

WHAT WE HEARD FROM THE PUBLIC <sup>1</sup>	FINDINGS FROM THE ASSESSMENT <sup>2</sup>
<b>Alaska Native Traditional Knowledge and Cultural Heritage</b>	
<b>Cultural</b> (Archeological and Historic Resources)	
<p>“There are cultural and historic sites that need protection. Forest users may not know their importance and may damage them.”</p> <p>“Would like to see Native youth continue to have opportunities to get connected with traditional hunting grounds (e.g. Ice Patch Archeology Expeditions for past three summers with Kenaitze Indian Tribal youth).”</p> <p>“There are places that are significantly historical and it is absolutely important that these places not be advertised in order to protect them.”</p> <p>“There are other cultural/historic resources that should be recognized/designated as management areas within the plan, in addition to Native tribal cultural and historic resources.”</p> <p>“Important to preserve historic/cultural sites, e.g., old school settlement in Quartz Creek, Golden Fairman Mining Company; historic cabin on Johnson Pass.”</p>	<ol style="list-style-type: none"> <li>1. Alaska Natives have lived on the land for millennia. This land is significant to them and is shared through family generations through language and stories. Alaska Natives continue traditional practices. The Chugach National Forest (CNF) landbase is connected to Alaska Native people (spiritual, family, subsistence, social, recreational, economic).</li> <li>2. Since 2002, CNF lands have been conveyed to Alaska Native Corporations consistent with ANCSA. Management of CNF lands adjacent to Corporation lands need to consider the values and resources being managed by Alaska Native Corporation lands. There may be opportunities for co-management.</li> <li>3. Working with Tribes, Alaska Native Corporations and other parties is essential for the preservation and management of cultural and natural resources on the Forest.</li> <li>4. Less than ten percent of the recorded sites on the Forest have been evaluated per the criteria of the National Register of Historic Places. Records and geospatial data for cultural resources across the Forest are incomplete.</li> <li>5. The CNF has been developing a commemorative route of the Iditarod National Historic Trail (INHT) between Seward and Girdwood since 2004 to continue implementation of the INHT Comprehensive Plan.</li> <li>6. The Chugach Children’s Forest embraces youth into programs and projects.</li> </ol>
<b>Sustaining Biodiversity, Intact Ecosystems and Connectivity for Global Ecological Processes</b>	
<b>Climate Change</b>	
<ol style="list-style-type: none"> <li>1. Glaciers are receding.</li> <li>2. Higher frequency and increasingly powerful storms.</li> <li>3. Mixed views on evidence of climate change, e.g., change in snow coverage season – snowfall later in the year.</li> </ol>	<ol style="list-style-type: none"> <li>1. Climate modeling in southcentral Alaska shows 1) significant warming may occur with increased precipitation, 2) lower elevations will experience decreased snowfall, increased glacial melt, and loss of snowpack, 3) short, low-elevation stream systems will experience less of a spring surge, and greater</li> </ol>

<sup>1</sup> This information reflects input from the general public and agencies, as well as the targeted outreach with youth, Tribes, and Alaska Native Corporations.

<sup>2</sup> This information is a summary of findings generated by US Forest Service staff.



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<p>4. Climate change impacts, e.g., fewer or more fires, Columbia Glacier receding exposing land, impacts to wildlife and pollinators.</p> <ul style="list-style-type: none"> <li>· “Please do your best to plan for climate change adaption in the Forest, with respect to both ecosystem and recreational uses.”</li> <li>· “I’ve lived here for more than twenty years, seen changes in early low elevation snow fall. Used to be we always had snow at Halloween, now that is rare. These changes are not as visible in mid-winter.”</li> <li>· Youth in Cordova – “Sheridan and Childs Glacier have gotten smaller.”</li> <li>· Youth in Anchorage – “You can’t see Eklutna and Portage Glaciers anymore.”</li> </ul>	<p>runoff during winter months; and 4) this area is likely to experience increasing length of the summer season (days to weeks) with some areas that regularly freeze now, no longer doing so (or doing so rarely).</p> <ol style="list-style-type: none"> <li>2. Glacier dynamics in the Forest influence global sea rise, coastal currents, local marine pH, nutrient delivery to freshwater and ocean systems, sediment loads, and local weather. In general, glaciers located at higher elevations are increasing in mass; those located at lower elevations are losing mass. Over the short term (20 year planning period) implications of this change include new areas of land exposed, potentially fewer icebergs (potential wildlife effects), and scenic changes (potential recreation/tourism impacts). Despite these changes, the Chugach may be buffered from more significant ecological changes - such as changes in timing, amount, and type (sediment and nutrients) of water - by the sheer mass of ice covering the landscape.</li> <li>3. Initial modeling suggests that the CNF will experience variable ecological responses to climate change. Perhaps the least change will be in the coastal rainforests of Prince William Sound (PWS) and the Copper River Delta (CRD) which are expected to remain as rainforests. The impacts will vary across habitats and species.</li> </ol> <p><i>NOTE: See following sections for more information on the possible impacts of climate change on vegetation, habitat, recreation, water, etc.</i></p>
<b>Vegetation</b>	
<ol style="list-style-type: none"> <li>1. Increase in invasives.</li> <li>2. Berry population variable, possible connection to early snow melt, invasive insects; plants flower before bees are around to pollinate.</li> <li>3. Fire risk from spruce bark beetle and concern about link with climate change– want to see beetle killed trees harvested. <ul style="list-style-type: none"> <li>· “Want to control invasive weeds, but don’t want to use Roundup.”</li> <li>· “We had three 100-year floods in the last 10 years/ Because of this, the weeds are going crazy in the lake areas, spawning more invasives.”</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Invasive plants, both terrestrial and aquatic, pose perhaps one of the larger long term threats to ecological integrity. Invasives include insects and others (i.e. European black slug). Effects of changing climate, increasing levels of disturbance (both natural and human caused) and increasing tourism and population growth make the Forest vulnerable to expansion of invasive plants.</li> <li>2. The richness and diversity of the native vegetation on the CNF likely provides a high level of resistance and resilience in response to change (over 560 plant species recorded on the Forest).</li> <li>3. Vegetation communities on lands neighboring the CNF, particularly on the western Kenai Peninsula (KP) may shift more substantially than the coastal</li> </ol>



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	rainforests. One of the more important changes resulting from climate change will be a reduction in the period of snow cover and change in the type of snow. These changes will influence recreation opportunities and may influence the distribution of some plants and animals.
<b>Animals and Plants as Food and Resources</b>	
<b>Fish and Wildlife</b>	
<p>Varied perceptions of changes in fish and wildlife populations including:</p> <ol style="list-style-type: none"> <li>1. Salmon coming in later; low salmon returns/strong salmon returns.</li> <li>2. Concerns about moose population declines or poor moose habitat in some areas.</li> <li>3. Changing caribou herd behavior.</li> <li>4. Increase in deer/drop in deer (PWS).</li> <li>5. More bears (Anchorage)/fewer bears (PWS). <ul style="list-style-type: none"> <li>· “Prince William Sound hatcheries – how are they impacting native fish?”</li> <li>· Youth in Cordova – “There wasn’t an abundance of moose this past year (everyone is seeing the same 5 moose).”</li> </ul> </li> </ol>	<p><i>Fish</i></p> <ol style="list-style-type: none"> <li>1. About 1/7 of the world’s Pacific salmon come from the CNF. This represents a cultural and economic resource of local, national, and global significance. Without the spawning and nursery grounds provided by the CNF these fish would not exist.</li> <li>2. Salmon are critical to aquatic and terrestrial ecosystem functions. They are a source of food and bring ocean nutrients into upland ecosystems. Alaska Natives have relied on and utilized salmon in the area known as the CNF for thousands of years. Beginning about 100 years ago, from 30% to 60% of each year’s salmon return has been caught in fisheries. Although, all indications suggest that total runs-sizes have not declined during this period, one consequence of fish being removed by fisheries is that fewer salmon are reaching the spawning grounds and the infusion of marine derived nutrients into aquatic ecosystems is less than in historical times.</li> <li>3. There are five species-based aquatic ecosystems identified in the CNF. Because of a lack of information, it was possible to confidently assess only one of these, the pink-chum salmon ecosystem. Initial modeling has been completed assessing the possible effects of climate change on the pink-chum ecosystem. These results suggest over the next 50 years pink salmon numbers may increase by 26%, while chum salmon may decline by as much as 37%.</li> </ol> <p><i>Wildlife</i></p> <ol style="list-style-type: none"> <li>1. Human use and equipment technology (i.e. boats, snowmobiles, OHVs, and recreational aircraft) on the Kenai Peninsula has increased since 2002.</li> <li>2. The spatial extent and quality of moose habitat is gradually declining on the Kenai geographic area of the Chugach largely due to natural succession of</li> </ol>



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vegetation that was initiated by disturbances in the middle of the last century. Current abundance of moose in the Kenai geographic area is not meeting sport or subsistence demand. Prescriptions in the existing forest plan place 96% of the forest in prescriptions that allow minimal manipulation of vegetation.

3. Forest management influences the different components of wildlife and invertebrate populations in complex and interactive ways. More information is needed regarding habitats, population trends, and management strategies to ensure the continued health of less prominent species, ranging from small furbearers, to little brown myotis bat, the boreal toad, and native pollinators.
4. Brown bear numbers on the Kenai Peninsula were recently estimated for the first time using scientific methods and field data. Results suggest more bears likely occur on the Kenai than were recognized during the last forest planning exercise, however, the abundance of brown bear is likely similar to that occurring during the past decade. The recent estimate [624 (95% CI 504-772)], based on local field data, may indicate that the expert-based estimate of brown bear population size used in the last Forest Planning effort was low.
5. Outside influences from oil spills, tsunamis, marine debris, and plastics threaten species and habitats in the CNF continue to be a concern. The Forest has partnered with others to restore species and services injured in the 1989 Exxon Valdez oil spill (EVOS). Several species have still not recovered from EVOS.



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<b>Subsistence</b>	
<ol style="list-style-type: none"> <li>1. Subsistence is a huge part of life – “subsistence puts food on the table, but it’s more than that – it’s family, community, culture, sharing, heritage.”</li> <li>2. The Forest will need to address the issue of subsistence uses. What is a legitimate subsistence use? Motorized use under the guise of subsistence is a problem (e.g., “looking” for firewood on a snowmachine where trees don’t grow). The Forest needs to define allowable subsistence uses.</li> <li>3. Forest Service spends a lot of money developing trails and subsistence users can damage the trails using motorized vehicles.</li> </ol>	<ol style="list-style-type: none"> <li>1. The Federal Subsistence Board has determined that for purposes of the Federal Subsistence Program, the only non-rural communities within the boundaries of the CNF are Seward and Moose Pass. Therefore, the rural communities on the CNF are Cooper Landing, Hope, Whittier, Chenega Bay, Tatitlek, and Cordova.</li> <li>2. The Forest Service implements the subsistence provisions of ANILCA, Title VIII, which provides specific direction regarding subsistence use and access. ANILCA Section 803 defines subsistence uses as “...the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct, personal or family consumption as food, shelter, fuel, clothing, tools or transportation...” (e.g., harvest of fish, wildlife, berries, firewood, logs, plant materials, etc.). ANILCA Section 804 provides a priority on the public lands for the non-wasteful subsistence uses of fish and wildlife. And, ANILCA Section 811 ensures rural residents engaged in subsistence uses access to subsistence resources, including the use of motorized modes of transportation, subject to reasonable regulation.</li> </ol>
<b>Recreation Experiences</b>	
<b>Recreation</b>	
<ol style="list-style-type: none"> <li>1. <b>Recreational access</b> – most people want more opportunities, more places to go; some want more vehicular access, some want less. <ul style="list-style-type: none"> <li>· “Access has been the same since the 80s.”</li> <li>· “Access is important for people that are disabled.”</li> <li>· “We need more affordable options to access and use the Chugach.”</li> <li>· “The Forest is millions and millions of acres and just a few people using it – we need more access.”</li> </ul> </li> <li>2. <b>Recreational infrastructure</b> – many requested cabins in new areas and need for improvements in cabin reservation system; expressed interest in partnering to maintain or expand trails; highlighted value of Iditarod National Historic Trail (INHT)</li> </ol>	<ol style="list-style-type: none"> <li>1. The Chugach National Forest continues to provide a diverse range of recreation settings and opportunities, along with a very high scenic integrity level. Visitor satisfaction is reported as very high in USFS National Visitor Use Monitoring (NVUM) surveys and other studies. <ol style="list-style-type: none"> <li>a. 82% of respondents during the 2008 NVUM survey were very satisfied with the quality of their recreation experience.</li> <li>b. A study of recreation use in PWS between 2006 and 2008 found that 95% of respondents planned to return to PWS and only 10% reported negative encounters with other users.</li> </ol> </li> <li>2. Access, including a desire for an increase in summer and winter access for both motorized and non-motorized activities continues to be an issue. <ol style="list-style-type: none"> <li>a. Limited monitoring of unauthorized motorized vehicle use citations</li> </ol> </li> </ol>



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and establishing a “corridor” for management.

- “Need more cabins in most heavily used areas; as soon as a cabin is open, it is booked immediately.”
- “We need better connections into and through the backcountry – like an improved trail from upper Russian Lake to Seward; or a connection from Manitoba into the Johnson Pass Trail, and on to Spencer Glacier.”
- “Childs Glacier Rec Area- needs to be a plan in place to recover that area. That’s part of the identity of Cordova.”
- “Lots more people. Lots of possibilities for trails. Expand historic mining roads for trails. Encourage loop trails.”
- “Facilities needs for large youth groups.”

3. **Changing character of use** – many note, particularly younger people, new/increased types of use: mountain biking, backcountry skiing, combining motorized/non-motorized activities like (e.g., snow machining to get into backcountry for snowboarding). Multiple types of vehicles contribute to noise pollution.
- “Kids load up motor-cross and kayaks in their trucks and do both.”
  - “Plane loads of sport fishers are coming in the fall, but in spring, we’re down on visitors because of access to Child’s Glacier.” (due to Hwy closure)
  - “Youth groups make regular use of easily accessible and researched, known locations and car-accessible cabin camping that can facilitate large (10-20 campers) groups, given the diversity of experience and equipment among the young participants.”
  - “We have an increase of backcountry emergencies in the Sound. People needing rescue.”
  - “Impact of social media and blogs; more people are coming to Whittier because of what they’ve seen online. But this is uncontrolled.”

4. **Motorized use** – looking for more corridors into backcountry;

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and public input indicate that current users generally understand where motorized use is allowed. The number of citations decreased from over 80 in 2006 and 2008, to 17 in 2011.

3. Although trends in use over the past decade are difficult to establish, some highlights include:
- a. An observed diversification of summer and winter recreation activities on the Kenai Peninsula, with an increase in mountain biking, backcountry skiing, and trail running.
  - b. A 30% decrease in visitation to the Begich, Boggs Visitor Center over the past five years from 100,000 in 2010 to 69,000 in 2012, primarily due to a reduction in use by commercial tours.
  - c. An increase in boat and upland use in PWS: traffic through the Anton Anderson Memorial Tunnel to Whittier increased from 176,000 in 2002 to nearly 235,000 in 2010.
  - d. Twardock et.al (2010) found that number of PWS campsites along beaches studied over more than a decade increased by 27% and total impacts at existing campsites expanded from 43m<sup>2</sup> to over 73m<sup>2</sup>.
  - e. Out of state visitors to Alaska grew from 1,275,000 in 2002, to 1,556,800 in 2011; visitation peaked in 2007, dropped with the great recession, and have begun climbing back to mid-decade highs. *Source:* State of Alaska, AK Visitor Statistics Program (AVSP)
    - Out of state visitors to Whittier, summer 2011 – 224,000; summer 2006 – 232,000; summer 1993 – 83,600; Out of state visitors to Portage; summer 2011 – 102,000; summer 2006 – 98,000; summer 1993 - 370,000; *Source:* AVSP 1993, 2002, 2006, 2011.
4. Public interest in cabins in PWS and campsites on the KP exceeds available capacity during much of the summer, especially during peak fishing times.
5. The CNF continues to implement the multi-agency Iditarod National Historic Trail Comprehensive Plan.



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impact of changing technology and more advanced machines; overall, balance still isn't right between motorized and non-motorized, "every other year" protocol for Resurrection is working; "older" visitors – as folks get older, getting into Chugach requires motorized use and corridors would help get deeper into Forest.

- "Create opportunities for more corridors to access deeper in the Forest for snowmachine access."
- "Winter recreation management is working well at Turnagain Pass and Summit Lake."

5. **Increasing use and user conflicts** – some say use is increasing a lot, especially in particular areas – why don't overall visitation numbers reflect that?

- "Palmer Creek Recreation Area use is astonishing."
- "Concern that heli-skiing operators are moving into areas that are commonly accessed by snowmachines and skiers."
- "Lots more organized events. Don't have infrastructure to support growth. More trash in these areas."
- "Dramatic increases in snowmachiners and backcountry skiers in the Turnagain pass area."
- "Disagree that recreation use is stable. It's growing."
- "New ethnic groups to Anchorage have concerns about safety, especially when it comes to wildlife."
- "Lots of people are recreating on PWS-trash everywhere, carry beer  
bottles full, lots of trash; water taxis drop them off at the same place"
- "Barrier to winter recreation (specifically skiing) is trapping/traplines. It is understood that everywhere will be a trap as trappers are not required to post where they are trapping. Don't need exact locations of the traps but would be good to know where general areas are so you can recreate without fear. It is currently a barrier to use."

6. **Economy** – be aware of the overall economic importance of



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recreation to local communities; need to find year-round opportunities to support business.	
<b>Designated Areas</b>	
<p>“The INHT is nationally recognized and needs to be regarded as more valuable than other trails.”</p> <p>“There’s talk of scenic areas and RNAs; have these areas been utilized?”</p> <p>“I don’t see an additional need for more regulation here. Example: wild and scenic river. Maybe in areas with more use and more people, but in remote areas there is no need.”</p> <p>“My hopes for this new planning process is to have the Nellie Juan/College Fiord Wilderness Study area become a fully recognized wilderness within the Chugach.”</p> <p>“Wilderness benefits, among other things, fish and wildlife and their habitat, clean air and water, scenic beauty, individual Alaskan recreationists, subsistence and sport hunters, subsistence, sport and commercial fishermen, visitors, and tourism operators.”</p> <p>“When traveling to the Stikine River wilderness area, it was noted that a Forest Service employee was cutting grass with a hand cutter and another employee wasn’t allowed to use an electric drill because they were in the wilderness. Wilderness designations create problems. The forest is used to hunt, fish, trap, ski and pretty much everything else; we don’t want it to be too restricted.”</p>	<ol style="list-style-type: none"> <li>1. The Kenaitze Indian Tribe and Cook Inlet Region Inc. have expressed a desire to nominate the Sqilantnu Archaeological District, on the KP, to the National Historic Landmark Program. There is the opportunity to consider a management area for this District based on legislation and multi land ownership.</li> <li>2. There are a variety of designated areas (including trails, archaeological district, roads) and recommended Wild and Scenic rivers across the Forest.</li> <li>3. The Kenai Mountains-Turnagain Arm National Heritage Area on the KP was designated in 2009. A management plan was completed for this area in 2012.</li> <li>4. There are two of America’s Byways located in or adjacent to the CNF: Alaska Marine Highway (PWS portion of the Gulf Coast) and the Seward Highway. There are five Alaska Scenic Byways located in or adjacent to the CNF which include the Seward and Alaska Marine. The others are: Sterling Highway (north segment), Copper River Highway, and Alaska Railroad.</li> <li>5. No further decisions have occurred since the 2002 Forest Plan regarding the status of the Nellie Juan-College Fiord Wilderness Study Area or Wild and Scenic River recommendations. There have been land conveyances to an Alaska Native Corporation within the Wilderness Study Area (WSA) boundary since 2002. Per direction from the new Planning Rule, the CNF will conduct a wilderness inventory and evaluation and a Wild and Scenic river review as part of the Forest Plan Revision process.</li> <li>6. The Nellie Juan-College Fiord WSA is valued for social, ecological, educational, economic and other benefits.</li> <li>7. The CNF includes 16 inventoried roadless areas that encompass over 99% of the Forest.</li> <li>8. Four Research Natural Areas (RNA) were designated in 2002 (and a fifth RNA</li> </ol>



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	<p>existed prior to 2002). Forest Service staff are exploring the potential for a RNA at Cedar Bay (estimated at 5,700 acres) to represent yellow-cedar near the very limits of its natural range. The yellow-cedar populations in Cedar Bay are thriving in contrast to large-scale mortality in southeast Alaska.</p>
<b>Wood as Renewable Energy and Fuel Source</b>	
<b>Forest Products, including personal use fuelwood, timber, special products</b>	
<ol style="list-style-type: none"> <li>1. Need for personal firewood for heating homes, cabins; ensuring it is accessible for gathering.</li> <li>2. Energy prices are increasing, so there is need for alternative heat sources.</li> <li>3. It's challenging to access some of the areas where harvesting personal firewood is allowed. <ul style="list-style-type: none"> <li>• "Firewood is critical for smaller communities for home/cabin heating."</li> <li>• "Firewood is important. Half the people in Seward use it to heat their homes. But 4-wheelers are not allowed; access is needed to get the firewood."</li> <li>• "Firewood supply has diminished and demand is going up due to the economy – people looking for lower cost ways to heat their homes, firewood is a good option."</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. 3% of the Forest is suitable for commercial timber harvest.</li> <li>2. There is a growing demand for personal use and commercial forest products, especially on the Kenai Peninsula.</li> <li>3. There will be future demand for wood products. Much of the beetle-killed spruce close to roads has been utilized.</li> <li>4. There is significant and growing interest in mushrooms and other special forest products, such as Christmas trees, berries. There is no information on quantities and trends in demand.</li> <li>5. From 2007 to 2011, the average annual timber harvest was about 350 thousand board feet (MBF) for personal use and 1,110 MBF from commercial sales.</li> <li>6. From 2006 to 2011, the average annual harvest of fuelwood was 1,125 cords for personal use and 650 cords from commercial sales.</li> </ol>
<b>Fire Management</b>	
<p>"Fewer wildfires has resulted in encroachment of trees resulting in loss of wildlife habitat"</p> <p>"Fire return interval is getting shorter. Concern of fire going from FS lands into private lands, as well as from private lands into FS lands. Would like to reduce fire threat around communities."</p> <p>"There is a lot of deadfall in the woods. Some of it is due to beetle kill. It is a time bomb; a fire risk. We have to deal with it every</p>	<ol style="list-style-type: none"> <li>1. There are about 119,000 acres of wildland-urban interface (WUI) in the KP geographic area, most of which are within Community Wildfire Protection Plan (CWPP) areas.</li> <li>2. Since 1914 approximately 1,400 fires burned a total of 75,000 acres on the CNF. Over 99 percent of the acres burned were on the KP geographic area.</li> <li>3. Humans caused over 99 percent of the fires.</li> <li>4. The risk of human-caused fires is expected to increase.</li> <li>5. Effects of climate change on lightning occurrence and fuel moisture may alter</li> </ol>



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Spring.”	<p>the frequency and intensity of fire.</p> <p>6. Reestablishing broadcast burning in the fire management toolbox would expand treatment options (and possibly reduce costs) for hazardous fuel reduction and wildlife habitat improvement.</p>
<b>Water Quantity and Quality</b>	
<b>Water, Air, Soil</b>	
<ol style="list-style-type: none"> <li>1. “Water quality is very important to local communities – any development on CNF should protect water quality”.</li> <li>2. Concerns about air quality – e.g., cruise ships in PWS, snow machines on the Kenai, and jet skis, boats.</li> <li>3. Based on conversations by rangers with the public, there is growing concern in the Wilderness Study Area (WSA) of diminished visibility and possible ecological impacts to forest resources from air pollution.</li> <li>4. Concerns about lingering effects from the EVOS oil spill.</li> <li>5. Banks of Russian and Kenai are getting trampled; resource damage. <ul style="list-style-type: none"> <li>· “Air quality concerns with increased motorized and commercial uses from increased boat traffic in PWS.”</li> <li>· “Despite emission improvement in snowmachines, with increased use and concentration of motorized use, there is increased potential for adverse impacts to air quality.”</li> </ul> </li> </ol>	<p><i>Water</i></p> <ol style="list-style-type: none"> <li>1. The conditions in the majority of the watersheds and water quality on the Chugach National Forest are generally good. Natural processes such as glaciers, mass wasting, and natural bank erosion remain the primary sources of sediment loads and turbidity in streams and rivers across the Forest. Human associated water quality concerns exist in limited locations, primarily in heavily visited areas close to roads and in developed areas. These include erosion, sedimentation and/or wetland damage from Off Highway Vehicle (OHV) routes and user created trails; sedimentation and pollutants associated with backcountry motorized use; fecal coliform pollution from recreation related human waste; sedimentation from mining activities; and sedimentation from roads, trails and recreational activities.</li> <li>2. Impacts to water resources from climate change on the Chugach may include changes to the hydrograph such as increased flood frequency and magnitude, glacial recession and changes in the timing of peak and low flows. Additionally, increased stream temperatures, and increases in fire potential and loss of wetlands in some locations are also predicted.</li> <li>3. Forest lands provide water for more than 150 public water systems and one designated municipal water source (City of Cordova).</li> <li>4. Nearly 500 water rights exist on the Forest with 5 including minimum instream flow reservations for fish and wildlife habitat.</li> </ol> <p><i>Air</i></p> <ol style="list-style-type: none"> <li>1. In 2012, the CNF began a pilot project to monitor cruise ship visual emissions in College Fiord, partnering with ADEC. Preliminary reports suggest cruise</li> </ol>



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	<p>ship visual emissions may have exceeded allowable state standards in College Fiord.</p> <p><i>Soil</i></p> <ol style="list-style-type: none"> <li>1. Understanding of soils disturbance is limited by lack of forest-wide monitoring.</li> </ol>
<b>Education and Research</b>	
<p>“We need eyes to be able to look and see changes in the Forest – need a citizen science program to evaluate the health of the Forest and monitor invasives.”</p> <p>“In the future, emphasize education. This is important for both youth and adults. Stewardship is important.”</p> <p>Youth In Anchorage – Transportation is a challenge to getting outdoors.</p>	<ol style="list-style-type: none"> <li>1. Chugach Children’s Forest (CCF) has been operating in partnership with Alaska Geographic since 2008. The CCF with the leadership and support of over 30 partners (includes educators, community and agency staff, environmental and social non-profits) have created healthy, sustainable connections to the outdoors for Alaskans of all ages.</li> <li>2. The Chugach Children’s Forest continues to create opportunities in four key areas: <ol style="list-style-type: none"> <li>a. Healthy outdoor activities for kids, families and communities.</li> <li>b. Pathways to outdoor oriented education and careers.</li> <li>c. Expanded public land stewardship and civic participation.</li> <li>d. Environmental and climate change understanding and identifying local solutions.</li> </ol> </li> <li>3. Four Research Natural Areas (RNA) were designated in 2002 (and a fifth RNA existed prior to 2002). Forest Service staff are exploring the potential for a RNA at Cedar Bay (estimated at 5,700 acres) to represent yellow-cedar near the very limits of its natural range.</li> </ol>
<b>Socio-Economic/Community</b>	
<b>Socio-Economic Overview</b>	
<ol style="list-style-type: none"> <li>1. Regional and local economies are linked to Forest management and quality of life for the regions.</li> <li>2. Commercial hunting and trapping Recreational use of CNF is important to diversifying local economies – dollars spent in lodging, equipment/supply purchases, food purchased, etc.</li> </ol>	<ol style="list-style-type: none"> <li>1. The Chugach National Forest plays a major role in the economic and social life of Alaska, particularly communities within and near the forest, providing services from jobs, to subsistence resources, to clean water, carbon sequestration, and the natural beauty that makes people want to visit and live</li> </ol>



## WHAT WE HEARD FROM THE PUBLIC<sup>1</sup>

3. Designation of “Kenai Mountains-Turnagain Arm National Heritage Areas” is tourism attraction for smaller communities.
4. Tourism has declined due to weak national economy; increased gasoline prices.
5. Communities are willing to work with the Forest Service, e.g. help refurbish historic cabins but not sure how to approach, collaborate on events, and help maintain trails.
6. Demographic changes forest-wide – more diverse populations, different needs.
  - “Snowmachine closures in 2002 influenced the closure of 7-8 local businesses (i.e., Princess, Summit Lake Lodge, Gwen’s in Moose Pass and Hope).”
  - “Concern with winter economy in Hope – not enough winter jobs. Forest Service should provide more winter recreation opportunities.”
  - “It would attract more businesses if there was access to affordable energy.”
  - “Local businesses can serve as partners. Infrastructure to support recreation has been expanded but more needs to be done. There is a lot of summer recreation and not much infrastructure for fishing. The number of visitors is staggering; there are “big” weekends.”

## FINDINGS FROM THE ASSESSMENT<sup>2</sup>

- in Alaska.
2. The study area for the social, cultural, and economic assessment consists of the Municipality of Anchorage; the Kenai Peninsula Borough, and the Valdez-Cordova Census area (CA):
  - a. A majority of the population is in Anchorage (287,000), while fewer people in Valdez-Cordova (9,600).
  - b. Populations are growing for Anchorage and the Kenai Peninsula but decreasing slightly for the Valdez-Cordova CA.
  - c. Populations are changing, creating new demands for amenities and services. Key demographic trends including growing ethnic diversity (especially among younger populations) in the region, and an aging population.
  - d. Alaska Native populations are lower for Anchorage and the Kenai Peninsula (7 to 9 percent) but similar to State levels for the Valdez-Cordova CA (14 to 16 percent).
3. Employment grew by 10% to 14% for Anchorage and the Kenai Peninsula but by only 1% for the Valdez-Cordova CA (compared to 2% for the US), as recovery from the recession continues.
  - a. Regional employment in travel and tourism (17 %) remains important and is projected to grow by 12.5% for Alaska as a whole by 2020. CNF is a major attraction for regional tourism activities. Visitor related employment for southcentral Alaska grew 7% from 2010 to 2011, reflecting rebound since the 2007-2008 recession.
  - b. Approximately 500,000 recreational visits to the CNF (2008), including sport fishing, are estimated to support 976 jobs of which 84% (822 jobs) are from non-local visitor spending (new dollars).
  - c. Commercial fishing is the largest forest resource-related sector in southcentral Alaska. CNF habitat plays a key role in sustaining fisheries that support commercial fishing and processing industries that account for large percentages of economic output in the study area.



## WHAT WE HEARD FROM THE PUBLIC<sup>1</sup>

## FINDINGS FROM THE ASSESSMENT<sup>2</sup>

- d. The annual economic impact of salmon produced on the Forest that are caught in commercial fisheries is approximately \$232 million per year. This impact generates an estimated 3,141 jobs. The economic impact of recreational fisheries is more difficult to assess, but is substantial, perhaps equal to commercial fisheries in terms of revenue and jobs generated.
- e. Secure Rural School (SRS) payments and CNF federal spending support approximately 440 jobs per year.
4. Higher percentages of homes are seasonal or recreational in the Kenai Peninsula (19 %) and the Valdez-Cordova area (27 %), suggesting demand for scenic, recreational, or other attributes.
5. Observations regarding conditions and trends for individual communities in the study area include:
  - a. Decreasing population trends are more common in smaller sized communities.
  - b. Median household income tends to be lower than income levels for Alaska. Income levels are increasing for a number of communities within the Kenai Peninsula, but only one community in the Valdez-Cordova CA, indicating slower recovery from the recession in Valdez-Cordova.
6. Poverty rates are generally low, with the exception of higher poverty rates within the two small communities (Chenaga Bay, Tatitlek).
7. Shifts in types of employment (e.g., natural resource industries; recreation/tourism; transportation; healthcare) as well as types of income that reflect aging populations and changing demographics (e.g., earnings from wages/salaries versus social security or retirement payments) demonstrate how the CNF can have different levels of direct and indirect impacts on communities. Direct job impacts may be greater for communities with more employment in tourism; indirect impacts may be greater for communities with higher numbers of retirees who are attracted to amenities provided by the CNF and spend supplemental income on local services.



WHAT WE HEARD FROM THE PUBLIC <sup>1</sup>	FINDINGS FROM THE ASSESSMENT <sup>2</sup>
	<p>8. The information above provides the foundation for demonstrating how the plan area can contribute to social and economic sustainability by providing opportunities to meet current needs without compromising the ability to meet future needs. Needs are reflected in the numerous values, beliefs, and attitudes expressed or revealed by local residents, non-local visitors, and people outside of Alaska regarding different ecosystem services opportunities provided by the CNF.</p> <p>9. The USFS is working with partners to connect diverse youth to outdoor recreation, education, stewardship and career opportunities, in the forest and beyond. One example is the Chugach Children’s Forest initiative.</p>
<b>Mining</b>	
<ol style="list-style-type: none"> <li>1. Concerns expressed regarding impact of commercial mining on the lower Resurrection Creek, including impacts on water quality, recreation, habitat, visual quality.</li> <li>2. Request for updated information on what level of mining is likely to continue, how this meshes with plans for restoration of past mining activities. <ul style="list-style-type: none"> <li>· “I’m a motorized rec. user – but I don’t want to see mining on the forest; don’t think it is compatible with recreation use...but, if a mine led to a new road, say a new road that went 10 miles into the backcountry; that might be good if it opened up new areas for recreation.”</li> <li>· “People associate AK with gold panning; make AK more appealing for visitors if there were more areas open for gold panning – economic benefit –‘Big tourism’.”</li> <li>· “Tourism is big on Kenai; People want to find gold. Need more recreational panning areas.”</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Gold prices are increasing; increase in mining activity (commercial and recreational gold panning.)</li> </ol>
<b>Energy</b>	
<ol style="list-style-type: none"> <li>1. More access to small scale renewable, particularly hydropower.</li> <li>2. Concern regarding impacts of projects on recreation/other uses. <ul style="list-style-type: none"> <li>· “Development of renewable energy efforts have begun at Power Creek, Snyder Falls Creek and Humpback Creek, there is potential for hydro-power at all sites.”</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. There are currently no biomass energy facilities within the boundary of the CNF. The interest and demand may increase in the future.</li> <li>2. The CNF could see an increase in the number of new energy project proposals, due, in part, to the availability of federal and state grants, high fossil</li> </ol>



WHAT WE HEARD FROM THE PUBLIC <sup>1</sup>	FINDINGS FROM THE ASSESSMENT <sup>2</sup>
	<p>fuel costs, and tax breaks for renewable energy projects.</p> <p>3. The location of previously proposed, current, and planned energy projects and potential utility corridors must be considered when making land use allocation decisions.</p>

