) Export_reported_summary.xls.pdf
Ref362-USFS (CY-12) Export_reported_summary.xls.pdf
Ref363-USFS (CY-13) Export_reported_summary.xls.pdf
Ref364-USFS (CY-14) Export_reported_summary.canada.pdf
Ref365-USFS (CY-14) Export_reported_summary.xlsx.pdf
Ref366-USFWS (2010) Spruce grouse - Species assessment & listing priority assignment form.pdf
Ref367-Vick (2011) Second opinion - The medical profession diagnoses biomass incineration .pdf
Ref368-Vilsack (2013) Secretary's memo about the Tongass transition and Forest Plan__2Jul13.pdf
Ref369-Vilsack (2014) Response to 22Nov13 Cascadia et al letter (Resp is instead from USFS)_19Feb14.pdf
Ref370-Walton et al (2013) POW Amphibians.pdf
Ref371-Weckworth et al (2015) Genetic Distinctiveness of AA Wolves - Reply to Cronin e-a 2015.pdf
Ref372-Whitehead (2010a) Testimony (AUDIO) On illegal POW wolf take_BoG mtg_6Nov10.mp3
Ref373-Whitehead (2010b) Testimony (Transcript) On illegal POW wolf take_BoG mtg_6Nov10.docx
Ref374-Whitehead testimony__(Transcript) (on illegal POW wolf take)__BoG mtg_6Nov10.docx
Ref375-Wolken e-a (2011) Evidence & implications of recent & projected climate change, Ak's forests.pdf
Ref376-Yude et al (2011) A large and persistent carbon sink in the world's forests.pdf
Ref377-Zhou (2013) Production, prices, employment, trade in NW forest industries (pnw-rb-265).pdf
Ref378-Zhou (2015a) Press release (11Mar) West coast log and lumber exports decreased in 2014.pdf
Ref379-Zhou (2015b) Press release (27May) West coast log & lumber exports decreased, 1st qtr 2015.pdf
Ref380-Zhou (2015c) Production, prices, employment, trade in NW forest industries (pnw-rb-266).pdf
Ref381 - Alexander (2012) Employment coefficients & indirect effects, for NEPA planning, update.docx
Ref381 to Ref382 spacer (SEPARATOR FOR TWO INDEPENDENTLY ALPHABETICAL SECTIONS).txt
Ref382 - Brooks (2016).pdf

Ref383 - GLEC (2008) Nat'l assessment on forest roads water qual impairments & use of BMPs .pdf
Ref384 - Greenpeace (2015f) Comments to Forest Service on TLMP amendment_28Jan15.pdf
Ref385 - Iverson_1990__Goshawk Review (a review of 3 papers).pdf
Ref386 - Kuiu (2006a) 3-D map - BEFORE (1954) deer habitat, Security, Saginaw.jpg
Ref387 - Kuiu (2006b) 3-D map - AFTER (2006 state) deer habitat, Security, Saginaw.jpg
Ref388 - Kuiu (2008a) Appeal by SEACC_Greenpeace_et al__27Jul08.pdf
Ref389 - Kuiu (2008b) B&W Google image of the Kuiu project area (WAA 5012).jpg
Ref390 - Kuiu (2016) Legal Notice__North Kuiu timber sale__KDN_13Aug16.pdf
Ref391 - Lane (1998) Log export-import restrictions, PNW & BC past & present (PNW-GTR-436).pdf
Ref392 - Lowell (2013b) Unit 3 overview PPT (Jan-2013 Board of Game meeting).pdf
Ref393 - Lowell (2013c) - Lowell overview of Units 1B & 3 (Audio), BoG mtg 14Jan13.mp3
Ref394 - Manomet Center (2010) Biomass Sustainability and Carbon Policy Study.pdf
Ref395 - Person (2010e) Ball in the Box Model (illustrated transcript, '10 BoG & '06 CSR Workshop).pdf
Ref396 - Porter (2013a) PPT for Unit 1A and 2 overviews (Porter & Bethune at Jan-2013 BoG mtg).pdf
Ref397 - Porter (2013b) PPT for Unit 1A FA for IM (Porter at Jan-2013 BoG meeting).pdf
Ref398 - Porter (2013c) Audio of presentation to BoG, Unit-1A wolf IM FA__12Jan13.mp3
Ref399 - Smith (2013) Spatially explicit analysis of Cons Strategy, on sustaining NoGo habitat.pdf
Ref400 - Smith et al (2011) Source-sinks, metapops, reserves - Conserving SE-Ak flying squirrels.pdf
Ref401 - USFS (2009) Logjam FEIS.zip
Ref402 - USFS (2015) Kosciusko Final-EA, FONSI and Draft DN.pdf
Ref403 - USFWS (1997) R-7__Status_of_AA_Wolf_(latest version, 12Aug97).pdf
Ref404 - Voss (2005) Logging Tax Loss report.pdf

Contents of DVD disks (Ref343(a),(b),(c)) — CSR Workshop agenda, PPTs, videos of panels, etc.

(To be posted here later)

Contents of ZIP files

Ref029-Ak Board of Forestry (2013-2016) Meeting minutes.zip

#1 - BoF (2013a) Minutes, March 26-27 FINAL.pdf
#2 - BoF (2013b) Minutes, August 12-13 FINAL.pdf
#3 - BoF (2013c) Minutes, November 12-13 FINAL.pdf
#4 - BoF (2014a) Minutes, March 19-20 FINAL.pdf
#5 - BoF (2014b) Minutes, August 13-15 FINAL.pdf
#6 - BoF (2014c) Minutes, December FINAL.pdf
#7 - BoF (2015a) Minutes, March 23-24 FINAL.pdf

- #8 - BoF (2015b) Minutes, 28-29-July FINAL.pdf
- #9 - BoF (2015c) Minutes, Nov. 12 FINAL.doc
- #10 - BoF (2016) Minutes, March 1 DRAFT.doc

Ref079-Cascadia et al (2014a) Comments (and exhibits) on Big Thorne SIR (archive).zip

- Cascadia Wildlands et al. (GP, GSACC, CBD, TBC) Big Thorne SIR Comments____23Jun14.pdf
- Ex.1 - Person_2014__Rebuttal of Dave Person to the WTFR & Big Thorne Draft SIR (Final)__23Jun14.pdf
- Ex.2 - 21 Mail - USFWS comments on WTF Narrative__28Mar14.pdf
- Ex.3 - Logan email to Brockmann, status of collared wolves__12Jun14.pdf
- Ex.4 - 20 attachment-Greg_NotesOn_Task_Force_Draft_Report_V bl sb 040714 v2.pdf.pdf
- Ex.5 - 22 attachment-USFWS_Narrative_Attached_Matrix_Conclusions.pdf
- Ex.6 - Compilation of additional “One-voice” emails__Mar-Sep 2012__about Person & Logan _2012_ rept.pdf
- Ex.7 - March to Sept 2012 documents about Person & Logan (2012) report (June 2014 FOIA).zip
- Ex.8 - ADF&G_2011__ Internal emails about Big Thorne (30May14 update to Exh.12-55).pdf
- Ex.9 - The Book of One-Voice__The State of Alaska's suppression of science in SE-Ak__May-2014.pdf
- Ex.10 - An introduction to the State of Alaska's 'One-Voice' policy__Greenpeace_2014.pdf
- Ex.11 - 10 attachment-Input_Task_orce_Draft_Report_V4_FWS_Logan.pdf
- Ex.12 - 26 Mail - Fwd_ Big Thorne Timber Sale wolf appeal (UPDATED cover letter)__28Mar14.pdf
- Ex.13 - 21 Mail - USFWS comments on WTF Narrative__28Mar14.pdf
- Ex.14 - Complaint, CBD et al. v. Jewell & FWS, Alex Archipelago wolf, 14-991 Dkt 1, 10Jun14.pdf
- Ex.15 - Person's report on the AA Wolf Conservation Assessment to Board of Game__28-Oct-96.zip
- Ex.16 - Larsen's report on AA Wolf status, with Person & Kirchhoff in Q&A__to Board of Game_29-Oct-9...
- Ex.17 - Board of Game's deliberations on Unit 2 wolf proposals & passage of Prop 14C__29-Oct-1996.zip
- Ex.18 - Partial transcript of Person's wolf presentation at Tongass Cons. Strat. Review Workshop_200...
- Ex.19 - Person's presentation 'Wolves in SE Ak' to the Board of Game__5Nov10.zip
- Ex.20 - James Kelly__AA wolf ESA comments (docket FWS-R7-ES-2012-0093-503)__30May14.pdf
- Ex.21 - Jacki Sunde__AA wolf ESA comments (docket FWS-R7-ES-2012-0093-0315)__30May14.pdf
- Ex.22 - Petitioners et al. comments to FWS on AA wolf ESA listing__30May2014.pdf
- Ex.23 - Documentation submitted with Petitioners et al. ESA comments__30May14.zip
- Ex.24 - Stronen_e-a_2014__Wolf population genetics, island-mainland diff in a marine archipelago.zip
- Ex.25 - Hedrick_e-a_2014__Genetic rescue in Isle Royale wolves - Genetic analysis, collapse of the p...
- Ex.26 - Person_& Brinkman_2013__Succession Debt and Roads - Effects of Timber Harvest, SE-Ak .pdf
- Ex.27 - Greenpeace_2014__New information exposing failed Big Thorne decisionmaking for PLOR4.pdf
- Ex.28 - PLOR4 documents received by FOIA, 2014 (those not in BT appeal record provided to us).zip

Ref094-Chrono-(v2) (An archive cited in 'Big Problem' one-voice document).zip

<< 168 sequentially numbered files, “One-voice” documentation. Consult the zip file for contents. >>

Ref123-DNR (2015b) Final FYSTS for southern Southeast__May-2015.zip

- #1 - 2015-2019 FINAL FYSTS (without comments matrix).pdf
- #2 - 2015-2019 FYSTS Comment Matrix.pdf

Ref250-Person (1996a) Report on the AA Wolf Conservation Assessment to Board of Game_28-Oct-96.zip

- #1 - Person's report (TRANSCRIPT) on the AA Wolf Conservation Assessment_to BoG_28Oct96.pdf
- #2 - Person's report (AUDIO) on the AA Wolf Conservation Assessment_to BoG_28-Oct-96.zip

Ref251-Person (1996b) (See Person & Kirchhoff Q&A, in - Larsen's AA Wolf status rept_BoG_29Oct96.zip

- #1 - Larsen's report (TRANSCRIPT), AA Wolf status _Person, Kirchhoff in Q&A__to_BoG_29Oct96.pdf
- #2 - Larsen's report (AUDIO), AA Wolf status (Person, Kirchhoff in Q&A)_to_BoG_29Oct96.zip

Ref252-Person (2001a) Wolf Dissertation (Original -- with separate files for Figs, Tables, Etc).zip

- #1 - Person_2001_Dissert--(with tables, but NO FIGURES)_searchable.pdf
- #2 - Person_2001_Dssert_maps.pdf
- #3 - Person_2001_Dissert_figures.pdf
- #4 - Person_2001_Dissert_(excerpted wolf_charts).pdf

Ref302-Snowfall news stories (2006-2009) Documenting record Southeast Ak snowfalls.zip

- #1 - Record_Monthly_Snowfall_for_Petersburg__KFSK_30Nov06.mp3 11/30/2006
- #2 - NOVEMBER_SNOWFALL_(Script)__KFSK_30Nov06.doc 12/01/2006
- #3 - Record_November_Snowfall_in_Petersburg__KFSK_30Nov06.txt 12/01/2006
- #4 - Heavy_Snow_Could_Affect_Deer_Numbers__KDN_2Dec06.txt 12/04/2006
- #5 - Nov_Petersburg_Snowfall_Was_Twice_the_Record__PP_7Dec06.txt 12/08/2006
- #6 - POW_Snow__IN_20Nov06.gif 12/10/2006
- #7 - Deer_Weathering_Tough_Autumn__JE_10Dec06.txt 12/11/2006
- #8 - Petersburg_Record_November_snowfall_&cold.TXT 12/19/2006
- #9 - Person_on_Snowstorm_&Deer__KFSK.txt 12/21/2006
- #10 - Record_Winter_Snowfall_in_Wrangell__KFSK_23Feb07.mp3 03/05/2007
- #11 - Record_Snowfalls_Continue_in_Petersburg__KFSK_2Mar07.mp3 03/05/2007
- #12 - Cold_&Moist_Air_Masses_Dumped_Snow_on_Southeast__PP_8Mar07.txt 03/09/2007
- #13 - Sitka_Having_Record_Snow__SS_12Mar07.pdf 03/13/2007
- #14 - Petersburg_Winter_in_2nd_Place_at_197-Inches_So-Far__KFSK_13Mar07.mp3 03/13/2007
- #15 - Petersburg_Winter_in_2nd_Place_So_far__200-Inches_KFSK_14Mar07.mp3 03/14/2007
- #16 - Juneau_Likely_To_Set_Snow_Record__JE_17Mar07.txt 03/17/2007
- #17 - Wildlife_Sturggles_for_Survival_This_Winter__KCAW_21Mar07.txt 03/23/2007

#18 - Wildlife_Sturggles_for_Survival_This_Winter_KCAW_21Mar07.mp3	03/23/2007
#19 - Southeast_Monthly_Snowfall_Through_March_2007.pdf	04/03/2007
#20 - Petersburg_Winter_Snowfall_to_March_2007.pdf	04/03/2007
#21 - Petersburg_Breaks_Snowfall_Record_PP_5Apr07.txt	04/05/2007
#22 - Snow record set for Juneau, just short of 200 inches__JE_10Apr07.pdf	04/10/2007
#23 - Brainerd_2007__Deer Mortality Transects for GMU 3__5Jun07.pdf	06/07/2007
#24 - 2nd_Largest_Snowpack_on_Record_KFSK_17Apr08.txt	04/17/2008
#25 - Snowfall breaks record for 17-April__JE_18Apr08.pdf	04/18/2008
#26 - 2nd_Largest_Snowpack_on_Record_KFSK_Apr08.txt	04/23/2008
#27 - Deep_Snowpack_Calls_for_Caution_KDN_10May08.txt	05/10/2008
#28 - 75 inches of January snow sets Juneau record__ADN_3Feb09.pdf	02/3/2009

Ref330-TAC (2015e) - Collection of public comments_January meeting.zip

#1 - Matt Kirchhoff_TAC comments__21Jan15.pdf
 #2 - 010315ChewGordon.pdf
 #3 - 010815SmithBruce.pdf
 #3 - 010815StansburyColleen.pdf
 #4 - 010915LandryLarry.pdf
 #5 - 010915SafaiMassy.pdf
 #6 - 011015DavidsonJennifer.pdf
 #7 - 011015SenacMelissa.pdf
 #8 - 011315AdamsCynthia.pdf
 #8 - 011315HarryTucker.pdf
 #9 - 011315Jordan GlassKaren.pdf
 #10 - 011315MollLee.pdf
 #11 - 011315OwenKimber.pdf
 #12 - 011315PihlmanDale.pdf
 #13 - 01022015KadenHayden.pdf
 #14 - 01022015LeshDavid.pdf
 #15 - 01062015MackovjakJames.pdf
 #16 - 01072015MotykaRoman.pdf
 #17 - 01082015BrakelJudy.pdf
 #18 - 01082015OkinMagowanLeah.pdf
 #19 - 01092015ClausBob.pdf
 #20 - 01092015LandryJen.pdf
 #21 - 01092015StrevelerGreg.pdf
 #22 - 01132015ElderCarolyn.pdf
 #23 - 01132015MountEmily.pdf

#24 - 01132015PetersonFloyd.pdf

Ref333-The Wilderness Society (2008) Appeal of the 2008 TLMP & exhibits.zip

- #1 - email_ Appeal of the 2008 Tongass Na.pdf
- #2 - Final TLMP Appeal.pdf
- #3 - EXHIBIT A - Morton et al. 2007.pdf
- #4 - EXHIBIT B - Deposition of Forrest Cole.pdf
- #5 - EXHIBIT C - Roads to Nowhere, Tongass National Forest .pdf
- #6 - EXHIBIT D - Mehrkens Analysis and Declaration Signed .pdf
- #7 - EXHIBIT E - Timber Harvest History 1952-2007.pdf
- #8 - EXHIBIT F - TNF Timber Bids Analysis Mehrkens.xls
- #9 - EXHIBIT G - Final Tongass Budget Analysis 91-07 Mehrkens.xls

Ref348-USFS (2013e) Nine Tongass SIRs & CAs (2013) resulting from Greenpeace v Cole.zip

- #1 - Letter to USFS, reexamination of TNF projects' deer modeling, post GP v Cole__20Dec11.pdf
- #2 - Cole_2012__Intent regarding remand in Greenpeace v Cole__10Feb12.pdf
- #3 - Cole cover letter & e-mail transmittal for Islands Wolf project SIRs and Change Analyses__29Jan13.pdf
- #4 - Baht Change Analysis.pdf
- #5 - Backline SIR.pdf
- #6 - Baht SIR.pdf
- #7 - Backline Change Analysis.pdf
- #8 - Backline SIR.pdf
- #9 - Couverden Change Analysis.pdf
- #10 - Couverden SIR.pdf
- #11 - Overlook Change Analysis.pdf
- #12 - Overlook SIR.pdf
- #13 - S Lindenberg Change Analysis.pdf
- #14 - S Lindenberg SIR.pdf
- #15 - Scott Peak Change Analysis.pdf
- #16 - Scott Peak SIR.pdf
- #17 - Soda Nick Change Analysis.pdf
- #18 - Soda Nick SIR.pdf
- #19 - Traitors Cove Change Analysis.pdf
- #20 - Traitors Cove SIR.pdf
- #21 - Woodpecker Change Analysis.pdf
- #22 - Woodpecker SIR.pdf
- #23 - Appendix_A_interagency_deer_winter_hsi.pdf

- #24 - Appendix_B_deer_model_settings_effects.pdf
- #25 - Appendix_C_wolf_sustainability_viability_deer_density.pdf

Ref354-USFS (2014a) Big Thorne SIR and WTF final docs.zip

- #1 - Big Thorne - Final SIR App A - Wolf Task Force Report_ 21May14 (stelprd3801787).pdf
- #2 - Big Thorne - Final SIR App A - Errata to Wolf Task Force Report_(Undated)(stelprd3813734).pdf
- #3 - Big Thorne - Final SIR App B - Old Growth Reserve Modification Process_May14 (stelprd3801803).pdf
- #4 - Big Thorne - Final SIR App C - Legacy Forest Structure S&G - Implementation Report_May14 (stelprd3801804).pdf
- #5 - Big Thorne - Final SIR App C - Errata to Legacy Forest Structure S&G - Implementation Report_May14 (stelprd3813737).pdf
- #6 - Big Thorne - Final SIR App D - Legacy Maps (sstelprd3801805).pdf
- #7 - Big Thorne - Final SIR App D - Errata to Legacy Maps (stelprd3813738).pdf
- #8 - Big Thorne - Final SIR__20Aug14 (stelprd3813733).pdf
- #9 - Regional Forester's letter of concurrence with BT SIR__21Aug14.pdf