

# Appendix B

## Responses to Comments

### Background

A Draft Environmental Impact Statement (EIS) was prepared by the Forest Service, and mailed for public comment in September and October 2007. The 45-day comment period ended November 19, 2007. Eighteen comment letters were received from the following individuals or organizations on the Iyouktug Timber Sales DEIS. A letter designator and comment number were assigned for tracking purposes.

This appendix displays the annotated comments followed by the Forest Service's response to those comments. In many of the responses to comments the reader is referred to specific locations in the Iyouktug DEIS and/or FEIS where a particular topic or analysis is displayed or discussed. These references are arranged with the chapter first, the referenced resource section second, followed by the specific section or sections within that resource section. This method was used because page numbers changed between the DEIS and FEIS, whereas the section headings generally did not change.

The complete citations for literature cited in this appendix is found in Chapter 4 of the FEIS.

<b>List of those who commented on the Iyouktug DEIS and letter designator</b>	
<b>BC</b>	Bob Christensen
<b>BS</b>	Barbara Sachau
<b>DEC</b>	Kevin Hanley Alaska Dept. Natural Resources (ADNR) Dept. Environmental Conservation (DEC)
<b>EH</b>	Ernestine Hanlon
<b>EPA</b>	Christine Reichgott United States Environmental Protection Agency (EPA)
<b>ISES</b>	Gregory P. Streveler Icy Strait Environmental Services
<b>JB</b>	Judy Brakel
<b>JM</b>	James Makcovjak

<b>NMFS</b>	James W. Balsiger National Marine Fisheries Service	
<b>OHMP</b>	Sheila A. Cameron (for Jackie Timothy) ADNR, Office of Habitat Mgmt. and Permitting (OHMP)	
<b>OPMP</b>	Erin Allee ADNR, Office of Project Management/Permitting (now the Division of Coastal & Ocean Management)	
<b>PB</b>	Paul Barnes	
<b>SCS</b>	Paul Olson Sitka Conservation Society	Larry Edwards Greenpeace
	Gabe Scott Cascadia Wildlands Project	Gregory Vickrey Tongass Conservation Society
	Bruce Baker Juneau Group of the Sierra Club	
<b>SEACC</b>	Erika Bjorum Southeast Alaska Conservation Council	
<b>SL</b>	Steve Lewis	
<b>TU</b>	Mark Kaelke Trout Unlimited	
<b>USDI</b>	Doug Mutter (for Pamela Bergmann) United States Department of the Interior	
<b>WC</b>	Wanda Culp	

## Iyouktug Timber Project

## Introduction

BC-1 I am a resident of Icy Strait who is interested in supporting the management of the Tongass National Forest to provide for multiple uses, including maintaining high levels of productivity for wildlife such as salmon, bear and deer, providing subsistence opportunities for rural communities, economic opportunities for rural communities (including reasonably scaled timber projects), recreation opportunities for residents and visitors and "ecosystem services" for healthy ecological systems.

In general I was very impressed with the Iyouktug draft EIS. Many important issues were addressed and potential impacts from proposed actions were described clearly, well illustrated and documented in appendices.

BC-2 My critique of this project derives largely from a difference in personal and professional opinion (from the Forest Supervisor at least) on how TLMP should be implemented. In short, projects like Iyouktug make it amply clear that in timber LUDs the USFS manages primarily for the harvest and production of timber. This "no-brainer" is not necessarily a problem on its own. The problem lies in that the timber LUDs were established long before biological values and "non-extractive" economic interests were of much concern. The timber LUDs were drawn around the most productive watersheds in the Tongass because timber took priority. This is a problem because in addition to being the big timber producing watersheds in the Tongass they are also the core zones of productivity for a great variety of wildlife species, many of which are important to other aspects of South-east economy. The disproportionate emphasis on timber productivity in the majority of the highly productive watersheds in the Tongass burdens the timber planning team with the challenge of/responsibility to see that management of these landscapes results in something considerably more than tree farms. The timber LUDs are in many cases the true "biological heart" of the forest, providing much higher productivity for salmon, bear, deer, eagles, etc. than the system of protected lands. This is especially true on NE Chichagof where there occurs no congressionally protected lands at all.

BC-3 Although today a great deal of effort is paid to conservation of other forest values within a timber project DEIS/EIS the tendency is to meet only the minimum requirements to adhere to the standards and guidelines. The scale of harvest v.s. the scale of conservation in highly productive sites is highly disproportionate to the social value derived from harvest activities. This is especially true for areas that have already been high-graded by past harvest efforts. In particular, the economics of these sales makes very little sense from a government fiscal responsibility perspective and marginal sense at best for providing rural economic stability.

BC-4 Although I will go to some length below to describe specific areas/units that concern me I want to make it clear that most of this concern is born by what I see as a fundamental flaw in the *scale of harvest* proposed in the preferred alternative. If the project were appropriately scaled to respond to past harvests in and around the project area I would feel very little need to voice the concerns I do below, even if the specifics of the particular unit had not changed. I understand and appreciate that impacts to wildlife productivity are an unavoidable consequence of human occupation and economy. Again, it is the scale of the proposed impacts that I take issue with. That is why I would like to go on record in support of a slightly modified version of Alternative 5 (move a portion of the North Iyouktug units to the Suntaheen 1663' knob) and a much greater emphasis on "integrated management", i.e. a balance of proposed impacts and mitigative actions like restoration.

## Specific Issues

*Partial-cutting*

BC-5 Iyouktug is a fairly unique timber project in the Tongass. Many of the harvest units proposed in the preferred alternative are partial cut prescriptions. Using partial cut prescriptions in order to maintain some old growth character in harvest units may work very well in many locations in the Iyouktug project area but it seems to me that the idea is soured somewhat by the scale at which it is being applied in Alternative 3. Although the par-

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BC-5  
(cont.)

Partial cut approach makes it possible to provide a relatively large volume of timber while adhering to S&Gs for marten and goshawk, the downside results in greater impacts to habitat connectivity, especially for deer, and results in more roads necessary per board foot volume. Partial cutting at this scale is unprecedented on the Tongass and may have unforeseen consequences to habitat connectivity in what is an already highly fragmented landscape (naturally and from past harvest).

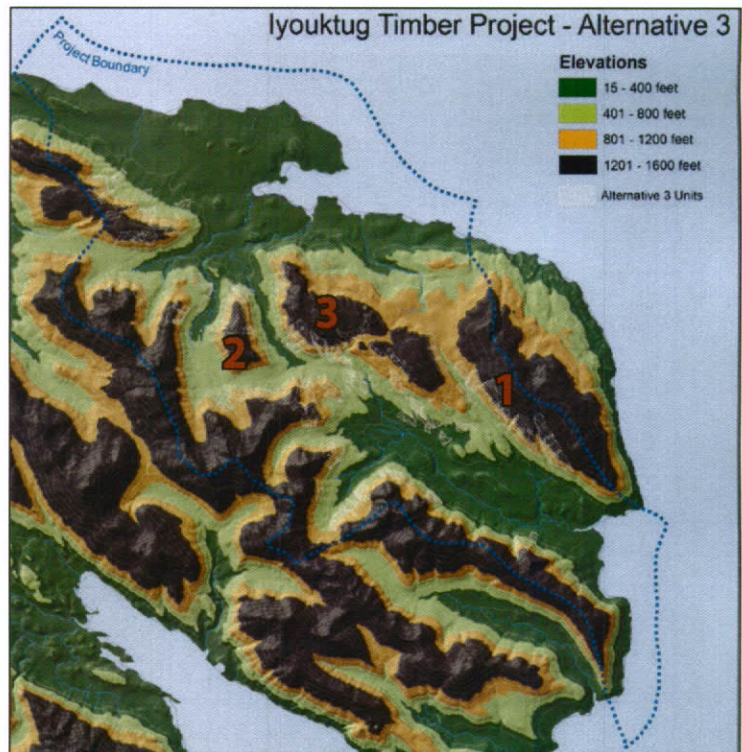
BC-6

It is also important to acknowledge that little is known about the wind-firmness of partial cut forests and what is known (see alternatives to clearcut study, FSL) does not bode well for trees left standing in sites exposed to seasonal wind storms.

BC-7

There are 3 areas within the project that I find particularly problematic for maintaining ecological integrity in a post Alternative 3 harvest scenario because of the extent of proposed partial harvesting (see figure right). These areas are:

1. North Fork Iyouktug,
2. the Suntaheen 1663' Knob, and
3. the Suntaheen 1600' Knob



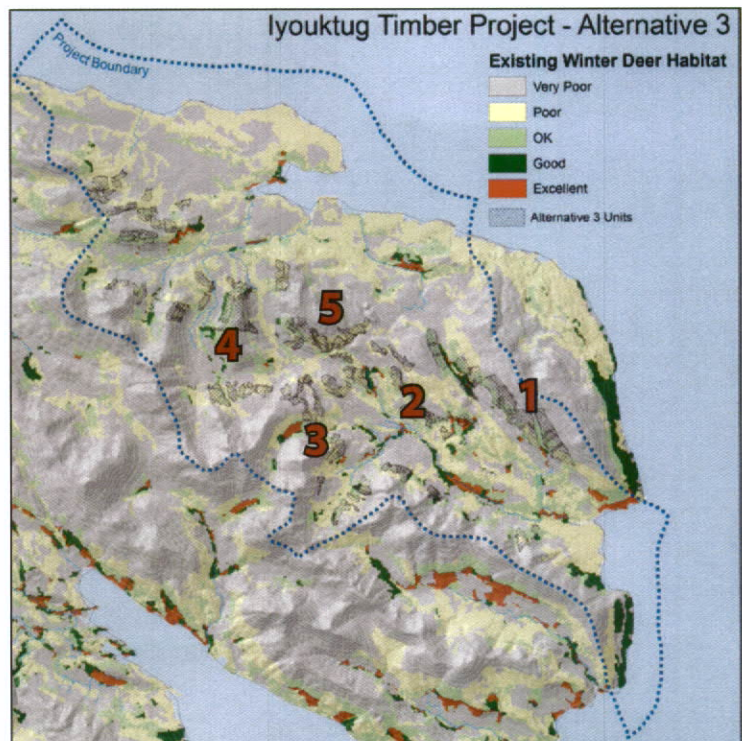
BC-8

### *Deer Winter Habitat and Connectivity*

Over half of the prime deer winter habitat has been logged in the project area. The remaining patches of prime habitat are highly fragmented and often occur up-slope of difficult to traverse second growth stands. The reduction in availability and access to prime habitat has reduced the carrying capacity of this landscape and made it more susceptible to catastrophic die-offs due to high snow winters. What fragments of higher quality habitats remain should not be logged or further isolated by removal of travel corridors. It also seems reasonable that we should protect the best of the medium quality winter deer habitat and “thin for wildlife”, i.e. gap-thin what once was prime winter habitat in order to maintain and restore a suitably dense and resilient population for an important subsistence area.

BC-9

The units in the North Fork Iyouktug area (1) are particularly problematic for degradation of some of the last southwest facing moderate value winter habitat in the project area. Reduction in canopy closure will also degrade landscape and elevational winter connectivity in this area. Specific units of concern are: 114, 116, 117, 118,





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BC-9 (cont.) 119, 120, 121, 122, 123, 124, 125, 184 and 185. An “integrated” approach to management for this area would balance some harvesting with the maintenance/restoration of landscape/elevational connectivity and gapped thinning of lower elevation second growth. Review of the resource specialist report suggests that some efforts were made to maintain connectivity, but there does not appear to be enough known about the importance of connectivity to ensure that the scale of conservation is balanced appropriately with the scale of harvest.

BC-10 Harvest of units 111, 103, 189, 191 and 193 would remove centrally located (2) patches of *prime* deer winter habitat or threaten remaining corridors to such from likely blow down (see more blow down threats below). Note that unit 103 is mapped as low quality deer winter habitat by the HSI model and yet it is prime deer winter habitat in terms of snow capture and winter foraging opportunities. This situation is not uncommon and should dictate that a ground-truth based approach should be systematically applied to the project area (i.e. use the FRESH model), especially in such a highly fragmented area where subsistence is needs are well documented.

BC-11 Harvest of units 163 and 165 (3) would greatly impact connectivity and increase risks of blow-down to the largest and highest scoring patch of deer winter habitat in the central-western portion of the project area.

BC-12 Harvest of a group of units in the northwest of the project area (914, 915, 923, 960, 954, 953) would log most of the Suntaheen 1663’ Knob-whose western slopes provide most of the higher quality deer winter habitat in the Suntaheen watershed (4).

BC-13 Harvest of a group of units in the northern portion of the project area (914, 915, 923, 960, 954, 953) would log most of the south facing slopes of a Suntaheen 1600’ Knob (5).

BC-14 It should also be noted that the large patches of moderate-good habitat that are mapped on the eastern sides of relevant OGR’s are unlikely to actually provide very high quality deer winter foraging opportunities. The current HSI model suggests these areas would be good for deer because they are low elevation POG with decent aspects. The model does not account for the wind-stressed nature of the forest types along the Chatham side slopes. These forest types tend to be closed canopy and nearly devoid of important winter foods like blueberry, cornus, coptis or rubus. Like the unit 103 example above, this is another

BC-15



*Prime deer winter habitat in unit 103. USFS deer model shows this as low quality.*



*This is a picture of a patch of forest in an OGR south of False Bay. This large patch of POG is mapped by the USFS deer HSI model as having high quality deer habitat. Clearly this is not the case.*



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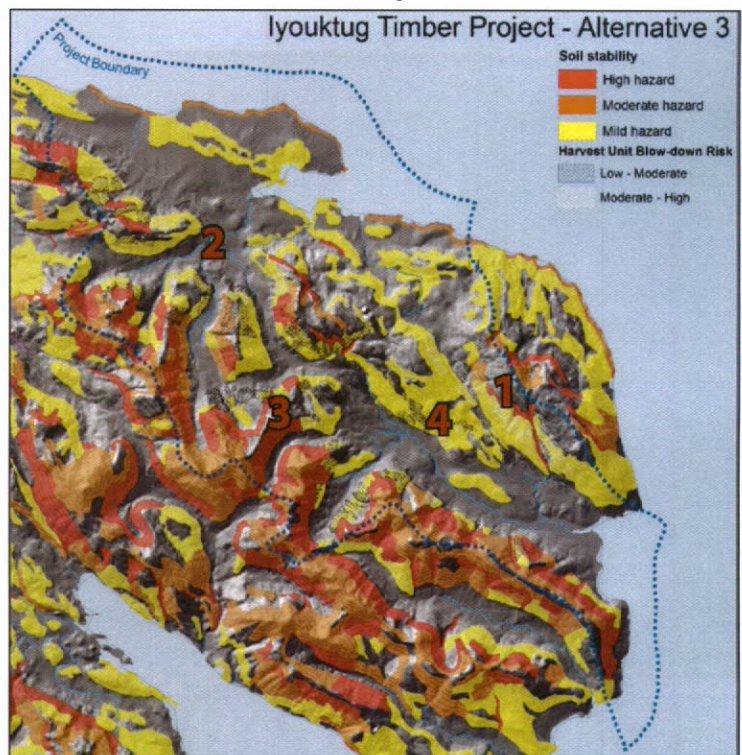
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BC-15

case where a better approach to understanding the on the ground reality for deer winter range is important for good intentions to equal good management. I appreciate that quick cruises for deer habitat were done both in and out of proposed units and I am confident that the wildlife biologists used site specific information to improve this project wherever possible, however, unit by unit tweaks may not do enough for meeting project/landscape scale management goals for large mammals in a highly fragmented landscape. Furthermore, the data used to quantify impacts to carrying capacity and subsistence opportunity are not based on ground-truthed data nor do they provide anything but relative estimates for deer numbers. The USFS is long overdue for a new deer habitat model that can be used effectively and consistently at regional, landscape and project scales.

BC-16

for deer habitat were done both in and out of proposed units and I am confident that the wildlife biologists used site specific information to improve this project wherever possible, however, unit by unit tweaks may not do enough for meeting project/landscape scale management goals for large mammals in a highly fragmented landscape. Furthermore, the data used to quantify impacts to carrying capacity and subsistence opportunity are not based on ground-truthed data nor do they provide anything but relative estimates for deer numbers. The USFS is long overdue for a new deer habitat model that can be used effectively and consistently at regional, landscape and project scales.



### Blow Down and Slope Stability

BC-17

Much of the Iyoutug project area occurs on moist soils.

BC-18

Forest types that occur on moist soils are susceptible to blow down when they are exposed to storm wind directions (Northerly and Southerly exposures). Although blow down can be used as a management tool for maintaining/increasing site productivity, it should be avoided when the unravelling of neighboring forests impact the accessibility of prime deer winter range or the overall quality of old growth retention.

BC-19

Again, the North Fork Iyoutug (1) units are particularly problematic in this regard: 119, 120, 121, 122, 123, 124, 125, 184 and 185. Blow down caused by the cutting of units 819, 820, 915 and 960 in the northwest of the project area (2) would also likely impact access to prime winter deer range. The same would hold true for the centrally located unit 103. On the southern side of the watershed, blow down from cutting units 151, 165, 909, and 983 would also impact deer habitat/connectivity (3). Unit 111 is prescribed to be a 50% basal area removal although it is highly susceptible to blow down ((4) mistake?).

BC-21

Where the USFS soils data shows moist soil types on steeper slopes the ground is considered moderately to highly unstable, or prone to land-slide hazards. Land slides should be avoided whenever risks are high. North Fork Iyoutug units stand out here as well.

Timber harvest is proposed upon and up-to unstable sites in these locations:

- Units proposed on **highly unstable sites**: 125
- Units proposed on **moderately unstable sites**: 138, 143, 914, 948
- Units proposed on slopes **immediately below or next to highly unstable sites**: 125, 134, 138, 142, 151, 184, 185, 817, 903, 916, 917, 932, 937 and 976. These units should provide for slope stability buffers or be abandoned if buffers are not deemed to be sound.

BC-22

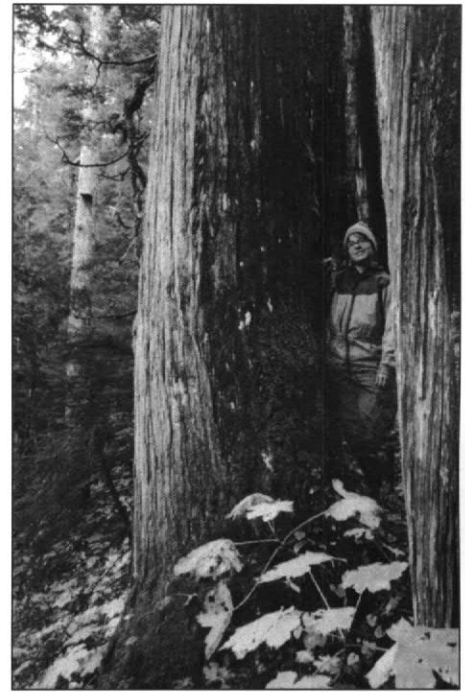
### Yellow Cedar

Although yellow cedar accounts for a small percentage of the total volume available in the unit pool it is clearly a primary driver in the economic feasibility of this sale. This suggests that large areas of forest, largely hemlock forest, will be impacted in order to harvest a small, but highly valuable cedar component. Efforts made to maintain the cedar component in partial cut stands will take on the ground stewardship to insure that the general retention/regeneration goals outlined in the summary section are met. Several other important points

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BC-23 about impacts to cedar trees and cedar habitat types are not addressed in this DEIS:

1. There is no mention of how the very slow growing nature of this species is being accounted for in long-term economic or ecological planning for this area.
2. The fact that cedar die-back is not occurring in the project area seems to be cited as justification for limiting concern with harvesting this species when it should be cited as justification for its conservation within the project area (why not protect it where it seems to be doing well and log it where it is dead?).
3. The fact that we know very little about the distribution of cedar across the broader NE Chichagof landscape and the relative proportions that would be harvested in Alternative 3 is not addressed.
4. The poor record of natural regeneration of this species is seemingly addressed by a single statement about how if necessary it will be replanted. This is far from a conservative approach given the challenges of funding the monitoring of such need and the implementation of mitigative action.
5. Mention is made in unit cards of individual tree buffers for very large, likely ancient, yellow cedars identified by the SCS ground-truthing project. While I applaud this effort I wonder how extensively this kind of surveying was done in the project area? I would like to see a dbh limit of 36" when harvesting cedar in this project area and a guideline for protecting high density groves (~50%).



Large yellow cedar found in unit 103.

BC-24

BC-25 *Cumulative Impacts*

I can find no significant contribution of accounting for cumulative impacts in the Iyouktug project. It is understandable that the USFS has not yet determined how to respond to the 9th circuit ruling on this matter at the project level but is that not a very important scale for action? Intensive harvesting by SEALASKA and Huna Totem in the game creek and spasski watersheds make it amply clear that the NE Chichagof landscape exemplifies the kind of area that the decision was meant to address.

BC-26 Overall impacts to winter deer habitat is an obvious resource to be considered with regard to cumulative impacts to the landscape and could be addressed somewhat with additions/changes to the OGR system. As an example, if the Whitestone SOGR were to be modified/added to such that it protected the old growth characteristics of the low elevation/south facing corridor between Whitestone Harbor and the Spasski valley (up Whitestone creek) the USFS may be able to buffer impacts to this critical watershed rather than broaden the footprint of its behavior as a population sink for old growth dependent species.

BC-27 *High Elevation Units*  
Many of the units in this project occur at relatively high elevations (above 800'). As mentioned above with reference to slow growth rates in cedar, all tree species regenerate and mature slowly at high elevations. There is no mention of how longer-term impacts to old growth characteristics at high elevation sites are accounted for.

Thanks very much for providing me an opportunity to comment,  
Bob Christensen  
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Gustavus, AK 99826



**Responses to BC – Bob Christensen**

**BC-1** – Your position on the Forest Service mission and positive feedback on the EIS are noted and appreciated. Thank you for providing maps and unit-specific information.

**BC-2** – The designation of lands for National Forests began with the Forest Reserve Act of 1891 and the lands targeted for these reserves were based on their timber production value rather than the other values associated with them today. The goals of the management of the National Forests have changed over time along with the public's values. This can be seen in LUD allocations of the 1979 Forest Plan, which was almost immediately amended by ANILCA (1980) which designated many timber production areas as Wilderness, such as Admiralty Island, Petersburg Creek-Duncan Saltchuck and Tebenkof Bay. The LUDs of the 1979 Forest Plan were further amended by the Tongass Timber Reform Act (1990) which added more Wilderness Areas and Legislated LUD II lands which are to be managed in perpetuity in a roadless state. A portion of NE Chichagof is allocated to the LUD II designation.

During the environmental analysis which resulted in the 1997 Forest Plan., the land use allocation was once again scrutinized. Many of the timber production LUDs were assigned to areas where there had already been timber harvest, in part to respond to the scoping comments to not develop roadless areas and in part to use the existing infrastructure. However, many other areas (2.7 million acres) were changed from timber production LUDs (LUD III and IV in the 1979 Forest Plan) to LUDs with other resource objectives, such as old-growth habitat of wildlife, semi-remote and remote recreation, and special interest areas designed to protect zoological, botanical, scenic, geological or cultural values. Approximately 25% of the NE Chichagof area was allocated to Old-growth reserves at that time which resulted in the modification of the Eight-Fathom EIS decision.

Prior to the development of a proposed action for the Iyouktug project an interagency review of the old-growth habitat reserves by biologists from the State of Alaska, US Fish and Wildlife Service and the Forest Service was begun in the Iyouktug area. This interagency review was also one of the major focuses of the 2008 Forest Plan Amendment. The intent behind this review was to ensure that the best areas were chosen for inclusion in the Conservation Strategy. Other LUD allocations were also considered for the Iyouktug project area at this time in the Forest planning process.

During the analysis for the FP amendment the LUD allocations were again analyzed and several adjustments were made to the 1997 Forest Plan LUDs based on public comment. Please refer to the 2008 Forest Plan Amendment ROD (USDA Forest Service 2008).

We understand that you do not agree with our timber LUD locations. Designating LUD areas is outside the scope of this analysis, and is part of the Forest Planning process. LUDS were created considering all resources, not focused only on timber. Management within timber LUDS includes multiple use management. Please see the information on LUDs in the DEIS and FEIS, Chapter 1, Relationship to the Forest Plan.

**BC-3** – The Forest Plan Standards and Guidelines are science-based and were determined to meet the goals and objectives of the Forest Plan for all resources, including timber. To increase the standards and guidelines for other forest values may affect the timber economics and/or outputs. Therefore Alternative 2 was designed to meet the Forest Plan direction; Alternatives 3,



4, and 5 provide different levels of other resource protection above the Forest Plan standards in many areas within the proposed project area. These increased protection measures also show to some degree the cost of these protection measures.

Appendix A of the Iyouktug FEIS explains the obligation to help stabilize the timber industry part of the communities of Southeast Alaska. Part of the purpose and need for this project (Chapter 1) is to provide a long-term stable supply of timber for local and regional sawmills and timber operators from suitable timber lands. Changing economic factors and rapid market fluctuations make it difficult to predict absolute economic values over the next five to 10 years. The economics of these proposed sales are discussed in the DEIS and FEIS in Chapter 3, Issue #3, Timber Economics, Timber Financial Efficiency Analysis section and provides a relative comparison among alternatives based on current market conditions. This section of the FEIS has been updated to provide additional information.

**BC-4** – Alternatives were designed by the IDT to provide a reasonable range of management options. Alternative 4, for example, does not harvest timber in the North Fork of Iyouktug Creek. Alternative A was a smaller-scale alternative using only existing roads. It was eliminated because it did not meet the needs of this project. The scale of harvest varies by alternative and a wide range of alternatives are developed in Chapter 2 of the DEIS and FEIS. Chapter 3, Environment and Effects, provide information concerning the existing environment of the Iyouktug project area, and potential environmental consequences of the proposed action and alternatives to it. Please also see responses to BC-7, 9, 10, 12, 13, and 14 where we discuss your concerns with specific units. Several alternatives were considered that would be similar to your proposal of a modified Alternative 5; Alternative D considered ground-based harvest only, with no harvest in roadless (including no harvest in the “North Iyouktug” area), Alternative F looked at small sales only, and Alternative J considered restoration projects in the Iyouktug area. Alternatives D, F, and J were eliminated from detailed study for the reasons described in Chapter 2 of the DEIS and FEIS, Alternatives Considered but Eliminated from Detailed Study section. The decision maker can consider modifications to alternatives similar to what you have suggested in the Record of Decision (ROD).

**BC-5** – The scale of the Iyouktug proposed harvest is not unusual when compared to other current timber sale proposals across the Tongass National Forest such as Navy and Logjam. For example, the Woodpecker Timber Sale proposed to partial harvest 1,140 acres in the preferred alternative and 1,850 acres in one of the other alternatives. Looking at larger project areas allows a landscape approach to management and is more cost-efficient for NEPA analysis. These larger areas also potentially provide more timber than a smaller area which can allow for a longer implementation period that provides a more reliable timber supply. Regardless, the scale of the proposed Iyouktug harvest was considered and the DEIS and FEIS, state that some partial harvest, in combination with other harvest, would result in a reduction in connectivity (Chapter 3 (and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth section, Environmental Consequences on Connectivity section). However, this document also describes how partial harvest will maintain some level of connectivity especially as compared to clear cut harvest. Information was added to this resource report to clarify this.

In addition, the DEIS and FEIS, Chapter 2, identify a range of alternatives with varying degrees of impact. Alternative 1 maintains the existing condition, with all of the travel corridors remaining intact. Alternative 3 was developed to minimize impacts to deer habitat and connectivity. Although corridors are reduced in width in all of the action alternatives, landscape

level connectivity is maintained as required in the Forest Plan (USDA 1997a). Forest Plan Standards and Guidelines do not require any specific number, width or distribution for corridor

**BC-6** – Monitoring results from the Alternatives to Clearcutting Study, five years post-harvest in wind prone areas reveal approximately 5 percent loss of basal area with the 25 percent single tree selection prescription and 6.4 to 8.5 percent basal area loss with 25 percent selection in clumps (McClellan, 2007). Based on these results, minor (5-8%) amounts of windthrow can be expected to occur following harvest within proposed single tree selection units with moderate to high wind risk ratings.

Regarding windfirmness of partial cut forests, proposed prescriptions are consistent with Harris (1989) and McClellan (2007). The FEIS Chapter 3, Silviculture and Vegetation, Direct and Indirect Effects on Windthrow Risk were updated to clarify how wind risk was considered in the analysis.

Wind disturbance and windthrow risk were analyzed and taken into account with selection of the proposed units, units design and harvest prescriptions. Please see FEIS, Chapter 2, Activities and Design Elements Common to All Action Alternatives, Windthrow.

Measures to minimize the probability of windthrow in partial harvest units have been considered and where risk indicates a need, addressed on individual unit basis in Unit Cards and prescriptions. Please see the FEIS, Chapter 3, Timber and Vegetation Section, Single Tree Selection and direct and indirect effects on windthrow risk.

**BC-7** – Thank you for providing maps and unit-specific information. The areas identified were all considered in the wildlife and the silviculture vegetation analysis. The DEIS and FEIS specifically address connectivity in the North Fork of Iyouktug Creek (Chapter 3, Habitat Connectivity and Old Growth section). The DEIS and FEIS Chapter 3, Silviculture and Vegetation section and Unit Cards describe silvicultural prescriptions. Please see response to BC-9 through 20 for more specific information.

**BC-8** – The DEIS and FEIS address the reduction in prime habitat for deer (Chapter 3 and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences for Deer, Affected Environment for Deer. Approximately 47 percent (not over 50 percent) of the prime deer habitat has been harvested. The Direct and Indirect effects on Sitka Black-tailed Deer section supports your comments that the carrying capacity of the habitat has been reduced and was updated to addresses the effects of high snow winters that may result in catastrophic die-offs of deer.

The DEIS and FEIS state that the action alternatives would reduce habitat connectivity (Chapter 3 and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth, Environmental Consequences on Connectivity section. Although there are no standards and guidelines addressing the fragmentation of habitat in the Timber Management LUD, connectivity was used as a critical habitat element to address fragmentation. Please see response to BC-5 for additional information on connectivity.

The medium quality habitat for deer is displayed in the DEIS and FEIS, Figure 3-6. Although medium quality habitat for deer was not specifically addressed, the deer analysis considered more than just high value habitat (reference the DEIS and FEIS, Chapter 3, Management Indicator Species and Other Wildlife, Environmental Consequences for Deer section).

Almost 700 acres of young growth, 20-23 years old, is currently planned for thinning in the Iyouktug area (VCUs 2080 and 2090). Thinning can include gaps and corridors, and are applied based on site-specific objectives and needs. Although future thinning was considered in the DEIS cumulative effects analysis, the FEIS has been updated to provide more specific information. Please see Chapter 3, Silviculture and Vegetation, Cumulative Effects on Vegetation.

**BC-9** – Thank you for referencing specific units in your comments. Please see response to BC-5 and BC-8 for additional information on connectivity. The DEIS and FEIS disclose a reduction in connectivity, and specifically addressed the North Fork of Iyouktug Creek (Chapter 3 (and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth section). Although this section does not specifically mention all of the units identified in your comments, all units were reviewed for this analysis (reference the Unit Cards in Appendix B of the DEIS). These analyses, in addition to additional analysis in the DEIS and FEIS, take into consideration the value of south facing slopes (Units 119, 122, 123, 124, 125, 184 and 185) and the reduction in canopy in the North Fork of Iyouktug Creek (Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences for Deer, Direct and Indirect effects on Sitka Black-tailed Deer section). Because Units 114, 116, 117 and 118 are on northeast facing slopes and occur mostly above 800 feet in elevation, these units have lower value as deer winter habitat. Also, not all of these units are proposed in any one of the action alternatives.

Your recommendation pertaining to the units in the North Fork of Iyouktug Creek was considered. Alternatives were designed with an “integrated” approach to management. All resources were considered when reviewing the units and an interdisciplinary balanced approach was used in developing alternatives. Although units in the North Fork of Iyouktug would have some impact to deer habitat and connectivity, they would also have a lower risk to other resources (e.g. karst). In addition, these are wind generated stands and other commenter’s recommended that we harvest in this wind prone area rather than wind protected areas where gap-phase (old-growth forest) processes dominate.

Please see response to BC-8 for information on thinning.

**BC-10** – The DEIS and FEIS address the reduction in prime habitat for deer in Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences for Deer, Direct and Indirect effects on Sitka Black-tailed Deer section (also see response to BC-8). Although this section does not specifically mention all of the units identified in your comments, all units were reviewed during this analysis (reference the Unit Cards in Appendix B of the DEIS). A map of prime deer habitat was added to the Wildlife and Subsistence Resource Report. Although Units 191 and 193 contain high value habitat, they do not include prime habitat as defined in the DEIS and FEIS. The Wildlife and Subsistence Resource Report specifically addresses Units 189 and 193 as including high use by deer in the Management Indicator Species and Other Wildlife, Sitka black-tailed Deer section, Deer Summer Habitat portion. Please see responses to BC-5, BC-8, BC-9, BC-11, and BC-19 for more information on corridors and connectivity.

The DEIS and FEIS considered the impacts of blow down (referred to as windthrow) on connectivity and deer habitat (Chapter 3 (and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth, Environmental Consequences on Connectivity section,

and Management Indicator Species and Other Wildlife, Environmental Consequences for Deer, Direct and Indirect effects on Sitka Black-tailed Deer section). Although windthrow was considered in the effects analysis, the Wildlife and Subsistence Resource Report did not make this clear and the Analysis Methods, Effects Analysis section was updated to reflect this analysis. In addition, some of the Unit Cards in Appendix B of the DEIS mention specific management recommendations for wildlife retention to address concerns with windthrow.

**BC-11** – Thank you for the information and photos regarding Unit 103. The analysis supports your statement that Unit 103 is not displayed as high quality habitat in the interagency deer model. The deer model was used in the DEIS and FEIS to compare the percent change in habitat capability between alternatives (Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species (MIS) and Other Wildlife and Subsistence, Black-tailed Deer section). The model was designed as a tool to assess habitat capability across a large scale to provide a measure to estimate and compare the relative effects of alternatives on deer winter habitat. Because the model was not designed to identify the exact location of quality deer habitat, results may not display Unit 103 as high quality deer habitat. In addition, the model uses GIS data to assess habitat quality. The GIS data has some limitations and lacks the refinement for specific unit analyses. The quality deer habitat that you identified in Unit 103 may have been too small to be defined as quality habitat in GIS.

The model was not the only means used to assess effects of alternatives on deer habitat. Field observations from wildlife biologists and other professionals were utilized to document deer use and movement patterns, research papers were consulted and incorporated, consultation and personal communications were held with ADFG and FWS personnel, ADFG data was studied and incorporated, in addition to public scoping comments and local knowledge. All of the following data were used to assess the effects to deer and deer habitat: habitat capability (derived from the deer model), high value deer habitat (derived from the deer model), prime habitat (derived from GIS data), quick cruise plots (field data) and observed use (field data). Unit 103 was identified to contain quality habitat for deer including prime habitat.

A new food-based model, which shows more promise for use at a local scale, is being developed by Pacific Northwest Research Station, University of Alaska, and other scientists. This model, which is referred to as the Forage Resource Evaluation System for Habitat – Deer (FRESHDEER) is still in the development stage. The current interagency deer model is used as one method to estimate effects.

**BC-12** – Please see responses to BC-5, BC-8 and BC-9 for information on connectivity. Although this section does not specifically mention the units identified in your comments, all units were reviewed in relation to deer winter habitat during this analysis (reference the Unit Cards in Appendix B of the DEIS). Because a range of alternatives with a varying degrees of impact were developed (refer to the DEIS and FEIS, Chapter 2), Units 163 and 165 are only proposed for harvest in Alternative 2. Please see response to BC-6 and BC-10 for information on the windthrow analysis.

**BC-13** - The DEIS and FEIS address the reduction in habitat for deer in Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences for Deer, Direct and Indirect effects on Sitka Black-tailed Deer section. Although the units identified in your comments (Units 914, 915, 923, 960, 953 and 954) may not have been specifically mentioned, they were considered in addressing the effects to deer



habitat (refer to Unit Cards in Appendix B of the DEIS). The lower elevations of Units 923, 953, 954 and 960 had a higher model HSI value. Because most of Units 914, 915 and 960 occur above 800 feet in elevation, are prescribed for only 25 percent single tree selection, and have a lower HSI value, the analysis assumed that they would have less impact to deer winter habitat.

Although these units are not considered as high quality deer winter habitat, they were recognized as providing quality summer habitat for deer (reference Figure 24 in the Wildlife and Subsistence Resource Report).

Also, not all of these units are proposed for harvest in one alternative. The DEIS and FEIS, Chapter 2, identify a range of alternatives with varying degrees of impact.

**BC-14** – Because you are referencing the Suntaheen 1600 foot knob, we assumed that you were referring to Units 909, 910, 916, 917, 919, and 983 and not Units 914, 915, 923, 953, 954 and 960 located on the Suntaheen 1663 foot knob. The interagency deer model, high value habitat and prime habitat analysis addressed in the DEIS and FEIS takes into consideration the value of south facing slopes in Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences for Deer section. Although not all of the units identified in your comments were specifically mentioned in the analysis, they were considered in addressing the effects to deer habitat (refer to Unit Cards in Appendix B of the DEIS). Because Units 909, 916, 917 and 983 occur above 800 feet in elevation and Units 909, 919 and 983 are prescribed for only 25 percent single tree selection; the analysis determined that there would be minor impact to deer winter habitat.

Also, not all of these units are proposed for harvest in one alternative. The DEIS and FEIS, Chapter 2, identify a range of alternatives with varying degrees of impact.

**BC-15** - The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth section and the Iyouktug Interagency Old Growth Reserve (OGR) Review address the quality of the habitat in the OGR. The interagency team considered the interagency deer model, field data, and personal knowledge when developing the proposed location for the small OGRs (see response to BC-11 for information considered in addition to the deer model). Figures 21 and 22 were added into the Wildlife and Subsistence Resource Report, and display that the small and large OGRs contain high value deer habitat and prime habitat. Figure 23 displays that six of the highest score quick cruise plots (80-99) were within the proposed small OGR. Figure 25 displays that high deer use was observed in the proposed small OGRs. Although the small OGRs may not contain the highest quality POG forest within the analysis area, these areas were considered important to maintain connectivity between the large and small OGRs and north of the analysis area.

Please see response to BC-10 for information on the windthrow analysis.

**BC-16** – We appreciate your support of the quick cruise surveys. As for your concerns with the project meeting project/landscape scale management goals, the analysis and project adhere to the management goals and objectives of the Forest Plan. Please see response to BC-9 for information on the interdisciplinary balanced approach used to develop the alternatives.

Please see response to BC-11 for information on the data used to quantify impacts to carrying capacity (the deer model) and other data used to assess connectivity, deer habitat and deer availability for subsistence uses.

**BC-17** – In soils terminology, the term “moist soil” refers to soil moisture available at different negative atmospheric pressures (in other words, soil moisture available to plants). In soils terminology, most if not all, soils on the Iyouktug Project Area would be classified as moist year-round. We believe you are referring to natural soil drainage class. Natural soil drainage is the ability of a soil to process water in its natural setting. About 49% of the Iyouktug project area is considered wetland which is hydric or very poorly or poorly drained soils. The balance is a range of somewhat poorly drained to well-drained soils. These soils support a range of forest types and productivity classes.

Additional information about windthrow risk assessment as it relates to soils has been added to the Silviculture Resource Report.

**BC-18** – Harvest prescriptions, buffers and best management practices are based on the professional experiences of the specialists on the Interdisciplinary Team and prescribed to minimize future wind damage. This experience is based on training, research, practical work and observations from within the project area over time. Please also see response BC-6.

The prescriptions and wind risk in the DEIS were reviewed for the units referenced in your comments. The FEIS and unit cards have been updated to reflect the changes in prescription to be responsive to windthrow concerns.

**BC-19** - The units proposed for harvest in the North Fork of Iyouktug Creek were addressed in BC-7 and BC-9 and the effects of windthrow were addressed in BC-10. Although the units identified in your comments may not have been specifically mentioned, the DEIS and FEIS, Chapter 3, Habitat Connectivity and Old Growth, Environmental Consequences on Connectivity section, and Management Indicator Species and Other Wildlife, Environmental Consequences for Deer, Direct and Indirect effects on Sitka Black-tailed Deer section, considered the impacts of windthrow on connectivity and deer habitat (reference the Unit Cards in Appendix B of the DEIS). This analysis was updated to clarify that windthrow was considered.

Although Units 819, 820 and 915 do not include prime winter habitat as defined in the analysis, the analysis supports your comments that these units may provide other deer habitat or may provide connectivity to prime habitat. Unit 819 was specifically addressed as including heavily used trails in the analysis. Units 909, 915, 960 and 983 are prescribed for only 25 percent single tree selection; the analysis determined that there would be minor impact to connectivity.

Not all of these units are proposed for harvest in one alternative. The DEIS and FEIS, Chapter 2, identify a range of alternatives with a varying degrees of impact.

**BC-20** - Unit 111 has a wind risk rating of high. The prescription in the DEIS calls for up to 50 percent basal area removal (ST50). Given the wind risk, the prescription has been changed to ST25. Although 108 was not mentioned in your comment the same change was made for Unit 108.

**BC-21** – The USFS Soil data hazard rating, MM-Haz, is calculated by slope stability, soil drainage and landform. MM-Haz is a general rating applied to a relatively large soil map unit polygon (Soil Resource Report). Soil maps and associated hazard ratings are one of the tools soil scientists use to focus field investigations. The Forest Plan Standards and Guidelines use mass movement hazard ratings and slope as a criterion for tentatively suitable lands. Slopes over 72 percent gradient and/or very high mass movement probability ratings do not meet tentatively

suitable criteria. Landslide prone terrain within the Iyouktug proposed harvest areas has been identified and either avoided or mitigated based on Forest Plan direction.

Field surveys were conducted to identify slopes over 72% and other unstable areas. Field investigations include an assessment of slope stability (landslide risk). Within the Iyouktug proposed harvest areas 304 acres of landslide prone terrain was deleted from harvest consideration (DEIS, FEIS Direct and Indirect Effects on Soil, Harvest on Slopes Over 72 Percent). Field investigations are used to identify potentially unstable sites within harvest units. Field investigations occurred in all of the units mentioned in comment BC-21. Based on field investigations Units 125, 138, 143, 184, 185, 817, 903, 914, 916 and, 917 were modified to avoid landslide prone terrain (DEIS, Appendix B). Please refer to the Unit cards in the DEIS for site specific stability discussions for all units in the project area.

When designing leave areas for slope stability concerns windfirmness of the leave area is considered.

**BC-22** – For economic reasons we would harvest higher value trees including yellow-cedar as described in the DEIS and FEIS, Chapter 3, Timber Economics, Silvicultural Prescriptions. Higher value however, is a relative term, and does not necessarily equate to the largest trees or the trees with the highest value for wildlife. All species would be harvested. Please see Chapter 3, Timber Economics, Table 3TE-4.

A relatively small percentage of the Iyouktug unit pool contains cedar and a smaller percentage is proposed for harvest. The FEIS, Chapter 3, Silviculture and Vegetation, Direct and Indirect Effects to Species Composition and Long-term Productivity, has been updated to clarify information regarding retention of trees under the single tree selection prescription and the number of units containing cedar that are proposed for harvest.

The following sections in the DEIS, FEIS, and Iyouktug project record provide additional information and analysis pertaining to yellow-cedar:

- Chapter 2, Alternatives considered but eliminated from detailed study, Alternative L – Avoid harvesting units with cedar Characteristics;
- Chapter 2, Activities and design Elements common to all action alternatives - Cedar component
- DEIS, Appendix B, project design, general mitigation measures and unit layout instructions – silvicultural prescription guidelines for all STS units.
- DEIS Appendix B, unit cards.
- Individual unit prescriptions in the project record.

**BC-23** – Yellow-cedar is generally characterized as a slow-growing long-lived species. Rotation length has been extended beyond the more typical 85-100 years to account for slower growth rates of yellow-cedar and other species on the North Tongass. Additional information has been added to the Silviculture Resource Report and summarized in the FEIS under Chapter 3, Silviculture and Vegetation section. Please see the Forest Vegetation and the Direct and Indirect Effects to Species Composition and long-term productivity.

Harvest of some yellow-cedar is considered appropriate and allowed within Forest Plan development LUDs. The Iyouktug project area is judged to be suitable for long-term yellow-

cedar survival and regeneration. The amount and distribution of yellow-cedar was analyzed and taken into account during selection and design of the proposed units, and when developing harvest prescriptions. Silvicultural prescriptions were designed for long-term maintenance of yellow-cedar within the project area.

Our knowledge of yellow-cedar distribution is based on extensive project level stand exam inventory and other broader forest level inventory data. The Silviculture Resource Report and FEIS have been updated to clarify this information. Please see the FEIS, Chapter 3, Affected Environment for Forest Vegetation, Species Composition.

Based on post-harvest natural regeneration surveys conducted within VCU's 2080 and 2090 (in previously clearcut stands containing yellow-cedar prior to harvest), the percent composition of yellow-cedar regeneration averages approximately 3.6 percent (pers. com. Budke 2007). This is slightly greater than the 3.4 percent yellow-cedar composition within the project area unit pool. Yellow-cedar is also frequently observed while conducting precommercial thinning inspections in 20-30 year old young-growth stands on the Sitka and Hoonah Ranger Districts. These are stands that would be expected to contain yellow-cedar based on presence of cedar in adjacent or nearby old-growth. Particular attention is given to yellow-cedar during thinning inspections, since all thinning contracts on the Hoonah Ranger District specify that it is not to be cut. Consequently, based on these data and field observations yellow-cedar regeneration is expected to occur naturally within proposed units and at rates similar to pre-harvest levels. Yellow-cedar regeneration will be monitored three years following harvest as well as when assessing thinning needs. Please see FEIS Chapter 3, Direct and indirect Effects on Species composition and Long-term Productivity.

In addition to stand exam data, IDT field visits by other resource specialists and field crews provided valuable site-specific information on resource conditions including the presence of large yellow-cedar trees or yellow-cedar groves that did not fall within stand exam plots. This information has been included in the unit prescriptions. Since we do not know the location or number of all large yellow-cedar trees within the proposed units, the single tree selection silvicultural prescriptions are designed to account for this and require retention of yellow-cedar trees in multiple diameter classes including large trees over 30 inches DBH. In consideration of your recommendations we feel this is adequate to provide for long-term representation of yellow-cedar, including large trees over 36 inches, within proposed units. Please see the FEIS, Chapter 3, Affected Environment for Forest Vegetation, Species Composition. General marking guidelines for use during layout are included in individual unit prescriptions. Please also see BC-22.

**BC-24** - The unit cards and prescriptions identify that we intend to retain some large trees. However, we do not intend to provide buffers around large (ancient) trees. Please see response to BC-23

**BC-25** – The 2008 Forest Plan Amendment analysis responded to cumulative effects including activities on non-forest lands in response to the 9<sup>th</sup> Circuit Court ruling. For the Iyouktug project, the IDT defined cumulative effects analysis areas by resource in the specialist reports; cumulative effect areas were chosen at an appropriate scale by resource to analyze the impacts of the proposals. The IDT is aware of the approximately 3,520 acres of past harvest in Spasski Watershed (see Figure 2-1, 3-2, and 3-6) and past harvest in other areas; these watersheds are outside of those cumulative effects areas, but were included in the Forest Plan Amendment



analysis (USDA Forest Service 2008b). More information on cumulative effects is in Chapter 3 cumulative effects sections in the DEIS and FEIS and in the Specialist Reports in the project record.

**BC-26** – Thank you for your suggestion on the placement of the OGRs. The location of deer winter habitat as well as connectivity were considered during the review of the OGRs (please see response to BC-15). During this review, numerous options for the placement of the small OGRs were discussed and considered. The Interagency Team recommended the proposed location for the OGRs to maintain quality habitat and overall landscape connectivity. The Forest Plan Amendment (USDA Forest Service 2008b) reviewed OGRs Tongass-wide and adopted the interagency recommendations for the Iyouktug Project Area.

Changes to the unit pool will aid in maintaining connectivity along Whitestone Creek (Forest Road 8531); Unit 901 was dropped, Unit 903 is an up to 40 percent individual tree selection and Unit 904 is not included in all the action alternatives.

**BC-27** – Please see response to BC-23 regarding slower growth rates, regeneration and rotation lengths. This response applies to higher elevation units as well.

## Begin Transmission ##  
 USDA Forest Service - National Web Site Email Response Form.  
 =====  
 =====

Posted on Sunday, December 30, 2007 at 9:48 Hours (Server time).

From: barbara sachau  
 Email: jeanpublic@yahoo.com

Telephone Number: 973 377 9433

Street Address:  
 15 elm st florham park nj 07932

BS-1

Message Subject: iyouktug timber destruction at tongass

Message Contents:

i oppose this timber cutting at hoonah range docket 2007 0406. it is destructive when you cut trees. you create huge water damage, you create erosion, you create heat islands, you harm immeasurably all of the birds and wildlife that need those forests. this destruction by local profiteers is an insult to all of america which has paid taxes for eons to protect that land. it is time to stop being so environmentally destructive.our children deserve better than they are getting from the highly anti environmental bush administration, which has shown absolutely no concern for all of our environments at every turn.

**Response to BS – Barbara Sachau**

**BS-1** – We appreciate and share your concern for natural resources. As described in the Alternative Development Process section of Chapter 2 of the DEIS and FEIS, the IDT developed the Proposed Action and alternatives to be sensitive to resources and related concerns. Forgoing harvest completely on Forest Service System land, however, is outside the scope of this analysis as described in Chapter 1, Issues, Other Issues and Concerns.



"Hanley, Kevin J (DEC)"  
 <kevin.hanley@alaska.gov>

To: comments-alaska-tongass-hoonah@fs.fed.us  
 cc:  
 Subject: Iyouktug

11/15/2007 02:22 PM

The Department of Environmental Conservation (DEC) has reviewed the Draft Environmental Impact Statement for the proposed Iyouktug Timber Sale on Chichagof Island. This sale proposes to harvest 16.8 to 59.8 MMBF of timber from 883 to 4,185 acres, and to construct up to 3.8 miles of new system roads and 13.4 miles of temporary roads, and to reconstruct up to 7.0 miles of existing roads, depending on alternative. The existing East Port Frederick log transfer facility (LTF) would be used under each of the action alternatives.

The DEIS identified Alternative 3 as the Forest Service's preferred alternative for this project. This alternative proposes to harvest approximately 43.4 MMBF of timber from an estimated 3,332 acres, and would involve the construction of 2.4 miles of new system roads, 3.9 miles of new temporary roads, and the reconstruction of 6.3 miles of existing roads. We offer the following comments for your consideration in the on-going planning for this timber sale.

DEC-1 We were pleased to see the high percentages of partial cut harvest prescriptions, particularly those of the preferred alternative. These prescriptions will better ensure that slope stability and hydrologic processes will be maintained during and after project completion. We do, however, have concerns regarding the use of the East Port Frederick LTF which, as the DEIS (page 3-167) indicates, is under an approved remediation plan for delisting as an impaired waterbody. This waterbody was included on the Clean Water Act Section 303(d) list for non-attainment of the residues standard for bark and wood debris. The listing was based on dive survey data that documented continuous bark coverage at 2.9 acres in March 2000, 4.8 acres in April 2001, 3.5 acres of bottom coverage in December 2002, and 2.1 acres in March 2004.

DEC-2 Sealaska Timber Corporation (STC) developed and submitted a remediation plan which DEC approved on March 14, 2005. The Department agreed to use the 2005 season dive survey data (2.8 acres continuous bottom coverage) as the basis of remediation plan monitoring. The approved remediation plan's institutional control required that STC modify the low angle slide to a drive down ramp to eliminate bundle velocity and minimize bark loss. This was completed in May of 2005. In addition, it requires that the continuous bark cover pile be reduced to 1.0 acre by 2010. It also calls for an annual bark dive survey in years that there is transfer activity and a bi-annual dive schedule when the facility is inactive. If the facility ceases operations prior to 2010, the bi-annual schedule will go into effect.

If future dive surveys document that the expected downward trend in the areal extent of continuous bark coverage is not realized, the plan contains a volume transfer cap table that will set annual limits on the maximum volume that can be transferred beginning the next operating season.

Since May 2005, all volume has been transferred utilizing the drive down ramp. The most recent dive survey submitted to DEC and EPA shows that the expected downward trend is being realized (albeit somewhat slowly), with a continuous bark coverage of 2.73 acres. The volume to be transferred from the Iyouktug Timber Sale could be significant (up to 60 MMBF) and could increase the amount of bark deposition at the site, which would be contrary to the objective of the remediation plan.

DEC-2  
(cont.)

Consequently, since barging is identified as an option in the DEIS, it should be used in lieu of conventional inwater log transfer to ensure that bark coverage does not increase above current levels and that it continues to decline.

We appreciate the opportunity to comment.

**Responses to DEC-- Kevin Hanley, Department of Environmental Conservation (DEC)**

**DEC-1** - Thank you for providing a review of the DEIS. Partial harvest was proposed to address multiple resource concerns and processes.

**DEC-2** – The Forest Service is aware of the listing of the waterbody as impaired and of the LTF remediation plan (DEIS and FEIS, Chapter 3, Potential Adverse Effects on Marine EFH). The Forest Service will abide by all stipulations in Huna Totem’s permit for operating the Marine Access Facility (MAF), and will be in compliance with Huna Totem’s approved remediation plan. Barging logs is an option that may be considered to help prevent further bark accumulation on the subtidal substrate. Please also see the letter from and response to NMFS.

Responses to Comments

Appendix B

Ernestine Hanlon  
 P.O. Box 358  
 Hoonah, Alaska 99828  
 907/945-3666

RECEIVED NOV 29 2007

November 19, 2007

U.S. Forest Service  
 Hoonah Ranger  
 Hoonah, Alaska 99829

RE: Iyouktug Timber Sale

To All this Concerns,

- EH-1 | The USFS is proposing to offer up to 59.8 MMBF in timber through the Iyouktug timber sale near already over-harvested Hoonah, Alaska. Putting this in number perspective, the proposed volume is almost twice the amount needed to supply local mills in Hoonah for the next 10 years.
- EH-2 | Already the Forest Service now predicts that the deer will decline to the point where deer hunting may be restricted because of the heavy loss of deer habitat from past logging and last year's severe winter that lasted for five full months. In the area of the area of Iyouktug timber sale, forty seven (47) percent of prime deer winter habitat has been lost through past logging.  
  
This is a pretty harsh history for the small village of Hoonah that depends on the wildlife sustained through a healthy habitat.
- EH-3 | As a Tlingit spruce root basket weaver, I used to gather perfect spruce roots at an estuary near Hoonah. Although the area I am referring to is not logged out, the cumulative effects have changed the ground and made it drier resulting in a different vegetation. Now, I need to go further away to gather good spruce roots because the ones growing at near by estuaries are more brittle and break easy resulting in low quality, short roots.
- EH-4 | I am opposed to any more logging. It has been only twenty five years since aggressive logging has begun around Hoonah. We need a thorough objective study of private and federal lands of the resulting negative effects this type of logging has left behind. We live and feel every negative affect today.  
  
Please, no more watershed loss. No more fish creek loss. No more deer and bear habitat loss. No more wildlife ecosystem loss. No more human losses.  
  
Our Tlingit way of life will continue what little we have left now for our grandchildren into the future.

Sincerely,

Ernestine Hanlon



**Responses to EH – Ernestine Hanlon**

**EH-1** – The timber industry in Southeast Alaska needs to be considered on a more regional scale than on a community by community basis. The purpose of the Iyouktug Timber Sale includes serving the existing timber operators in Hoonah as well as other users of Southeast Alaska timber both existing and potential. Looking at only supplying the current need eliminates the possibility of any future expansion for the timber industry.

**EH-2** - The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife and Subsistence sections, Sitka Black-tailed Deer portion, address the impacts to deer winter habitat and to hunting. This section confirms your statement that subsistence hunting would be affected by the proposed project.

**EH-3** – The DEIS and FEIS alternative maps in Chapter 2 show the distance from estuaries to the project area. The Chapter 2, Activities and Design Elements Common to All Action Alternatives, Beach and Estuary Fringe section clarifies that no harvest or roads are proposed in beach or estuary fringe. We do not expect cumulative watershed effects to result in changes in downstream vegetation in the Iyouktug project area.

**EH-4** – We considered a no action alternative that proposes no harvest in the project area (Chapters 2 and 3). Please also see the response to BC-25.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

1200 Sixth Avenue, Suite 900  
Seattle, Washington 98101-3140

November 19, 2007

Reply To: ETPA-088

Ref: 07-054-AFS

Hans von Rekowski, IDT Leader  
Sitka Ranger District, Tongass National Forest  
204 Siginaka Way  
Sitka, Alaska 99835

Dear Mr. von Rekowski:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (EIS) (CEQ No. 20070406) for the Iyouktug Timber Sales project on the Hoonah Ranger District, Tongass National Forest, in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. This Section specifically directs EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Under our policy and procedures, we also review the adequacy of the draft document in meeting procedural and public disclosure requirements of NEPA.

The draft EIS proposes a no action and four action alternatives. Alternative 2 is the proposed action and Alternative 3 is the preferred alternative. According to the draft EIS, Alternative 2 maximizes timber harvest in the Iyouktug project area; Alternative 3 minimizes impacts to deer habitat, connectivity, and also minimizes effects to roadless characteristics in roadless areas while providing for economic timber supply; Alternative 4 minimizes impacts to the roadless character of Iyouktug's roadless areas; and Alternative 5 maximizes the economic return of timber harvest in the project area.

EPA-1  
EPA has rated the draft EIS as EC-2 (Environmental Concerns-Insufficient Information) due to concerns regarding potential impacts to water quality and wetlands. We recommend that the final EIS include additional information about the affected resources and mitigation measures to avoid or compensate for impacts. An explanation of the EPA rating system is attached to this letter. The rating and a summary of our comments will be published in the Federal Register.

The draft EIS includes a good discussion of potential water quality impacts, including potential increased temperature due to harvest and potential increased sediment due to roads and stream crossings, such as the Middle Iyouktug and Suntaheen watersheds. However the document does not indicate whether any waters in the project area are listed on Alaska's 303(d) list or whether the project will contribute to exceedences of water quality standards. Section 303(d) of the Clean Water Act (CWA) requires identification of those water bodies which are not meeting or not likely to meet State water quality standards. The EIS should report those water bodies potentially affected by the project that are listed on the State's current 303(d) list and whether the Alaska Department of Environmental Conservation (ADEC) has developed a water quality restoration plan (Total Maximum Daily Load) for the waterbodies and the

EPA-1  
(cont.)

pollutants of concern, if applicable. If a Total Maximum Daily Load (TMDL) has not been established for those water bodies on the 303(d) list, then in the interim until one is established, the EIS should demonstrate that there will be no net degradation of water quality to these listed waters. The DEIS discusses the potential for sediment loading, but not in terms of meeting or exceeding water quality standards. We recommend that the final EIS include such a discussion along with mitigation measures. We also recommend that the final EIS include a discussion about potential impacts of sediment on wetlands and associated mitigation measures.

EPA-2

EPA commends the US Forest Service (FS) for consulting with tribal governments and incorporating their concerns into the modifications of the alternatives. The draft EIS is well-written and informative. The maps, tables, and summary charts are helpful tools for comparing the alternatives.

EPA-3

Thank you for the opportunity to comment on this draft EIS. If you would like to discuss our response further, please contact Fatima Bukhari, at (907) 271-1481 or via electronic mail at [bukhari.fatima@epa.gov](mailto:bukhari.fatima@epa.gov) or me at (206) 553- 1601.

Sincerely,



Christine Reichgott, Manager  
NEPA Review Unit

Enclosures

**U.S. Environmental Protection Agency Rating System for  
Draft Environmental Impact Statements  
Definitions and Follow-Up Action\***

**Environmental Impact of the Action**

**LO – Lack of Objections**

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EC – Environmental Concerns**

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

**EO – Environmental Objections**

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU – Environmentally Unsatisfactory**

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

**Adequacy of the Impact Statement**

**Category 1 – Adequate**

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2 – Insufficient Information**

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

**Category 3 – Inadequate**

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

**Responses to EPA – Christine Reichgott, United States Environmental Protection Agency (EPA)**

**EPA-1** – EPA’s rating of the Draft EIS as Environmental Concerns – Inadequate Information (EC-2) and your request that additional information and mitigation measures to address these concerns be added to our EIS is noted.

We feel the analysis within the Water Quality, Fisheries and Wetlands sections located in Chapter 3 adequately describe the potential impacts relating from this proposed project. Furthermore, we feel the design measures described in unit and road cards in Appendix B and C of the DEIS and also in the project record, including the implementation of Best Management Practices (BMPs) are expected to maintain water quality within standards established by the State of Alaska.

Additionally, EPA’s comment about the lack information on water quality limited water bodies (303d listing) is also noted. Currently, the only water body within the project area listed on Alaska’s 303(d) list is the Long Island MAF (referred to by the State as the East Port Fredrick LTF). The listing of this water body and its status has been added to the Water Quality section of the FEIS. See also DEC-2 for more discussion on this topic.

**EPA 2** - EPA’s concern for potential sediment loading in terms of meeting or exceeding water quality (WQ) standards is noted. EPA’s primary concern is the potential cumulative adverse impacts in water quality and high quality salmon fisheries from this project.

The DEIS and FEIS conclude that BMP implementation is expected to maintain water quality with standards established by the State of Alaska. While short-term, local sedimentation is likely during the replacement of pre-existing stream crossing structures and during installation of new road segments and stream crossing structures, properly placed and maintained structures affect only the local channel segment and are expected to be minor. Additionally, fish stream crossings will be bridged to minimize channel disturbance.

The site-specific application of BMPs, with a monitoring and feedback mechanism, is the approved strategy for controlling nonpoint source pollution as defined by Alaska’s Nonpoint Source Pollution Control Strategy (Alaska Department of Environmental Conservation (DEC) 2007). In 1997, the State approved the BMPs in the Forest Service’s Soil and Water Conservation Handbook (FSH Handbook 2509.22, R10 Supplement, October 1996) as consistent with the Alaska Forest Resources and Practices Regulations. We are using the most current BMPs (USDA Forest Service 2006d). The DEIS and FEIS conclude that water quality effects will be temporary and localized, will be minimized by the application of BMPs (shown site-specifically in unit and road cards in the ROD), and will not impair existing or designated uses or exceed State Water Quality Standards. Forest-wide BMP implementation monitoring results indicate a high rate of successful BMP implementation. We continue to work cooperatively with the State of Alaska to develop and apply water quality monitoring protocols.

See response to EPA-1 above for additional information on mitigation and design measures.

**EPA-3** - Thank you for your review and comments.

11/20/07

I.D.T. Team Leader  
 Sitka Ranger District  
 Tongass National Forest

Attn: Iyouktug Timber Sale EIS

ISES-1

Thank you for the opportunity to comment on the subject document. I applaud the USFS effort to provide a ten-year supply of timber for the Hoonah mills and sympathize with the difficulty of your task, given the catastrophic (and continuing) overharvest on NE Chichagof. If this sale is necessary for a ten-year supply, I can't imagine where the timber is going to come from in the decades to come. The fact that 20% of this sale is comprised of mountain hemlock indicates the degree to which you are reaching into the bottom of the barrel even now. However, since I have no concrete suggestions to ameliorate this, I will spare you further hand-wringing.

ISES-2

I will restrict my specific comments to your harvest plans for yellow cedar, whose ecology I have been personally interested in for my 40 years of residence in northern SE Alaska. The project area contains a considerable volume of cedar that is not undergoing the decline so prominent farther south. This is a very conservative, long-lived species whose recruitment is slow and sporadic under natural conditions, and for which there is no known practical way of increasing recruitment silviculturally. I believe these facts confer a particular responsibility on the USFS to harvest cedar very conservatively and generally attend to its persistence in the next generation of forest. The present plan to some degree does the opposite, targeting units with high proportions of cedar and emphasizing this species in selective cut units. The short-term economic rationale for this is evident, but I strongly believe this to be both ecologically and economically irresponsible in the long term.

ISES-3

Your plan to leave large, defective individuals and protect young cedars during harvest are good steps in the right direction but are in my view insufficient as an overall conservation plan. Please consider adding the following stipulations:

- Before harvest is allowed in a unit, all cedars greater than 3ft DBH will be marked for retention and provided with a sufficient buffer against windthrow (These large trees are often over a millennium old; they provide an important ecological presence in the forest and a continuing seed source);
- Units with 10% basal area of cedar will be removed from consideration for clear-cutting (Cedars recruit especially poorly under these conditions).

ISES-4

Thank you for considering my views.

Sincerely,

Gregory P. Streveler  
 Chief Scientist  
 Icy Strait Environmental Services  
 Box 94, Gustavus, Ak, 99826

**Responses to ISES-- Gregory P. Streveler, Icy Strait Environmental Services**

**ISES-1** - We are providing timber from the suitable and available timber base within development LUDs in the project area. Please see Chapter 3, Silviculture and Vegetation section, Chart 3SV-1.

**ISES-2** – Please see responses to BC-22 and BC-23. In addition, yellow-cedar third-year seedling survival percentages following planting on the Tongass from 1994 to 2001 have ranged from 67 to 92 percent with a weighed average of 84 percent. Silvicultural prescriptions will specify yellow-cedar planting in specific clearcut units and larger openings within some single tree selection units to increase yellow-cedar composition. Please see FEIS, Chapter 3, Affected Environment for Forest Vegetation and Species Composition.

**ISES-3** - Please see response to BC-23.

**ISES-4** – We considered your recommendation to avoid clearcutting units with more than 10% basal area of cedar. However, the prescriptions as proposed in the FEIS will adequately provide for yellow-cedar regeneration in clearcut units. Yellow-cedar is intolerant of shade and can successfully regenerate naturally following clearcut harvest and larger openings created through single tree selection harvest (Deal 2006).





"Greg Strevler"  
<grigori@gustavus.ak.us>  
s>

To: <comments-alaska-tongass-hoonah@fs.fed.us>  
cc: <erika@seacc.org>  
Subject: Iyouktug EIS comment

11/19/2007 03:41 PM

IDT Leader -

Attached is my comment on the Iyouktug EIS.

- Judy Brakel

No virus found in this outgoing message.

Checked by AVG Free Edition.

Version: 7.5.503 / Virus Database: 269.15.33/1132 - Release Date: 11/15/2007  
9:34 AM



Iyouktug Timber sale comments.doc

11/20/07

I.D.T. Team Leader  
 Sitka Ranger District  
 Tongass National Forest

Attn: Iyouktug Timber Sale EIS

JB-1 Thank you for the opportunity to comment on the subject document. I applaud the USFS effort to provide a ten-year supply of timber for the Hoonah mills and sympathize with the difficulty of your task, given the catastrophic (and continuing) overharvest on NE Chichagof. If this sale is necessary for a ten-year supply, I can't imagine where the timber is going to come from in the decades to come. The fact that 20% of this sale is comprised of mountain hemlock indicates the degree to which you are reaching into the bottom of the barrel even now. However, since I have no concrete suggestions to ameliorate this, I will spare you further hand-wringing.

JB-2 I will restrict my specific comments to your harvest plans for yellow cedar, whose ecology I have been personally interested in for my 40 years of residence in northern SE Alaska. The project area contains a considerable volume of cedar that is not undergoing the decline so prominent farther south. This is a very conservative, long-lived species whose recruitment is slow and sporadic under natural conditions, and for which there is no known practical way of increasing recruitment silviculturally. I believe these facts confer a particular responsibility on the USFS to harvest cedar very conservatively and generally attend to its persistence in the next generation of forest. The present plan to some degree does the opposite, targeting units with high proportions of cedar and emphasizing this species in selective cut units. The short-term economic rationale for this is evident, but I strongly believe this to be both ecologically and economically irresponsible in the long term.

JB-3 Your plan to leave large, defective individuals and protect young cedars during harvest are good steps in the right direction but are in my view insufficient as an overall conservation plan. Please consider adding the following stipulations:

- Before harvest is allowed in a unit, all cedars greater than 3ft DBH will be marked for retention and provided with a sufficient buffer against windthrow (These large trees are often over a millennium old; they provide an important ecological presence in the forest and a continuing seed source);
- Units with 10% basal area of cedar will be removed from consideration for clear-cutting (Cedars recruit especially poorly under these conditions).

JB-4

Thank you for considering my views.

Sincerely,

Gregory P. Streveler  
 Chief Scientist  
 Icy Strait Environmental Services  
 Box 94, Gustavus, Ak, 99826

**Responses to JB – Judy Brakel**

**JB-1** - Please see response to ISES-1.

**JB-2** - Please see response to ISES-2.

**JB-3** - Please see response to ISES-3.

**JB-4** - Please see response to ISES-4.



"Jim & Annie  
Mackovjak"  
<lituya@comcast.net>

To: <comments-alaska-tongass-hoonah@fs.fed.us>  
cc:  
Subject: Iyoutug

11/17/2007 04:40 PM

Forest Service planners:

JM-1

I have lived in Gustavus, on Icy Strait, for thirty-five years. I was very much opposed to the Forest Service's long-term pulp contracts, and was very pleased when they were terminated. The Hoonah Ranger District paid a steep price to help keep APC in timber. Joe Chiorella, the former Hoonah district ranger, told me probably fifteen years ago that the best timber on the Hoonah district was gone. In his words, the "heart of the watermelon was gone," and the Forest Service was working "close to the rind." It was also working off the public's pocketbook: witness the dismal economics of the Hoonah district's Humpback-Gallagher timber sale.

JM-2

The environmental damage caused by previous logging on the Hoonah district--especially in terms of lost deer habitat--is considerable and cumulative, particularly given the extensive clearcut logging on adjacent Sealaska and the Huna Totem Corporation lands. With the high cost of groceries and traditional dependence on subsistence, preserving productive deer habitat is of paramount importance, and should be given priority over logging.

JM-3

I am very opposed to the Forest Service's current proposal to log an additional sixty million board feet of timber in the Hoonah Ranger District. It will just be another environmentally costly and money-losing project. It concerns me greatly that the Forest Service now has a structural

JM-4

policy to export unprocessed logs from the Tongass National Forest. I am well aware of how the Forest Service until fairly recently worked to ensure that any logs that were cut were processed in Alaska. That was good policy, and it should be reintroduced.

JM-5

Any timber sales on the Tongass--including the proposed Iyoutug sale--should be geared to what can be locally sawn. I see Icy Straits Lumber as something of a fragile operation, with particularly high costs of operation. Those high costs are structural, and will not disappear. The company may survive, but I wouldn't bet on it.

JM-6

I have purchased a considerable amount of wood from D&L Woodworks, and think the owners have found a solid niche in cutting specialty and commodity wood. I think the Forest Service should support operations such as D&L with a consistent and predictable supply of timber on the existing road system. The Forest Service should tailor its timber program on the Hoonah district to

JM-7

supporting an operation such as D&L. The proposed Iyoutug sale should be abandoned.

Thank you,  
James Mackovjak  
P.O. Box 63  
Gustavus, AK 99826

**Responses to JM – James Mackovjak**

**JM-1** – The DEIS and FEIS, Chapter 1, Purpose and Need and Proposed Action sections describe the proposed project, the Decision to be Made and whether and how to make timber available from the Iyouktug project area in accordance with Forest Plan goals. The scale of harvest varies by alternative and a wide range of alternatives are developed in Chapter 2. Chapter 3, Timber Economics and Environmental Consequences on Timber Economics, addresses economics. In addition, please see response to ISES-1.

**JM-2** – Thank you for your comment about the importance of preserving productive deer habitat. The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Sitka Black-tailed Deer section, and Subsistence section addresses the impacts of past and proposed harvest to deer winter habitat and subsistence hunting. Please see the response to BC-25 for information on how the cumulative effects analysis areas were defined. The analysis and project adhere to the management goals and objectives of the Forest Plan and ANILCA requirements.

**JM-3** - Please see responses to BC-4 and JM-1.

**JM-4** - Current law allows timber harvested from Federal lands in Alaska to be shipped out of Alaska only if the “the supply of timber for local use will not be endangered” (16 USC Section 616, enacted in 1926). Shipment outside the state of unprocessed timber from National Forest System lands in Alaska is allowed with prior approval by the Regional Forester after the sale is awarded if the request meets certain criteria. Such approvals have been granted in the past on a case-by-case basis at the request of the purchaser.

Recent trends in timber markets and manufacturing costs have made it very difficult for timber purchasers in Alaska to profitably process small diameter Sitka spruce and western hemlock timber harvested on the Tongass National Forest. Under current Congressional appropriations direction, Tongass timber cannot be offered for sale unless it has a positive appraisal. Several factors are making it very difficult for the Tongass National Forest to offer economic timber sales. Timber values are lower in Alaska than elsewhere, largely due to higher operating and transportation costs in Alaska. Other factors that contribute to low timber values include: current market conditions and high manufacturing costs in Alaska; the process the Alaska Region historically used to approve shipments of unprocessed timber out of Alaska; and the impact that process had on timber appraisals.

Unless the Tongass can offer a reliable supply of timber with a positive appraisal, the few remaining locally owned mills in Southeast Alaska will find it very difficult to stay in business. Closure of the remaining mills, even on a temporary basis, would run counter to the objective of supporting local economies and wood processing capacity in Southeast Alaska.

Allowing limited interstate shipments will allow timber to be appraised using higher lower 48 market values. This policy would substantially improve the likelihood that timber will achieve a positive appraisal, and continue to be offered for sale from the Tongass. For these reasons, the policy is needed to ensure the continued existence of adequate wood processing capacity in Alaska.

**JM-5** – The DEIS and FEIS, Chapter 1, Purpose and Need, and Chapter 3, Employment in Southeast Alaska section show our support for local mills. The DEIS and FEIS, Chapter 3,

Timber Economics and Environmental Consequences on Timber Economics section address locally sawn timber sales. Chapter 3, Employment in the Project Area section addresses the Icy Straits Lumber and Milling Company. Please also see response to BC-3.

**JM-6** – The Hoonah Ranger District currently offers small sales along existing roads that are available for purchase by any timber operators including D & L Woodworks.

**JM-7** – We are proposing offering small sales from the Iyouktug project over an extended period of time. Please see responses to JM-5 and JM-6.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
*National Marine Fisheries Service*  
P.O. Box 21668  
Juneau, Alaska 99802-1668  
November 7, 2007

Appendix B

Forrest Cole  
Forest Supervisor  
Tongass National Forest  
Federal Building  
648 Mission Street  
Ketchikan, Alaska 99901

RE: Iyouktug Timber Sale, Draft Environmental Impact Statement

Dear Mr. Cole:

NMFS-1 | The National Marine Fisheries Service (NMFS) has reviewed the Iyouktug Timber Sale Draft Environmental Impact Statement (DEIS) and Essential Fish Habitat (EFH) assessment. The project is located in the northeastern part of Chichagof Island in the Iyoktug valley, northwest of the Iyoukeen Peninsula, approximately 12 miles east-southeast of Hoonah, Alaska.

The proposed action for the Iyoktug Timber Sale would harvest 4,185 acres of Forest Service (FS) land. The other four action alternatives would harvest in a range between 883 and 3,332 acres. The EFH assessment describes potential impacts to EFH in fresh and marine waters. Of a total of 330 miles of streams in five watersheds, 74 miles are Class I streams. Iyoktug, Suntaheen and Whitestone Head creeks and tributaries support populations of pink, chum and coho salmon. Iyoktug and Suntaheen creeks also have populations of Dolly Varden char, cutthroat trout and steelhead. Whitestone Creek also has Dolly Varden char.

Potential adverse effects to freshwater EFH include changes in water yield, sediment, water temperature, and fish passage at road crossings. You have determined that effects on water yield will be negligible because for all alternatives 10 percent or less of the canopy will be removed per watershed and 15 percent or less will be removed per sub-watershed. This is based on studies you have referenced, without citation, that show increases in water yield when a threshold of over 20 percent of the canopy is removed. We recommend that the final EIS include a citation for these studies.

NMFS-2 | Water temperature increases may occur in streams when shade producing trees are removed. Approximately 1.3 percent to 3.9 percent of Class IV streams, less than 5 feet wide and generally far upstream of EFH will be harvested without buffers. Temperature increases are not expected in any of the watersheds.

Three to six new roads will cross anadromous streams and three to 20 new roads will cross streams above fish habitat. These stream crossing could increase sedimentation to fish streams.





## Appendix B

## Responses to Comments

NMFS-2  
(cont.)

To address the potential adverse effects of this project to freshwater EFH, the FS has proposed that the following measures be taken.

- Stream buffers are prescribed along all Class I, II and III streams according to Forest Plan standards and guidelines. Class I and II streams will receive a minimum no-cut buffer of 100 feet and Class III streams will receive a slope break buffer.
- In areas where extensive windthrow has occurred or is expected, buffer widths will be increased to help ensure resistance to windthrow.
- Best Management Practices (BMPs) will be implemented to protect water quality and aquatic habitat for all freshwater streams. The unit cards contain specific applications of BMPs.
- Bridges will be placed at all road crossings over fish streams to minimize risks of sediment production and blockage of fish passage. All but three structures will be removed after the timber harvest.
- Temporary roads will be decommissioned following use for this timber sale and culverts will be removed.

NMFS-3

Potential adverse effects to marine EFH would be associated with use of the East Port Frederick marine access facility or "MAF". The MAF has been in use since 1983 and was listed by the State of Alaska under the Clean Water Act Section 303(d) for non-attainment of the residues standard for bark and woody debris. Dive survey information has documented an exceedance for the threshold bark accumulation, which was last documented in 2006 at 2.9 acres of continuous bark coverage. The MAF is the subject of a remediation plan submitted by Huna Totem Corporation to the Department of Environmental Conservation that is designed to reduce continuous bark coverage to less than 1.5 acres within a reasonable period of time.

NMFS-4

The marine waters of East Port Frederick are identified as EFH for a number of federally managed species, and species of concern to EFH, including the following: arrowtooth flounder, Atka mackerel, capelin, Chinook salmon, pink salmon, sockeye salmon, chum salmon, coho salmon, eulachon, Greenland turbot, octopus, Pacific cod, Pacific ocean perch, rex sole, rock sole, flathead sole, Dover sole, yellowfin sole, sablefish, sand lance, sculpin, shark, shortraker, rougheye and yelloweye rockfish, skate, squid, walleye pollock and weathervane scallops.

The potential adverse effects of the use of the MAF for log transfer by this project to marine EFH include diminished habitat value for managed species and their prey due to additional bark accumulation that smothers subtidal habitat. The FS has proposed the following measures to minimize negative effects to marine EFH.

- The FS will abide by all stipulations in Huna Totem's permits for operating the MAF.
- The FS actions will be in compliance with Huna Totem's approved remediation plan.

## Responses to Comments

## Appendix B

NMFS-4  
(cont.)

- Optional loading of logs onto barges will help prevent further bark accumulation on the subtidal substrate.

NMFS-5

Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) requires federal agencies to consult with NMFS on all actions that may adversely affect EFH. NMFS is required to make conservation recommendations, which may include measures to avoid, minimize, mitigate or otherwise offset adverse effects. As you have acknowledged in your EFH assessment, the Iyouktug Timber Sale would adversely affect both freshwater and marine EFH. You have incorporated measures into the project that would reduce these effects by abiding to all stipulations in Huna Totem's permits for the MAF, and complying with the approved remediation plan. You have indicated that optional barging of logs would further prevent bark accumulation on the subtidal substrate. NMFS recommends that given the degraded nature of the MAF site, mandatory barging of logs should be required to minimize the deposition of bark at the MAF. Mandatory barging is justified because it is an available technology, the site has exceeded the maximum depositional area for bark and is the subject of a remediation plan, and the FS should not counter efforts to remediate the site by knowingly allowing the use of log rafting when a better measure is available and feasible. Consequently, NMFS offers the following EFH Conservation Recommendation pursuant to Section 305(b)(4)(A) of the MSFCMA.

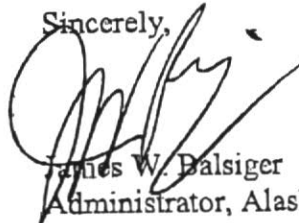
Only barging of logs should be allowed at the East Port Frederick MAF. No rafting should be allowed to minimize the re-deposition of bark that would counter efforts of the remediation plan.

NMFS-6

Upon receipt of these EFH Conservation Recommendations, the MSFCMA requires Federal Agencies to respond to NMFS within 30 days informing us of the agency's decision regarding these recommendations.

Thank you for the opportunity to comment. If you have questions regarding our comments contact Linda Shaw at (907) 586-7585.

Sincerely,



James W. Balsiger  
Administrator, Alaska Region

cc: \*Chris Meade, EPA Juneau  
\*Tom Schumacher, ADF&G, Juneau  
\*Richard Enriquez and Bill Hanson, USFWS, Juneau  
\*Kevin Hanley, ADEC, Juneau  
\*Erin Allee, ADNR, Juneau  
\*Don Martin, USFS, Juneau

**Responses to NMFS – James W. Balsiger, National Marine Fisheries Service (NMFS)**

**NMFS-1** - Thank you for reviewing Essential Fish Habitat in the Iyouktug Timber Sales DEIS. The citation noted as missing from the DEIS related to canopy removal and water yield is in the Watershed and Fish resource report and has been added to the EFH section in the FEIS.

**NMFS-2** - Several of the items and measures you noted in your letter are found in the DEIS, Chapter 3; Watershed and Fish section under Direct and Indirect Effects on Water Quality – Temperature and EFH; these items and measures are also in the FEIS under the same headings. The Forest Service believes the use of BMPs, including the measures noted in your response are good measures and will insure protection of water quality and fish habitats.

**NMFS-3** - The Forest Service is aware of the listing of the waterbody as impaired and of the LTF remediation plan (DEIS and FEIS, Chapter 3, Potential Adverse Effects on Marine EFH). The Forest Service will abide by all stipulations in Huna Totem's permit for operating the Marine Access Facility (MAF) and will be in compliance with Huna Totem's approved remediation plan. Barging logs is an option that may be considered to help prevent further bark accumulation on the subtidal substrate.

**NMFS-4** - Please see response to NMFS-2.

**NMFS-5** – Please see response to NMFS-3. We considered your recommendation, and it will be addressed in the decision.

**NMFS-6** – We have written a response to NMFS related to the EFH. A copy of that letter is in the Project Record.

## STATE OF ALASKA

SARAH PALIN, GOVERNOR

550 WEST 7<sup>TH</sup> AVENUE, SUITE 1420  
 ANCHORAGE, ALASKA 99501-3566  
 PHONE: (907) 269-8690  
 FAX: (907) 269-5673

DEPARTMENT OF NATURAL RESOURCES  
 OFFICE OF HABITAT MANAGEMENT AND PERMITTING

November 19, 2007

Hans von Rekowski  
 IDT Leader  
 USFS Sitka Ranger District  
 Tongass National Forest  
 204 Siginaka Way  
 Sitka, AK 99835

Subject: **Iyouktug Timber Sales Draft EIS comments**

Dear Mr. Rekowski:

Biologists from the Alaska Department of Natural Resources Office of Habitat Management and Permitting (OHMP) have reviewed the USFS Draft Environmental Impact Statement (DEIS) for the Iyouktug Timber Sales in the Hoonah Ranger District. The project area is about 12 miles east of Hoonah on northeastern Chichagof Island. The DEIS describes four action alternatives that propose harvest treatments ranging from 883 to 4,185 acres. Shovel, cable, and helicopter yarding systems are proposed for partial and clearcut harvests. Each action alternative requires existing road reconstruction and new road construction.

OHMP-1

**ACMP Consistency**

Per 11 AAC 112 the activities described in the DEIS are consistent with the Alaska Coastal Management Plan (ACMP) under the *Tongass National Forest Timber Sales General Consistency Determination (GCD)* issued December 4, 2006. Timber harvest activities under the scope of this GCD meet or exceed the Forest Resources and Practices Act AS 41.17 (FRPA) and corresponding regulations. However, this GCD does not include fish habitat and passage related activities as outlined in the Memorandum of Understanding (MOU) 04MU-111001-094 between the Alaska Region of the U.S. Forest Service and OHMP.

OHMP-2

**Fish Habitat**

Each of the alternatives includes stream crossings for anadromous and resident streams in the area. The Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes (AWC) lists the following streams and their tributaries in the project area.

- Iyouktug River (112-13-10060) for coho, pink, and chum salmon
- Suintaheen Creek (114-27-10150) for coho, pink and chum salmon, Dolly Varden char, and steelhead and cutthroat trout
- Whitestone Head Creek (114-27-10180) for coho, pink and chum salmon, and Dolly Varden char
- Unnamed creek (114-27-10120) for coho, pink and chum salmon, Dolly Varden char, and steelhead and cutthroat trout

- Unnamed creek (114-27-10260) for pink salmon

OHMP-2  
(cont.)

OHMP biologists will coordinate with Forest Service staff during the concurrence process to gather the appropriate information for each stream crossing concurrence. This includes collecting data on the ground to verify presence and extent of fish species to update the AWC.

OHMP-3

On September 1, 2006 OHMP submitted comments on Iyouktug Timber Sales scoping document. Thank you for addressing our concerns in the DEIS. We would like to submit the following points/comments for consideration in the Final EIS.

- Page 3-153: The Road Density and Stream Crossings section states that there are 5 red, 6 gray and 31 green culverts in the project area. How many red culverts will be replaced? How many gray culverts will be re-assessed to determine fish passage ability?
- Page 3-158: In the Alternative 2 section the second paragraph states "There would be 10 new class III stream crossings, eight of which are in the Iyouktug Watershed, and five in the North Fork Iyouktug subwatershed." It isn't clear whether there are 10 new stream crossings or 13 as the combined total suggests.
- The map for road 853431 appears to show several class IV crossings for alternative 2 that are not discussed in the narrative.
- The map for road 85345 displays a class II stream but the narrative states a class I crossing of a tributary of AWC stream #112-13-10060.
- The map for road 85300 does not show class II or IV crossings listed in the narrative.
- The map for road 85312 appears to only show one class III crossing contrary to the narrative.
- The map for road 85313 doesn't display the class IV crossings listed in the narrative.
- The map for road 85307 doesn't show class II and III crossings described in the narrative.
- The map for road 8534 doesn't show several class II and III crossings in the narrative.
- The map for road 8535 does not show several class II and III crossings in the narrative.

Thank you for the opportunity to comment on this project. We look forward to working with you during the concurrence process. If you have any questions please contact Habitat Biologist Kristen Dunlap at (907) 465-1635 or [kristen.dunlap@alaska.gov](mailto:kristen.dunlap@alaska.gov).

Sincerely,



FOR Jackie Timothy  
Juneau Area Manager  
Office of Habitat Management and Permitting

Cc by email:

Al Ott, OHMP, Fairbanks  
Erin Allee, OPMP, Juneau  
Kevin Hanley, ADEC, Juneau  
Kevin Monagle, ADFG, Juneau

Brian Glynn, ADFG, Juneau  
JT Stangle, USFS, Sitka  
Phil Mooney, ADF&G, Sitka  
Jerry Medina, Hoonah Coastal District

**Responses to Comments**

**Appendix B**

\* NMFS, Juneau  
\*nepa.comments@noaa.gov

\*email

*[Faint, illegible text, possibly bleed-through from the reverse side of the page]*

**Responses to OHMP-- Sheila A. Cameron (for Jackie Timothy), Office of Habitat Management and Permitting (OHMP)**

**OHMP-1** – Thank you for reviewing the Iyouktug Timber Sales DEIS. The Forest Service will comply with fish habitat and passage related activities as outlined in the Memorandum of Understanding (MOU) 04MU-111001-094 between the Alaska Region of the U.S Forest Service and OHMP.

**OHMP-2** - Forest Service Staff will coordinate with OHMP biologists during the concurrence process to gather the appropriate information for each stream crossing concurrence

**OHMP-3** – We have updated the information about the number of red and gray pipes in the FEIS, Road Cards, and the Watershed and Fish Resource Report. These sections now provide information on how red and gray culvert removal/replacement will be addressed through this timber sale and in the future. An updated list of all fish stream crossings, their locations and their passage status, within the project area and along the haul route, has been added to the Watershed and Fisheries Resource Report. Currently there are 5 red, 5 gray, and 29 green pipes within the project area. One of these red pipes will be addressed in 2008 during routine road maintenance. Of the four remaining red pipes, three would be removed under Alternatives 2 and 4 and two would be removed under Alternative 3. One red pipe, which would be removed under Alternatives 2, 3, and 4, is also proposed to be removed under the ATM decision. One gray pipe will be removed under Alternatives 2, 3, and 4. Additionally, there are 2 red, 2 gray, and 13 green culverts along the haul route outside the project area boundary. Between 2000 and 2005, 14 red pipes have been replaced within the project area. Ten of these culverts are now green, three are gray and one is red (additional culvert information is included in the Iyouktug project record); this red culvert is the beforehand mentioned culvert that is scheduled for repair in 2008. There is currently no schedule for re-assessing gray culverts. Gray pipes within the project area and elsewhere will be resurveyed, classified as red or green, prioritized and replaced if needed, as funds become available. Also, the narrative you noted in the Direct and Indirect Effects on Water Quality – Sediment; Stream Crossings and Road Miles section has been revised to more clearly convey the information.

Most Streams within the project area were mapped using a coarse scale inventory. This inventory used aerial photo interpretation and limited field verification. Field surveys as part of this project only accurately updated the number and location of streams within the boundaries of ground based equipment harvest units. Also, field surveys of proposed roads as part of this project and those conducted as part of past Road Condition Surveys (RCS) were used to generate the narratives. These surveys included walking proposed and existing roads identifying stream crossings, recording their channel type, stream class and morphological measurements along those routes. Streams in these locations were not fully mapped, but GPS points were taken at each stream crossing point and can be found in the project record. Consequently, the narratives in the road cards provide the most accurate information to date regarding the number and types of stream crossings. Additionally, for road cards covering existing road segments, only stream crossings that would entail structure replacement or reconstruction are listed. All other stream crossing structures along these existing road segments are currently structurally sound and would remain and be used, as is.



# STATE OF ALASKA

SARAH PALIN, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
OFFICE OF PROJECT MANAGEMENT AND PERMITTING

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[www.alaskacoast.state.ak.us](http://www.alaskacoast.state.ak.us)  
October 21, 2007

Mr. Hans von Rekowski  
U.S. Forest Service – Tongass National Forest  
Sitka Ranger District  
Sitka, Alaska 99835

Dear Mr. Rekowski:

**Subject: No Additional ACMP Review Required  
USFS Iyouktug Timber Sales  
State I.D. No. 2007-1002J**

OPMP-1

The Office of Project Management & Permitting (OPMP) has received the Draft Environmental Impact Statement (DEIS) describing the effects of the U.S. Forest Service's proposed timber sales near Hoonah, Alaska. The DEIS outlines one no action alternative and four action alternatives that all include road building and reconstruction as well as use of an existing marine access facility (MAF) at Long Island, near Hoonah, Alaska.

On December 4, 2007 the OPMP issued the final consistency response for the Tongass National Forest Timber Sales General Consistency Determination (see attached). This GCD does not apply to logging camps, log transfer facilities, public works as defined in 15 CFR 930.31(b), and activities that are not addressed by the Forest Resources and Practices Act (FRPA). Because all four action alternatives within this DEIS propose the use of an existing MAF and no camps are proposed, OPMP believes the GCD applies to this proposed timber sales activity and no additional Alaska Coastal Management Program (ACMP) consistency review is required for these Iyouktug timber sales.

OPMP has also consulted with the State of Alaska Office of Habitat Management & Permitting (OHMP), the Division of Mining, Land and Water (DMLW), the Alaska Department of Environmental Conservation (ADEC), and the Hoonah Coastal District regarding this project. These State and local agencies concur that the USFS GCD applies for this timber sale activity and no further review is required.

OPMP-2

If changes to the approved project are proposed prior to or during its siting, construction, or operation, please contact this office immediately to determine if further review and approval of the

Mr. Hans von Rekowski, USFS  
Iyouktug Timber Sales  
ID 2007-1002J

October 21, 2007

OPMP-2 (cont.) | revised project is necessary. If the project is changed in any significant way, or if the actual use differs from the approved use contained in the original project description, the State may amend this State approval, and may require a consistency determination.

OPMP.3 | If the proposed activities reveal cultural or paleontological resources, the applicant is to stop any work that would disturb such resources and immediately contact the State Historic Preservation Office (907-269-8720) and the U.S. Army Corps of Engineers (907-753-2712) so that consultation per Section 106 of the National Historic Preservation Act may proceed.

If you have any questions, please contact me by email at erin.allee@alaska.gov or by phone (907) 465-8790. Thank you for your cooperation with the ACMP.

Sincerely,

  
Erin Allee  
Project Review Specialist

- cc: Kevin Hanley – ADEC, Juneau\*
- John Dunker – ADNR/DMLW, Juneau \*
- Jackie Timothy – ADNR/OHMP, Juneau \*
- Claire Batac – ADNR/OPMP, Juneau \*
- Joe Donohue – ADNR/OPMP, Juneau \*
- Jerry Medina – Coastal District Coordinator, Hoonah\*
- Forrest Cole – USFS, Tongass National Forest, Ketchikan\*
- Randy Coleman – USFS, Tongass National Forest, Juneau\*

\*E-mail

**Responses to OPMP – Erin Allee, Office of Project Management and Permitting**

**OPMP-1** - Thank you for reviewing the Iyouktug DEIS and for providing the determination that no additional Alaska Coastal Management Program (ACMP) review is required because this project falls within the General Consistency Determination (GCD).

**OPMP-2** - If the Iyouktug Timber Sales is changed in any significant way, or if the actual use differs from approved use contained in the original project description, the Forest Service will notify the State in accordance with the ACMP MOU.

**OPMP-3** - If previously unknown cultural and paleontological resources are discovered during the project, activities in the vicinity will cease and the operator will protect the discovery and notify the Forest Service (District Ranger). The Forest Service in consultation with Native organizations and the Alaska State Historic Preservation Officer will determine a course of action (see chapter 2 DEIS, Activities and Design Elements Common to All Action Alternatives, Heritage Resources).



"Paul Barnes"  
<haikuaikido@gmail.co  
m>

To: comments-alaska-tongass-hoonah@fs.fed.us  
cc:  
Subject: Proposed Iyouktug timber sale

11/18/2007 08:53 AM

Dear Forest Service,

PB-1

PB-2

PB-3

PB-4

I'm writing to comment on the proposed Iyouktug timber sale near Hoonah. The current plan calls for logging 59.8 mmbf. The proposed amount is completely out-of-line with what can be utilized locally. Logging that amount of forest in an already logged area completely ignores all other values of the forest. The Forest Service has a mandate to include all users of the forest in it's decisions. The proposed action favors logging and compromises all other uses. NE Chichagof Island is one of the most, if not the most, heavily logged areas on the entire Tongass. To even offer a timber sale in this area is questionable! If more logging is to occur, it must be a smaller sale (under 4mmbf). The Forest Service needs to wake up to reality. The large timber sales of the past are over. To prove my point, I'll end with a question. Who does the Forest Service expect to bid on this sale? Please don't suggest the local mills who have already stated that the sale is too big. The only slim possibility is finding some large, non-local (usually foreign) company to come in and round-log export the whole thing, benefitting virtually no one and treating SE Alaska like a 3rd world country. As a 37 year resident of the Icy Strait area, I've witnessed this nonsense long enough. We must do better. Thank you.

Paul Barnes  
Box 155  
Gustavus, AK 99826

**Responses to PB – Paul Barnes**

**PB-1** - Please see response to EH-1

**PB-2** – The Forest Plan allocated LUDs and established standards and guidelines for resource protection to provide for all users of the Forest. While the Iyouktug project area has lands to provide for timber production, there is also land allocated to Old-growth Habitat Reserves for the benefit of wildlife. It is impossible to meet all resource needs on every acre.

Please also see responses to BC-3, BC-4, BC-25, and EH-1 and the Chapter 3 Affected Environment and Environmental Effects.

**PB-3** - A smaller timber sale alternative (Alternative A at around 5 MMBF) and an alternative containing only small sales (Alternative F) were considered in the DEIS and FEIS, but were eliminated for the reasons described in Chapter 2, Alternatives Considered but Eliminated from Detailed Study. Please also see response to BC-4.

**PB-4** - Please see responses to EH-1 and JM-4. Potential buyers include local mills in Hoonah and Gustavus as well as purchasers from other parts of the Tongass National Forest.



**Sitka Conservation Society**  
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**99835**  
**(907) 747-7509**  
**[info@sitkawild.org](mailto:info@sitkawild.org)**

*"Working to protect the  
 natural environment  
 of the Tongass, and  
 Sitka's quality of life –  
 Since 1967"*

Hans von Rekowski, IDT Leader  
 Sitka Ranger District, Tongass National Forest  
 204 Siginaka Way  
 Sitka, AK 99835  
 e-mail: [comments-alaska-tongass-hoonah@fs.fed.us](mailto:comments-alaska-tongass-hoonah@fs.fed.us)

Subject: Iyoutug Timber Sales DEIS Comments

Dear Mr. von Rekowski:

SCS-1

These are comments on the Iyoutug Timber Sales DEIS prepared jointly by the Sitka Conservation Society, Greenpeace, the Tongass Conservation Society and the Cascadia Wildlands Project. We have provided our contact information at the end of these comments.

All of these organizations have a long history of involvement in the planning process on the Tongass National Forest, especially concerning logging and road building. The organizations' memberships include hundreds of Alaskans, many of whom use the Tongass National Forest and are concerned about management of its natural resources and roadless areas. Our members within the Tongass include commercial fishermen, Alaska Natives, tourism and recreation business owners, and hunters and guides. The organizations also represent thousands of Americans living outside of Alaska, all of whom have a stake in the continued sustainability of the Tongass and its wildlands. The groups have a commitment to preserve the integrity of Southeast Alaska's natural environment and protecting its wildlands from unnecessary development. The organizations' staff and members use the project area for subsistence, commerce, recreation, education and health, and would be adversely impacted by the proposed action.

We are submitting supporting references to you via the Forest Service's FTP2 site, and ask that you include all of them in the planning record. They are at: [ftp2.fs.fed.us/incoming/chugtong\\_r10/IY\\_Comment\\_References](http://ftp2.fs.fed.us/incoming/chugtong_r10/IY_Comment_References). If there are any cited documents not already in the record that we have inadvertently omitted, please let us know and we will provide them.

## I. INTRODUCTION

- SCS-2 The Iyouktug project area contains 40,651 acres and is located on the northeastern part of Chicagof Island in the Iyouktug valley.<sup>1</sup> The preferred alternative, Alternative 3, would authorize the harvest of 43.4 million board feet (MMBF) from 3,332 acres using shovel yarding, cable logging and helicopter yarding systems. 1,394 of the harvested acres lie within inventoried roadless areas. There would be various small sales and one or more large sales designed to meet the needs of large operators.<sup>2</sup> Proposed road construction under the preferred alternative includes 3.9 miles of temporary road, 2.4 miles of National Forest System (NFS) road. The project would authorize construction of a half mile of the temporary road and 1.6 miles of NFS road in the inventoried roadless areas.
- In our view, this large sale with its attendant road construction and incursions into the roadless area should be reconsidered. In view of the alternatives provided, we support the no action alternative and request that you cancel this sale. If you decide to proceed with the sale, we request that it be dramatically downsized. We appreciate the effort to develop a small sale alternative but in this project area even Alternative 5 has flaws.
- SCS-3 We will preface our comments with our general impressions - the project area, when viewed in its entirety, is not suitable for the scale of the proposed project. It takes too much timber from too small of an area in a wet place that grows slowly. Clearcuts on private land have transformed the adjacent watershed into a wasteland. Extensive clearcuts and road construction have also degraded public lands in the project area. The proposed cutting units and methods ignore the ecological condition of the project area, particularly vulnerability to windthrow, soil conditions and slow regeneration rates. And even though we generally would prefer to see alternatives to clearcutting, in view of the high windthrow potential in this area, the proposed selective cutting measures carry unjustifiably high risks.
- SCS-4 The only forested areas remaining are extremely sensitive ecological areas that are difficult and costly to work in. And these remaining areas provide critical wildlife habitat that should not be disturbed in view of severely weakened local deer populations. Because of these and other concerns, the project analysis inappropriately assigns too much weight to the economic need rationale based on a flawed market analysis and does not adequately balance the other multiple uses of the project area against the purported economic need.
- SCS-5 Before we begin our comments on the issues identified as driving the alternatives, we would like to raise our concerns regarding whether it is appropriate to begin planning this project in light of the decision in NRDC v. U.S. Forest Service, offer some suggestions about expanding or modifying the range of alternatives and request that the agency begin addressing climate change in more detail in your NEPA documentation.

A. The Iyouktug Project Is Based On An Arbitrary And Unlawful Forest Plan

Planning on the Iyouktug project is directly reliant on the 1997 TLMP. However, the 9<sup>th</sup> Circuit recently invalidated the TLMP in NRDC v. U.S. Forest Service. The decision in NRDC v. U.S. Forest

<sup>1</sup> DEIS 1-3.

<sup>2</sup> DEIS, 2-3.



- SCS-5  
(cont.) Service requires the Forest Service to prepare a new forest plan – a plan that reportedly will be available to the public in December of 2007.
- 40 C.F.R. § 1506.1(c) governs actions proposed during a period when a federal agency is preparing a programmatic environmental impact statement. If an action is not covered by an existing program statement, “agencies shall not undertake in the interim any major Federal action ... unless such action: (1) [i]s justified independently of the program; (2) [i]s itself accompanied by an adequate environmental impact statement; and (3) [w]ill not prejudice the ultimate decision on the program.” 40 C.F.R. § 1506.1(c)(1)-(3). “Interim action prejudices the ultimate decision on the program when it tends to determine subsequent development or limit alternatives.” 40 C.F.R. § 1506.1(c)(3).
- SCS-6 Under the illegal 1997 TLMP, this timber sale would illegally settle the fate of this area by committing roadless areas to developed status and eliminating options for preserving it for other multiple uses through the court-mandated revision of the 1997 TLMP. Another significant problem which we will discuss in more detail in following sections is that the sale is justified in part by a flawed market demand analysis that should be revised in the new Forest Plan. This DEIS should be rescinded pending the development of new Forest Plan.
- SCS-7
- SCS-8 B. The Range of Alternatives Is Unreasonably Restricted
- Consideration of alternatives is the “heart” of the EIS and an important obligation under NEPA.<sup>3</sup> We appreciate the effort to address each of the three major issues identified in the DEIS: (1) impacts on deer habitat and fragmentation; (2) impacts on roadless areas and (3) economic viability. But as SCS pointed out in scoping comments, the size of the project given Hoonah mill capacity is perplexing. We requested downsized alternatives designed to meet the needs of local operators and consideration of multiple alternatives that build no new roads and do not enter inventoried roadless areas.
- SCS-9 But the DEIS does not present one alternative that comprehensively addresses all three issues or even two of the three issues. Instead, alternatives are presented in a format that seem to direct the decision maker to make an either/or choice between protecting deer habitat, protecting roadless values and maximizing economic viability.
- SCS-10 Alternatives 2, 3 and 4 all propose large harvests in excess of 35.1 MMBF which will occur through several small sales and one or more large harvests. As an initial matter, we appreciate the fact that you did not designate Alternative 2 as the preferred alternative. The objective of Alternative 2 was to maximize timber harvest and we agree that it does not adequately address the three alternative-driving issues identified in the DEIS.
- SCS-11 Only Alternative 5 focuses on economic viability. Thank you for offering an alternative that occurs exclusively through smaller sales. Unfortunately, this alternative also invades inventoried roadless areas and would authorize construction of 7.2 miles of road, further fragmenting deer habitat. The DEIS indicates an alternative that would use only ground based harvest and preclude harvest or construction in roadless areas was rejected on the ground that it was similar to alternatives 2, 4 and 5. Please clarify this statement in further stages of your NEPA analysis. Only Alternative 4 excludes roadless areas from harvest while Alternatives 2 and 5 both enter roadless areas. Given the public and

<sup>3</sup> 40 C.F.R. § 1502.14

- SCS-11 (cont.) | scientific support for protecting roadless areas, there should have been more than one alternative that did not include roadless sales.
- SCS-12 | We appreciate the fact that the preferred alternative, Alternative 3, seeks to address one of our major concerns with regard to impacts on deer habitat and fragmentation. But there would also be 1,394 acres harvested in the inventoried roadless areas and there will be a large sale component that does little for local timber operators. Moreover, even this alternative would construct 6.3 miles of road, including 1.6 miles of road in inventoried roadless areas. The project area already has an extensive road network. It is undisputed that roads are detrimental to wildlife and the total road construction for this alternative is only about twenty to thirty percent less than in alternatives 3 and 5.<sup>4</sup> The DEIS concedes as much by acknowledging in the cumulative effects analysis that there will be reductions in riparian and elevational corridors.<sup>5</sup>
- SCS-13 | Also, it is well documented that the winter of 2006-2007 had severely detrimental impacts on deer populations. Even if all roads are eventually closed, the simple fact of road construction and use will fragment habitat at a time when deer populations are already weakened. A recent emergency order from the state Department of Fish and Game expresses one of our most serious concerns:
- The [Northeast Chichagof Controlled Use Area] received record snowfall during the winter of 2006-07 and Wildlife Conservation staff conducted deer mortality surveys throughout the region in the spring of 2007. These surveys indicated that some locations in Northern Southeast Alaska, including the Northeast Chichagof Controlled Use Area, experienced substantial winter-related deer mortality. October deer surveys appear to confirm a significant reduction in the deer population from previous years. Roads permit vehicle access into all major watersheds resulting in a popular deer hunting area for local and non-local hunters. Additional doe harvest beyond the closure date in this emergency order would be excessive and may jeopardize the future productivity of this herd.<sup>6</sup>
- SCS-14 | We request that, at a minimum, a SEIS be produced that responds to current deer population status and the high road density in the area by providing an alternative that does not propose any new road construction. | Also, we note that a reduction in subsistence deer harvest was not considered an issue driving alternative. | In view of this more recent data indicating that the future productivity of the herd may be jeopardized by additional doe mortality, we believe that the viability of the deer population itself should be considered in addition to fragmentation as an alternative driving issue in a SEIS. 40 C.F.R. § 1502.9 requires supplementation when “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.”
- SCS-15 |
- SCS-16 |
- SCS-17 | Alternative 4 protects roadless area characteristics by eliminating proposed cutting units in inventoried roadless areas. But Alternative 4 does little to address the issues of deer habitat fragmentation and economic viability. Instead, there is a large sale component, 8.8 miles of road construction and more intensive harvest in the roaded areas.

<sup>4</sup> See DEIS 3-22.

<sup>5</sup> DEIS 3-22.

<sup>6</sup> Alaska Department of Fish and Game, Hunting and Trapping Emergency Order at 2 (November 6, 2007).

- SCS-18 | We are not fully convinced that a downsized alternative is impracticable despite the rationales provided in the DEIS. One reason provided for rejecting a downsized alternative was that there is only access to 5 MMBF of timber using existing roads which would not satisfy the needs of the project. But if one of the purposes of the project is to supply local sawmills, the 5 MMBF available using existing roads would be nearly a two year supply that could be used to supplement the 20 MMBF available through the nearby Couverden sale. In this case, there would be enough timber to tide over local mills.
- SCS-19 | The DEIS also rejected harvest using existing roads and helicopters because the removal costs implicated in helicopter harvest does not meet the needs of local sawmills and timber operators. Please discuss the analysis that supports this conclusion. Is the problem that small operators are not able to helicopter yarding, or is the issue that small mills have competitive bidding disadvantage when compared to larger operations that would harvest these trees for export? If that is the case, please clarify that in future NEPA documentation.
- SCS-20 | Also completely missing is any consideration of alternatives with regard to transportation management. In Cascadia's scoping comments, we drew special attention to the need for alternatives in transportation and roads. This project is locking us in for a long haul of road maintenance and high road densities, blindly. The Draft EIS is non-responsive to that request to consider alternatives. We renew that request. Please consider:
- Various amounts of road closures;
  - Alternative road closure methods, such as obliteration, storage, or classification and gating;
  - Can roads be closed *except for* subsistence use? What options are available to pull drainage structures for maximum fish benefits, while leaving enough key trails for ATVs to hunt.
  - Maintenance actions dealing with erosion, in particular sinkholes or other problem features over karst;
  - Fixing culverts for fish passage (It is necessary for Clean Water Act compliance to fix *all* culverts that have identified fish passage problems)
- SCS-21 | As we express in more detail in the "Transportation" section below, there are important problems and missed opportunities with regard to roads in the project area, that should be considered for solution in the FEIS. Also, an alternative should be brought forward that doesn't build any new road.
- SCS-22 | One of the reasons provided for rejecting an alternative that would construct no new permanent roads on the ground that there is potential for more than one entry or for future production. Given the scale of the proposed sale, the slow growth rate of timber in the project area and the extensive harvest that has already occurred, we are concerned about this rationale. In light of the general ecological condition of the project area, please explain why there is potential for future production, when this future production could be anticipated to occur, and why permanent roads must be constructed now.
- SCS-13 | Finally, as the Couverden Timber Sales ROD indicates, it is possible to develop alternatives that meet the needs of small mills without any extensive road construction. Small sales are defined as sales of

SCS-23 | less than 1 MMBF and perhaps as small as tens of thousands of board feet.<sup>7</sup> The Couverden ROD included a provision for small sales along the existing road system.<sup>8</sup> This ROD indicates that it should be possible to develop an alternative that, like Alternative 5, focuses on small sales. It also indicates that it would be possible to develop a small sales alternative that does not construct new roads. We recognize that the Iyouktug project area may be different from the Couverden project area in that there may be an even smaller amount of economical timber that is accessible from existing roads. But this does not excuse the failure to provide the type of alternative we requested in our scoping comments.

SCS-24 | For the above reasons, the DEIS does not supply an adequate range of alternatives. The preferred alternative that purports to minimize fragmentation of deer habitat does not substantially differ from the other alternatives in terms of total road construction. Future road closures will not help deer populations in the future if they are not protected now when they are imperiled. Further, these speculative benefits are offset by the amount of timber removed under this alternative. Also, there was no alternative provided that minimizes fragmentation of deer habitat, eliminates incursions into roadless areas and ensures economic viability for local timber operators. None of the alternatives adequately addressed two of the three issues. | NEPA mandates that the range of alternatives

SCS-25 | considered should not be unreasonably restricted. We request that you produce a revised DEIS that offers an alternative or several alternatives that do not force the decisionmaker make a choice between fragmenting deer habitat and invading roadless areas.

**C. In General, the DEIS Does Not Address Known and Possible Cumulative Effects of Climate Change**

SCS-26 | We will address our concerns about climate change in these comments as they pertain to specific issues. But we request that future environmental impact statements contain a separate discussion in the Environment and Effects section analyzing the cumulative effects of the project in terms of climate change. We recognize that making forest management decisions in light of the uncertainties about the possible effects of climate change on the Tongass is fraught with uncertainty.

SCS-27 | But the uncertainties about the possible effects of climate change are less speculative than the assumptions underlying the market demand analysis. It is clear that global temperatures are rising and it is therefore possible to address environmental concerns that pertain to long-term temperature increases. 40 C.F.R. § 1502.22(b)(1) provides appropriate guidance for addressing the uncertainties about climate change: even where the probability of catastrophic consequences is low, there should be a statement indicating the relevance of the incomplete information, summary of existing credible scientific evidence relevant to possible impacts, and your evaluation of the impacts based on generally accepted approaches or research methods.

We add that our request for a detailed analysis of climate change conforms to policy concerns addressed in NFMA - the Secretary of Agriculture is to analyze the potential effects of climate change in the decennial Renewable Resource Assessments and once every five years there is to be an "account for the effects of global climate change on forest and rangeland conditions, including potential effects

<sup>7</sup> Couverden Timber Sales ROD at R-8.

<sup>8</sup> *Id.* at R-9.

SCS-27 | on the geographic range of species, and on forest and rangeland products.”<sup>9</sup> Even though these pronouncements may not impose any specific duties on regional forest planners, they provide policy guidance from Congress regarding the type of discussion that we believe should be included in NEPA analysis in order to ensure that the decisionmaker has taken the requisite “hard look” at the cumulative effects of the project.

SCS-28 | One specific example that is highly relevant in light of the alternative driving issues is the effects of climate change on deer. It is well established that severe winters can result in a major crash of deer populations for periods of up to 30 years.<sup>10</sup> “Climate change predictions for Southeast Alaska indicate the likelihood of extremes of warm and cold during future winters, along with much greater precipitation.”<sup>11</sup> This means that the winter of 2006-2007 may not be an anomaly so much as a new climactic paradigm. This problem alone, in our view, is cause for an SEIS in light of the possible impacts of this sale on deer populations.

SCS-29 | Because we understand that federal agency responses to climate change are an evolving issue, we request for the purposes of this project that you discuss climate change with respect to specific issues highlighted in our comments. But under 40 C.F.R. § 1502.9, the need for climate change discussion warrants production of a revised DEIS because it is hard to meaningfully analyze the impacts of this project without considering the reality and cumulative effects of rising global temperatures.

## II. COMMENTS ON SIGNIFICANT ISSUES

### A. Habitat Connectivity and Old Growth

SCS-30 | . Deer use old growth forest corridors to move between low elevation winter habitat and high elevation summer habitat and migratory corridors in the project area have been affected by previous harvest so that additional harvest and road construction would further reduce habitat connectivity by removing additional low elevation forest and travel corridors. In our scoping comments, we pointed out that previous timber entries clearcut large blocks of forest at low elevations and in valley bottoms which left large portions of the project and surrounding areas in early successional or stem-exclusion phases which have been shown to be detrimental to old-growth associated wildlife species.

SCS-31 | The proposed harvest would focus on the few remaining big tree forests available for deer. Road construction and clearcutting would further fragment migratory corridors. The project will occur in an area that already has high sustainability for risks to wildlife due to significant logging on public and private lands. [Also, the DEIS does not fully acknowledge the severity of the 2006 winter. Hoonah residents discovered extensive evidence of winter kills and report that there are no deer to harvest in the area this year. They describe the project area as the “only sanctuary nearby” for deer. The Iyoutug project would further endanger an already troubled deer population in an area where village residents rely on wild foods as part of the economy.

<sup>9</sup> 16 U.S.C. § 1601(a)(5); 16 U.S.C. § 1601(5)(F).

<sup>10</sup> State of Alaska Comments on the Tongass Land and Resource Management Plan Amendment and Draft Environmental Impact Statement (April 27, 2007).

<sup>11</sup> *Id.*

## 2. The Preferred Alternative and Connectivity

SCS-33

We have particular concerns about the connectivity reductions in the area around the North Fork of Iyouktug Creek. The west end of the North Fork has already been subject to timber harvest and the preferred alternative would authorize clearcutting the east end of the fork and build a permanent road to access the cable clearcut harvest units. Please drop these units from the sale as well as the proposed road construction if you proceed with this alternative. Otherwise, the addition of these units to an alternative designed to ensure connectivity for deer is perplexing – particularly because the units also lie within a roadless area that provides added protections for deer.

SCS-34

In the past, there have been NEPA documents that identified specific corridors that would be preserved for wildlife. The discussion in the Iyouktug DEIS contains a general analysis of connectivity but fails to identify specific corridors. Please provide a map or detailed analysis in subsequent NEPA documentation that clearly delineates migratory corridors in the project area. The analysis should indicate the width of travel corridors, identify barriers and indicate elevations. It is difficult to fully analyze connectivity without an appropriately scaled map.

## 3. Cumulative Effects:

SCS-35

The DEIS ultimately concludes that “the cumulative reduction of elevational connectivity in association with a cumulative reduction in deer habitat capability as a result of past, proposed and future harvest activities and a severe winter in 2006 will likely result in a decline in the deer population. But the DEIS seems to rely on the assumption that “the Forest Plan conservation strategy maintains the population viability of deer.” As discussed in our deer section, this assumption is based on an erroneous application of the deer habitat capability model. Moreover, the Forest Plan conservation strategy does not account for what happened last winter - there is no need to predict a “likely decline in the deer population” because recent surveys demonstrate that this decline has already occurred. In view of this decline, the ability of Forest Plan standards and Guidelines to ensure population viability of a herd that is already in jeopardy is questionable. In future NEPA documentation, please detail how the Forest Plan standards and guidelines will ensure the population viability of specifically imperiled herds and analyze connectivity in view of the fact that local herd population declines are not a “likely result” but are instead an immediate reality.

SCS-36

**B. Impacts to Inventoried Roadless Areas (IRAs) are Unjustified**

There are significant portions of three IRAs in the project area: 11,245 acres from the 15,629 acre Point Augusta IRA, 5,430 acres from the 5,747 acres Whitestone IRA and 8,488 acres from the 47,040 acre Freshwater Bay IRA.<sup>12</sup>

In SCS’s scoping comments, we expressed concern about the proposed action, Alternative 2, which would have allowed half of the total logging and a third of the road construction within the project area’s IRAs. Thank you for not designating Alternative 2 as your preferred alternative - it would

<sup>12</sup> DEIS, 3-22.

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(cont.)

remove 18 percent of the acreage from the Point Augusta IRA that is within the project area and nearly one-third of the acreage from the Freshwater IRA.<sup>13</sup>

But the preferred alternative, Alternative 3, also would constitute a significant incursion into the IRAs – there would be 729 acres of timber harvest and 2 miles of road construction in the Point Augusta IRA and 728 acres of timber harvest and .2 miles of road construction in the Freshwater Bay IRA.<sup>14</sup> This would result in a 12 percent reduction in acreage retaining roadless characteristics for the Point Augusta IRA in the project area and a 28 percent reduction in the acreage retaining roadless characteristics in the Freshwater Bay IRA.

In general, we believe that these roadless areas should be preserved in their natural state. This is the most valuable use of these areas from an ecological, aesthetic and economic standpoint. The uniqueness of these areas creates economic value and an economy based on those who come to see, live close to, study or otherwise benefit from that uniqueness. And these areas provide ecological benefits to wildlife that are unavailable in developed areas.

Therefore, we believe that this significant incursion into the last remaining roadless areas on the northeastern portion of Chichagof Island is unjustified. Given the high profile debate over the management of roadless areas in recent years, particularly on the Tongass, we can see no valid reason for moving forward with any project that directly or indirectly degrades roadless areas and associated resources. There is strong public support for protecting roadless areas in the Tongass. Further, in view of the strong scientific support for protecting Tongass roadless areas, we request that this project be cancelled.<sup>15</sup>

SCS-37

We have identified three specific concerns in the discussion below. First, we question whether the incursion is justified in view of the minimal or negative economic benefit. Second, the project forecloses any future opportunity to have these areas designated as wilderness areas. Third, the project would significantly impair special roadless values - these areas are virtually the last un-logged and un-roaded fish and wildlife habitat on north eastern Chichagof Island. The roadless areas contain the majority of the bald eagle nests in the area, provide valuable habitat for foraging bears, migration corridors and winter habitat for deer and half of the winter habitat for marten.

**1. There is no economic benefit gained from degrading the roadless areas.**

In view of the minimal or negative economic “benefit” derived from the proposed project, there is no valid reason to compromise these areas. Alternative 5, for example, was designed to maximize the economic viability of the timber sales. Notably, Alternative 5, which would harvest 239 acres, construct 2.1 miles of road and indirectly affect another 1,084 acres in the IRAs, does not impact nearly as much of the IRA acreage as Alternatives 2 and 3, which would each harvest more than 1,600

<sup>13</sup> DEIS, 3-32.

<sup>14</sup> DEIS, 3-31.

<sup>15</sup> *See e.g.*, Powell, R.A. et al. (Oct. 1996): “Joint Statement of Members of the Peer Review Committee Concerning the Inadequacy of Conservation Measures for Old-growth Associated Wildlife Species”; Powell, R.A., et al. (Sept. 1997): “Joint Statement of Members of the Peer Review Committee Concerning the Inadequacy of Conservation Measures for Vertebrate Species in the Tongass National Forest Land Management Plan of Record.”



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(cont.)

acres from the roadless areas.<sup>16</sup> This contrast between the alternatives justifies the inference that any economic benefits derived from the sale decreases in proportion to increased impacts to the roadless areas. Furthermore, the DEIS indicates in Alternative 4 that there could be as much as 35.1 MMBF harvested in the project area without entering the roadless areas. This clearly establishes that even if there is a need to have a large sale, that sale could occur without degrading roadless values.

In your further NEPA documentation, please provide a detailed analysis of the economic costs and benefits that addresses only the proposed harvests in the roadless areas. A fully informed decision maker should be fully aware of the exact benefit accruing from a decision that would severely compromise these areas.

SCS-38

Also, the emphasis on helicopter yarding also undercuts any local economic benefit to be gained from entering the IRAs. As noted in a recent report:

[I]t is obvious that the value of domestically processed timber does not support the added cost of helicopter logging as reported in this study. It is an excellent logging tool but helicopter logging is too expensive for operation in all but the highest-valued stands in Alaska or sales that receive export waivers for processing logs.<sup>17</sup>

Based on this report, it appears that the proposed helicopter logging in the roadless areas would have two unjustifiable results: (1) the most valuable ecological areas in the roadless areas will be degraded by high-grading the most valuable timber or (2) the roadless areas will be invaded for the primary economic benefit of timber processors overseas or in the lower 48. Please provide a detailed analysis that discloses the economic and ecological values of the timber that would be harvested from the roadless areas and compares those values with timber in the roadless areas that will not be harvested.

SCS-39

Also, please address whether there is any reason to believe that the helicopter logging proposed to occur in this sale would be an exception to the proposition quoted above: that helicopter logging does not pay unless there is an export waiver granted. In the absence of that data, it is hard to be fully informed about whether there is any economic justification for the incursions into the roadless areas.

SCS-40

## 2. Concerns About Potential Loss of Wilderness Areas

We are concerned about the continual loss of potential Wilderness areas on the Tongass and the impacts these losses will have on local economies as well as fish and wildlife. The DEIS indicates that under all alternatives there would still be 5,000 acre blocks qualifying for wilderness consideration. This rationale suggests that the incursion does not compromise a possible wilderness designation primarily based on the remaining roadless acreage.

This discussion is inadequate. There has been ample research on the extreme variability of the habitat quality and landform variability of the Tongass – only a small portion of the total area provides high quality habitat. Please evaluate impacts on the wilderness qualities of the roadless areas in terms of whether the remaining acreage is sufficient to maintain ecosystem integrity, wildlife habitat and

<sup>16</sup> DEIS at 3-31.

<sup>17</sup> Linda E. Christian and Allen M. Brackley, "Helicopter Logging Productivity on Harvesting Operations in Southeast Alaska, Using Ecologically Based Silvicultural Prescriptions." West.J.App..For.22(2) (2007).

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(cont.)

primitive recreation opportunities in productive old growth forests. Please also include in this analysis in terms of percentage the amount of the project area that is already roaded or designated for timber production.

SCS-41

### 3. Roadless Areas Are Critical to Biodiversity and Species Viability

The DEIS indicates that there is some high value fish habitat within the IRAs includes the Iyouktug Creek Estuary and outlets, the main channel of Iyouktug Creek, the north Fork of Iyouktug Creek.<sup>18</sup> 78 of 96 mapped eagle nests along the coast of the analysis area are contained in the roadless areas.<sup>19</sup> There are high use bear areas in each IRA – there is late summer use of estuary and low elevation segments of Iyouktug Creek and there are high use areas along Iyouktug, Suntaheen and Whitestone Head creek.<sup>20</sup> The Freshwater Bay IRA provides high elevation summer habitat for marten and the Point Augusta IRA provides half of the high value marten winter habitat in the project area. There was evidence of concentrated deer use found in each IRA.<sup>21</sup> The Freshwater Bay IRA has high elevation summer habitat and the Point Augusta and Whitestone IRAs include low elevation habitat that maintains connectivity for deer and more high value deer winter habitat.<sup>22</sup>

We quote from comments on the roadless draft EIS specialist report on the Tongass (Johnston, May 2000, Biological Resources Effects): “[t]he Tongass is unique [from other national forests] because the majority of subsistence and game species are integrally linked to the habitat qualities provided by unroaded areas.” Also:

Because relatively little is known about the current status, needs and response to management activities for some species on the Tongass, conservative management approaches that emphasize retention of roadless areas may provide a necessary “buffer” to ensure higher likelihoods of maintaining biodiversity and species viability.

We add the following general comments about the impact of roads and road maintenance on natural environments: “[r]oads and the maintenance of roads impact natural environments in many ways. Roads increase air and water pollution, promote the spread of invasive exotics, reduce watershed integrity, compromise fish and fish habitat, increase surface erosion and landslide potential, and are associated with declines in wildlife numbers.”<sup>23</sup>

<sup>18</sup> DEIS, 3-26.

<sup>19</sup> DEIS, 3-26.

<sup>20</sup> DEIS, 3-26.

<sup>21</sup> DEIS, 3-26.

<sup>22</sup> DEIS, 3-26.

<sup>23</sup> Dominick A. Dellasala & James Stritholt, Impact of Inventoried Roadless Areas and Unroaded Lands to Oregon’s Natural Heritage (Comments on Oregon’s Roadless Petition to the Bush Administration (2006) (citing Andrews, A. 1990. Fragmentation of habitat by roads and utility corridors: A review. Australian Zoology 26:130-141; Furniss, M.J., T.D. Roelofs, and C.S. Yee (1991. Road Construction and maintenance. In W.R. Meehan, ed. Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society Special Publication 19. Bethesda, MD.; Reed, R.A., J. Johnson-Barnard, and W.L. Baker. 1996. Contribution of roads to forest fragmentation in the Rocky Mountains. Conservation Biology 10:1098-1106; Spellerberg, I.F. 1998. Ecological effects of roads and traffic: a literature review. Global Ecology and Biogeography Letters 7:317-333 and Trombulak, S.C., and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic communities. Conservation Biology 14:18-30.

- SCS-42 | Also, much of the proposed harvest in roadless areas will occur through helicopter yarding. Although helicopter yarding may have fewer permanent impacts than road construction, it is hardly benign with regard to wildlife. "Aircraft overflights may cause flushing of birds from feeding or nesting areas, alteration of movement or activity patterns, decreased foraging efficiency, panic running of big game animals, decreased young survival, and increased heart rates in big game."<sup>24</sup> It is clear that the closer the aircraft, the more likely an animal will be stressed, and helicopter overflights are more stressful than fixed wing overflights.<sup>25</sup>
- SCS-43 | In addition to disturbances caused by the helicopters themselves, helicopter yarding in partial cut units is almost certain to result in high-grading the largest, most valuable trees. Please discuss the impacts of helicopter yarding in view of the unique role roadless areas have in ensuring wildlife population viability.
- SCS-44 | In view of these concerns and the recommendation to conservatively manage roadless areas and maintain them as a buffer to maintain biodiversity and species viability, please omit the roadless areas from any final decision if you elect to proceed with this sale. In particular, the current status of deer populations makes any degradation of roadless area habitat unjustifiable.

#### 4. Other Concerns: Ecological and Recreational Values

- SCS-45 | Alternative 2 would have authorized the harvest of 73 acres of karst. Thank you for not identifying Alternative 2 as the preferred alternative.
- There were 5,489 acres of karst identified and 59% of those acres are in the Freshwater Bay IRA.<sup>26</sup> The DEIS indicates that an estimated 1,102 acres of previously unmapped karst was identified in the Point Augusta IRA during project reconnaissance that was not included in the proposed Geologic Special Interest Area.<sup>27</sup> Please explain why this unmapped karst was not included and please disclose the extent of the project reconnaissance – is there a possibility that there may be additional unmapped karst in the IRAs? **Information may be in planning record**
- SCS-46 | Also, there are two listed rare plants found in the project area – Galium kamtschaticum and Listera convallarioides and 25 of 57 sightings were in the Point Augusta & Freshwater Bay IRAs.<sup>28</sup> Undesirable non-native plants grow near roads and were not found in the project area IRAs.<sup>29</sup> But there are five invasive plant species found on the Hoonah road system that are moderately to highly

<sup>24</sup> USDA Forest Service, 1999. Wildlife Report: Commercially Guided Helicopter Skiing on the Glacier and Seward Ranger Districts. Unpublished report by Theron E. Schenck II, Chugach National Forest Supervisors Office.

<sup>25</sup> USDI National Park Service. 1994. Report to Congress: Report on effects of aircraft overflights into the National Park system. Washington D.C. [www.nonoise.org/library/npreport/intro.htm](http://www.nonoise.org/library/npreport/intro.htm).

<sup>26</sup> DEIS at 3-25.

<sup>27</sup> DEIS at 3-26.

<sup>28</sup> DEIS at 3-26-27.

<sup>29</sup> DEIS, 3-27.

- SCS-46  
(cont.) | invasive.<sup>30</sup> The DEIS only indicates that these plants “pose a threat and should be prevented from spreading into the project area and otherwise controlled or eradicated where possible.”<sup>31</sup>
- SCS-47 | Please disclose in your further NEPA analysis whether road construction will introduce invasive plants and the extent to which invasive plants could encroach on listed rare plant species. Please explain how procedures to control or eradicate invasive plants will be different from procedures used in the past on the Hoonah road system because past procedures apparently have not been effective in preventing the spread of invasive plants. Please disclose what herbicides would be used, if any. Also, please include a cumulative effects analysis that discusses the impacts that climate change has on listed rare plants and on the potential for invasive plants to take root in the project area.
- SCS-48 | With regard to roadless area recreation, the DEIS indicates that all three IRAs in the project area rated moderate or low for solitude and self-reliant recreational opportunities due to the small size and narrowness of IRAs, but the opportunities for primitive recreation are high due to easy access.<sup>32</sup> The DEIS concludes that the degree of influence on recreational opportunities is minor because there would be no harvest in the Whitestone IRA. As discussed below, we disagree with this conclusion based on the growth of the outdoor recreational industry.
- SCS-49 | For the above reasons, should the agency move forward, we specifically request that no entry into the inventoried roadless areas be allowed.

SCS-50

**C. The Project is not Economically Viable, Particularly in View of Multiple Uses**

The purposes of the project are the following: (1) to maintain and promote wood production from suitable timber lands, providing a supply of wood to meet society’s needs; (2) to provide a stable supply of timber that meets the annual planning cycle market demand while managing land for sustained long-term yields consistent with sound multiple-use and sustained-yield principles; (3) to provide a long-term, stable supply of timber for local sawmills and timber operators and (4) provide a diversity of opportunities for resource uses that contribute to the local and regional economies of Southeast Alaska to support a range of natural resource employment opportunities within Southeast Alaska’s communities.<sup>33</sup>

**1. Proposed helicopter yarding and road-building may reduce the economic viability of the timber sales because small operators need local, economical timber to stay in business.**<sup>34</sup>

First, we note the high cost of accessing the remaining timber to the public - the 17.2 miles of road and 17 bridges constructed or reconstructed by the Forest Service will cost the public \$4,400,482.00. Similarly, as we previously noted, the costs also seem high for local timber operators – extensive helicopter harvest significantly undercuts any economic benefit that would be derived from the

<sup>30</sup> DEIS 3-51.

<sup>31</sup> DEIS 3-51.

<sup>32</sup> DEIS 3-27.

<sup>33</sup> DEIS, 1-4.

<sup>34</sup> DEIS, 3-36-37.

- SCS-50 (cont.) | incursion – it costs between 30 and 40 percent more per thousand board feet (MBF) to harvest timber using helicopters.<sup>35</sup>
- SCS-51 | The DEIS indicates that helicopter logging costs have decreased between \$30 to \$50 per MBF.<sup>36</sup> Please clarify whether this is meant to indicate a reduction from the average cost of \$338 per MBF. Our understanding based on Christian and Brackley's recent paper is that costs increase as levels of retention decrease.<sup>37</sup> If this is correct, the 25% partial cutting units would be at the high end of helicopter logging costs. Please discuss the economics of helicopter logging in more detail.
- SCS-52 | For these reasons, we do not understand how the large size of the project aligns with the needs of local sawmills on eastern Chichagof Island. D & L woodworks employs two people and produces 100 MBF per year, and Icy Straits Lumber employs 20 people and has a mill capacity of 5 MMBF annually but currently mills 3 MMBF with 15 employees.
- Moreover, the Couverden Timber Sales ROD was issued in July 2005 and makes available 23 MMBF of timber in a project area that is 13 miles northeast of Hoonah.<sup>38</sup> That ROD made meeting the needs of smaller mills from the Couverden project area a priority.<sup>39</sup> According to the Couverden ROD, "[t]his decision virtually guarantees a wood supply for local small mills over the next ten years if they choose to take advantage of it."<sup>40</sup>
- SCS-53 | Also, as indicated in our comments on the "Transportation" section, we feel that the long-term costs of the proposed transportation system are not fully accounted for. Please insure that the logging costs fully include road maintenance, and lost opportunity cost of decommissioning or storage. This important factor does not appear to be included in the NEAT model.
- SCS-54 | **2. The DEIS Relies On A Misleading Demand Analysis**
- The Tongass Timber Reform Act (TTRA) provides that the Forest Service must provide a timber supply that (1) meets annual market demand for timber from the forest and (2) meets the annual market demand from the forest for the planning cycle. In August of 2005, the 9<sup>th</sup> Circuit Court of Appeals ruled that a previous error in calculating demand required the Forest Service to revise the Forest Plan. In response, new timber demand projections were completed and published in 2006.<sup>41</sup> As part of the justification for this large sale, the DEIS indicates that annual market demand for FY 2007 is 131 MMBF.

<sup>35</sup> See DEIS at 3-39-40.

<sup>36</sup> DEIS at 3-45.

<sup>37</sup> Linda E. Christian and Allen M. Brackley, "Helicopter Logging Productivity on Harvesting Operations in Southeast Alaska, Using Ecologically Based Silvicultural Prescriptions." West.J.App..For.22(2) (2007).

<sup>38</sup> DEIS, 3-26.

<sup>39</sup> Couverden Timber Sales ROD at R-1.

<sup>40</sup> *Id.* at R-5.

<sup>41</sup> *Id.* at R-5.

<sup>41</sup> Brackley et al., 2006.

SCS-54  
(cont.)

As a matter of common sense, we think this figure is unrealistic. Since 1996 the backlog of uncut timber has exceeded the amount logged each year.<sup>42</sup> By 2001 the harvest volume was less than an eighth of the volume under contract.<sup>43</sup> At no time during the last six years has the volume sold or cut even approached the 131 MMBF proposed as the annual demand for FY 2007. Instead, recent logging levels have ranged from 33.8 to 50.8 MMBF during the last five years. Moreover, the DEIS acknowledges the forest products employment in Southeast Alaska dropped from 2002 people in 1995 to 499 people in 2005 - a regionwide drop of 300% drop in timber industry employment over the past decade, suggesting a significant decline in demand for Tongass timber.<sup>44</sup>

SCS-55

The DEIS arrives at the 131 MMBF figure using Dr. Allen Brackley's 2006 harvest projections.<sup>45</sup> The new model contains four scenarios that project a turn-around in market demand from the long-term decline that began in the 1970s.<sup>46</sup> We believe that this optimistic assessment depends on three unrealistic assumptions - the same flawed assumptions as the model rejected by the 9<sup>th</sup> Circuit in *NRDC v. U.S. Forest Service*. More recently, a 9<sup>th</sup> Circuit District Court enjoined the Forest Service from offering the Threemile Timber Harvest Sale because of the need to update long-term market projections.<sup>47</sup> Because the market demand analysis used to justify the sale here suffers from the same defects, this sale is also a likely candidate for an injunction should it proceed.

SCS-56

We incorporate by reference the April 30, 2007 comments of The Wilderness Society on the Tongass Forest Plan Revision DEIS. We have attached a copy to our comments. Also, we will summarize the key points in the following discussion.

First, the Brackley model assumes that Pacific Rim markets remain viable and that those markets determine domestic (lower 48) demand for Tongass forest products. At one time this assumption made sense because Japan was the dominant market for softwood lumber sawn from Tongass timber. But economic factors internal to Japan as well as a shift in demand from green lumber to kiln-dried lumber and engineered wood products have reduced the interest in Alaskan timber.<sup>48</sup> Exports from Alaska to Japan have declined from 400 mmbf in 1973 to less than 25 mmbf in recent years.<sup>49</sup> Nor is there any basis to assume that market demand in other Pacific Rim countries would be similar to the bygone Japanese market.

Also, this drop has corresponded to a decline in market share - North American lumber shipments dropped from 88% to 49% of Pacific Rim lumber imports from 1990 to 2004.<sup>50</sup> But the scenarios in Brackley's new model rely on the assumption that the market share will either remain constant or that Alaska's market share will increase.<sup>51</sup> Given the high costs of production in Alaska, this assumption

<sup>42</sup> Crone 2007.

<sup>43</sup> Crone 2007.

<sup>44</sup> DEIS at 3-37.

<sup>45</sup> Appx A-6; *see also* TLMP DEIS (Jan. 2007).

<sup>46</sup> Brackley et al. 2006 at Table 3.

<sup>47</sup> *Organized Village of Kake et al. v. U.S. Forest Service*, Case No. 1:04-cv-00029 (JKS) (D. Alaska, September 26, 2007).

<sup>48</sup> *See* Crone 2007.

<sup>49</sup> Brackley et al., 2006.

<sup>50</sup> Brackley et al. 2006 Table 5A.

<sup>51</sup> Brackley et al. 2006 Table 5A.

- SCS-56  
(cont.)
- seems questionable because Alaskan products must compete against logs produced in British Columbia and the Pacific Northwest at a lower cost.
- This inaccuracy is multiplied because Brackley's model also assumes that Pacific Rim demand dictates domestic demand. This is another curious assumption because in recent years the majority of softwood lumber produced in Southeast Alaska has gone to domestic markets - over the past four years, 78% of the wood products have gone to domestic markets and only 15% have gone to Pacific Rim markets. In future NEPA documentation, please explain why a small export share would drive demand for the majority of the wood going to domestic markets. It would be more appropriate to reconsider demand based on a model that accurately represents the domestic lumber market.
- The failure to calculate demand based on the domestic market implicates the second major mistaken assumption - that Southeast Alaska's forest products industry is competitive. The model assumes that overall domestic demand for Alaskan lumber will increase or that Alaska's market share will increase. But Southeast Alaska shares an integrated market with British Columbia and the Pacific Northwest.<sup>52</sup> And Southeast Alaska has a number of competitive disadvantages - a large proportion of low-value tree species, higher labor, operating, manufacturing and transportation costs, less efficient mills and weak local markets. As Robertson and Brooks noted: "With the highest total production cost of the three regions and a substantially lower stumpage value, the marginal position of Alaska as a high cost producer is evident."<sup>53</sup>
- SCS-57
- The third flawed assumption contained in the model is that new, large mills will soon begin operating in Southeast Alaska. It seems premature to design a large sale based on a demand analysis that relies on events which have not yet come to fruition.
- SCS-58
- Because the range of scenarios in the model is unreasonably restricted to overly optimistic estimates of demand that run counter to the evidence, the purpose and need for this large sale are based on an over-inflated calculation of demand. The consequences of inflating ASQ are particularly evident in this sale: (1) continued high-grading of the most ecologically significant forests; (2) continued exports with few jobs for local wood processors; (3) high value intact watersheds will be degraded in the name of generating a small amount of local economic activity; (4) local economic activity continues to be highly subsidized by American taxpayers and (5) new road construction will continue for the purpose of accessing timber even though it is unlikely that road construction costs will ever be recovered.
- For these reasons, the market demand analysis in the Brackley model should not be used to justify this sale. The analysis has not fulfilled the requirements of the 9<sup>th</sup> Circuit's ruling and has fatally infected this DEIS. If the Forest Service continues to proceed with this sale, there should be a SEIS that uses a new model that is based on realistic demand projections. With more accurate information, the agency can develop alternatives that achieve realistic objectives: (1) restoration; (2) focus on harvesting areas that already have roads; (3) shift support for regional industry from road building to value added manufacturing (technical and financial assistance) to meet more local needs and (4) allocate land and management effort toward broad forest values and the true economic engines of SE AK: nature based recreational and tour industries, commercial fishing and amenity based developments.

<sup>52</sup> See Stevens and Brooks (2003).

<sup>53</sup> Robertson and Brooks (2001).



SCS-59

The rationale for offering this sale, and especially a roadless area sale under three of the action alternatives, is not supported by actual demand. We are particularly concerned about the justification for the need for large sales:

Small sales can be financially successful even though our process indicates uneconomic situations for the “normal” timber industry. Small timber operators have the ability to sell smaller amounts of forest products in the local area, have less capital outlays, lower overhead, and have been able to develop niche markets for their products. The small and very small family owned businesses that currently constitute the Southeast Alaska woods products industry are adjusting to take advantage of these more specialized markets. This is likely a normal phenomenon that is part of the transition occurring in the Southeast Alaska timber industry.<sup>54</sup>

### **3. The Likelihood of Export Should Be Disclosed in Detail**

SCS-60

The incursions into the roadless areas, in particular, seem designed to meet the needs of large timber operators who ship unprocessed yellow cedar overseas and up to 50% of the less valuable sawlogs to mills in the lower 48. As discussed in the previous section, it is clear that the incursions into the roadless areas in particular will be primarily for the purpose of enabling a large-scale timber operator to export unprocessed timber.

Because of the high rate of exports, the column in Table 3TE-5 on mill jobs is misleading. The table provides an upper range of jobs that assumes that all of the timber sold, including Alaska Yellow Cedar (AYC) is processed in Southeast Alaska. The DEIS states that “[t]he number of jobs and related income will likely fall somewhere between the high end and low end of this calculated range.” This statement suggests that there will be somewhere between 82 and 164 annualized mill jobs, 161 and 243 annualized total jobs and between \$6.1 and \$ 8.7 million in direct income. We believe that the table mischaracterizes the total annualized jobs and total income by suggesting an upper range without providing any basis for the assumption that all the timber sold would ever be processed locally in Southeast Alaska.

It is undisputed that it is more profitable to export raw logs than to process them in Southeast Alaska.<sup>55</sup> The annual appropriations riders in the Department of Interior and Related Agencies Appropriation Acts effectively exempt Alaska Yellow Cedar from the domestic processing requirement, ensuring the export of the most valuable trees. Although the amount of cedar sold between 2001-2005 was less than 20% of the volume of spruce and hemlock sold during the same period, the stumpage value was similar: \$3.3 million for the spruce and hemlock and \$ 2.8 million for the cedar.<sup>56</sup> Therefore, even though the preferred alternative would sell a relatively small amount of cedar, the analysis in the DEIS should reflect the fact that if there is to be a large sale, the high value trees will be exported pursuant the domestic processing exception contained in the annual appropriations rider.

<sup>54</sup> Couverden Timber Sales ROD at R-9.

<sup>55</sup> See e.g. Alaska Dept. of Commerce and Economic Development, Southeast Alaska Wood Products at 8 (2003) available at [http://www.dced.state.ak.us/dca/AEIS/Statewide/Timber/Statewide\\_Timber\\_SE.html](http://www.dced.state.ak.us/dca/AEIS/Statewide/Timber/Statewide_Timber_SE.html) (hereinafter AK DCED Wood Products Report).

<sup>56</sup> See e.g. USDA Forest Service Region 10, Timber Cut and Sold on National Forests, 2001-2005, available at [http://www.fs.fed.us/r10/ro/policy-reports/for\\_mgmt/index.shtml](http://www.fs.fed.us/r10/ro/policy-reports/for_mgmt/index.shtml).

SCS-60  
(cont.)

Also, 36 C.F.R. § 223.201 grant the Regional Forester the authority to approve other raw log exports upon application from the timber sale purchaser.<sup>57</sup> This procedure seems to be nearly automatic – all but 4 of the 117 applications from 2001-2005 were approved. And as of March 14, 2007, the Regional Forester has authorized timber sale purchasers to ship unprocessed spruce and hemlocks to states in the lower 48 up to a maximum of 50 percent of total sawlog contract volume of all species.<sup>58</sup>

Because of the above legislation, regulations and policies, we do not believe that Table 3TE-5 accurately depicts projected Alaskan employment and income. Please provide analysis in your future NEPA documentation that incorporates a realistic depiction of the amount of timber from this sale that will most likely be exported without any prior domestic processing. The upper end of the range relies on the mistaken assumption that all the timber could be processed locally and therefore the entire table is misleading as to the actual range of jobs and income generated by the project.

#### 4. More Consideration Should Be Given to Multiple Use Economic Values

The DEIS measures the economics of the timber sale in terms of four factors: (1) the total volume in MMBF; (2) logging costs in MBF; (3) employment in number of job years and (4) direct income based on projected employment. We believe that a fully informed analysis of the economics of this timber sale should incorporate external costs. The cost of producing a good or service is not simply a factor of priced inputs such as logging costs. If environmental and other resource user costs are not factored in to the economic analysis, the true value of the resources being used to produce the timber is not accurately represented and there is significant information lacking that would inform a decision that best allocates resources.

Planning regulations require forest plans to “describe and analyze ... the range and estimated long-term value of market and non-market goods, uses, services and amenities that can be provided [by national forests] consistent with the requirements of ecological sustainability.”<sup>59</sup> The DEIS broadly discloses the affected environment for timber economies by noting that Southeast Alaska’s 74,000 residents work in commercial fishing, timber harvest and processing, tourism and mining, recreation and subsistence related economies. But there is no adequate attempt to quantify or even adequately analyze the other values.

Also, in planning a timber sale project, the Forest Service must compare the public money it will spend administering a project with the prospective returns to the agency. That analysis, which “compares estimated Forest Service expenditures with estimated financial revenues,” allows the decision maker and the public to gain some understanding of “the future financial position of the program if the project is implemented.”<sup>60</sup> Part of the purpose of this analysis is to fulfill NEPA’s requirement to “balance a project’s economic benefits against its adverse effects.”<sup>61</sup>

<sup>57</sup> 36 C.F.R. § 223.201.

<sup>58</sup> Memorandum from Dennis E. Bschor, Regional Forester, Re: Limited Interstate Shipments of Sitka Spruce and Western Hemlock Timber (March 14, 2007).

<sup>59</sup> 36 C.F.R. § 219.21.

<sup>60</sup> Forest Service Handbook § 2400.18\_30.

<sup>61</sup> Hughes River Watershed Conservancy v. Glickman, 81 F.3d 437, 446 (4<sup>th</sup> Cir. 1996).

SCS-61  
(cont.)

The "Timber Financial Efficiency Analysis" excuses its lack of quantitative analysis for other resource uses by stating that "non-market values are difficult to represent by appropriate dollar figures."<sup>62</sup> Nowhere in the DEIS are the more easily quantifiable values, for which data exists, actually quantified. These values include the values of subsistence take, outfitter guide revenues, trapping, sport hunting and fish production for both commercial and recreational takes. Without taking readily available data and using it to put a number to these values, the DEIS does not fulfill its obligation to inform the public and the decision maker. We request that you seek out readily available information that is necessary to quantify other multiple economic uses of the Tongass – tourism, fisheries and subsistence - in order to make a fully informed decision.

SCS-62

The number of tourists utilizing the project area for wildlife viewing, hiking and scenery has increased dramatically over the past few years and the increase is projected to continue. We cite these comments from over 100 businesses, including 17 Alaska business, that addressed Congress regarding the outdoor recreation industry's concerns about logging of roadless areas:

While the timber industry in Southeast Alaska continues a sharp decline, primarily due to changing global timber markets, the recreation and visitor industry continues to grow. Using U.S. Forest Service data, a 1997 comparison between the value of logging Tongass old-growth forest and recreation and tourism use of these lands showed that tourism was nine times more valuable than logging. By 2000, recreation and tourism on the Tongass contributed 30 times the value of clearcutting the forest. There are particularly interesting facts when considering that the failing Tongass timber program cost taxpayers \$35 million in subsidies that same year. The estimated number of summer visitors to Southeast Alaska slightly more than doubled between 1993 and 2001, increasing from 502,800 in 1993 to 1,010,352 in 2001. Clearly, trees left standing for recreation and tourism contribute substantially more logging to Southeast Alaska's long-term economy.<sup>63</sup>

SCS-63

Also, the area is critical to the subsistence economy – 2004 studies done by Alaska's Department of Commerce indicate that local residents harvest an average of 243 pounds of wild food per person.<sup>64</sup> The value of this wild food has been quantified – wild food harvests provide 115% of the protein requirements for Southeast Alaska residents and the total value of wild food harvests to Southeast Alaska's 73,000 plus residents in 1999 was \$15,193,527 at \$3 per pound and \$25,322,545 at \$5 per pound.<sup>65</sup>

SCS-64

Chartered sport fishing is a growing industry and the economic value of commercial salmon fishing has rebounded dramatically in the past few years. The American Sport Fishing Association conducted a national survey in 2001 finding that U.S. residents over the age of 16 spent an estimated \$537

<sup>62</sup> DEIS at 3-40.

<sup>63</sup> Outdoor Industry Supports Efforts to Safeguard Tongass National Forest for Sake of Customers and U.S. Taxpayers (September 29, 2004).

<sup>64</sup> Alaska Dept. of Commerce, Community Profiles, *available at* [www.commerce.state.ak.us/dca/AEIS/Skagway/General/Skagway\\_General\\_Narrative.htm](http://www.commerce.state.ak.us/dca/AEIS/Skagway/General/Skagway_General_Narrative.htm). (last visited Dec. 5, 2004).

<sup>65</sup> Robert J. Wolfe, (Alaska Dept. of Fish and Game, Division of Subsistence Research Director), Subsistence in Alaska: A Year 2000 Update (March 2000).

SCS-64  
(cont.)

million on fishing trips in Alaska in 2001.<sup>66</sup> These expenditures generated 11,064 jobs and \$238 million in wages and salaries with a \$960 million ripple effect.<sup>67</sup> Updated figures in 2003 showed that jobs and expenditures increased approximately 9% in these categories.<sup>68</sup>

Also, statewide commercial salmon fisheries generated more than \$374 million in ex-vessel value alone (meaning that processing jobs, transportation jobs and other economic ripple effects are not factored in).<sup>69</sup> Fisheries in Southeast Alaska had an ex-vessel value of over \$98 million, or more than one-fourth of the statewide total.<sup>70</sup> Based on this figure, we believe it is reasonable to assume that at a minimum, sport fisheries in Southeast Alaska also comprise roughly one-fourth of statewide values in 2000 - \$125 million in direct expenditures, 2,500 jobs worth over \$50 million in wages with \$250 million in ripple effects. In view of the negative appraisal value of the Iyoutug sale, we do not believe the precise numbers are necessary to make our point: that other uses are highly profitable, and the proposed sale is not.

Based on the above economic statistics, we believe that there are many studies ascribing numerical values to subsistence, recreational and fisheries uses of public lands. These studies make abundantly clear that logging areas like the Iyoutug project area now would constitute an immediate economic loss and would unjustifiably compromise the economic future of the Tongass. By emphasizing timber harvest over other economic uses in the area, the proposed project ignores economic trends in the region. We expect a cost/benefit analysis that does more than simply state that these other economic uses are hard to quantify. A full accounting of wildland values should be provided in order to satisfy NEPA's mandate to disclose significant effects.

### 5. Conclusion

We believe that in view of the broader economic trends in the region, the decision to proceed with this sale is unjustified. In addressing the implications of income and employment trends, Robertson points out the following:

[I]n the absence of significant increases in national forest timber sales (and the market to support them), the ability of forest policy to impact the regional economy via the timber sector will be small. Thus, the focus should shift to ways in which forest policy can affect the new drivers of economic activity in the region – tourism and unearned income. Forest policies that attract both visitors and new residents and keep existing residents from leaving will contribute to economic growth in the region.<sup>71</sup>

Crone's research indicated that efforts to improve the competitiveness of Alaska wood products could contribute to economic diversity in some communities but it was unlikely that wood products

<sup>66</sup> Alaska Dept. of Fish and Game, Economic Impact of Sport Fishing in Alaska, *available at* [www.sf.adfg.state.ak.us/statewide/economics/](http://www.sf.adfg.state.ak.us/statewide/economics/) (last visited November 19, 2007).

<sup>67</sup> *Id.*

<sup>68</sup> *Id.*

<sup>69</sup> Alaska Department of Fish and Game, 2007 Alaska Commercial Salmon Harvests and Exvessel Values, *available at* [www.cf.adfg.state.ak.us](http://www.cf.adfg.state.ak.us) (last visited November 19, 2007).

<sup>70</sup> *Id.*

<sup>71</sup> Lisa K. Crone, Southeast Alaska economics: A resource-abundant region competing in a global marketplace at 22 (2005). (or Landscape and Urban Planning 72 (2005) 215-233.

SCS-64  
(cont.)

production and employment will ever return to their previous levels in southeast Alaska. Her conclusion about economic viability and uses of the Tongass is quoted here:

Although timber from the Tongass continues to play a role and efforts to assist the wood products industry restructure should continue, timber is not likely to be the most important contributor to future socioeconomic well-being in the area. Based 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.<sup>72</sup>

Please reconsider the economic justifications for this sale in light of the flawed market demand analysis and take NEPA's requisite hard look at economic data related to other economic uses of the forest. We believe that a fair balancing of multiple uses against the proposed action here mandates only one conclusion: the proposed action alternatives are all unjustified in economic terms.

### III. Other Resources

#### A. Botany: Invasive Plants and Weeds

SCS-65

Thank you for disclosing that road construction has resulted in an invasive weed problem in the project area. As you indicated, invasive weeds are a threat and five of the species found in the project area are moderately to highly invasive. Please discuss the specific types of threats the five invasive plants pose to project area. Also, please discuss the extent of the ongoing efforts to eradicate invasive weeds referred to in Appendix D and the effectiveness of these efforts. Given the general threat posed by invasive weeds, any decision about further road construction in the project area would be less than fully informed if there was an absence of data about the spread of invasive plants despite eradication efforts.

#### B. Geology and Karst

SCS-66

The Draft EIS says there are no proposed roads on or near any low, moderate or high vulnerability karst.<sup>73</sup> However, the sale would rely on roads crossing karst at the 8535 road and proposed 85351 spur. The map in the EIS (Fig. 3-4) also clearly shows the 8530 road crossing karstlands. Roads can have severe impacts to karstlands. Roads on karsts should be high priorities for decommissioning. Please conduct surveys or include the information if surveys have been done regarding roads on karsts. Karst is so unique, that ignoring this element is a major failure.

### IV. Management Indicator Species and Other Wildlife Species (Excluding Deer)

<sup>72</sup> Crone (2005) at 231.

<sup>73</sup> DEIS 3-58

A. Marten<sup>74</sup>

SCS-67 The project area is high-risk biogeographic province for marten and more roads would increase trapping effort for this increasingly valuable furbearer. Under TLMP, timber harvest units containing high value marten habitat must meet Forest Plan standards and guidelines which require retention of portions of the original stand structure, trees for future snag recruitment as well as decadent trees and downed material. As an initial matter, please explain the basis for the assumption that the 25% partial cuts are excluded from the standards and guidelines. If the most productive forest is high-graded in these cuts, will there actually be sufficient stand structure to support this assumption? Also, although the standards and guidelines will help retain some forest features relevant to marten population viability, we have several concerns regarding whether the DEIS gives sufficient consideration to other factors impacting marten populations.

SCS-68

**1. The DEIS Places Too Much Reliance on the Habitat Capability Model**

The DEIS relies on the interagency habitat capability model (Suring et al. 1992) that calculates a Habitat Suitability Index (HSI) based on timber volume strata, elevation and typical snowfall. There are three factors controlling marten population densities: habitat conditions, prey densities and trapping pressure.<sup>75</sup> But the marten model only considers one of these factors – habitat conditions and the habitat conditions evaluated in the model do not consider fragmentation.

SCS-69 In our scoping comments, we requested that there be an adjustment to the model that accounts for road density and application of a model that uses TimTyp data rather than volume strata. Also, although the DEIS discusses road density, it does not appear that the habitat suitability index contains a straightforward application of the road density adjustment. Without an adjustment for road density, the habitat suitability figures can be misleading as to potential impacts on marten populations.

SCS-70 Also, because marten prefer habitat patches over 180 acres in size and do not use patches of less than 10 acres and because the project is within a high-risk biogeographic province, analysis of patch size and fragmentation is of great concern. Please provide some analysis in your subsequent NEPA documentation regarding the availability of large habitat patches left available for marten. We would point to the Traitor's Cove Timber Sale FEIS as providing an example of the type of patch size analysis that would be helpful in providing information to a decisionmaker that would remedy the shortcomings of the habitat capability model.<sup>76</sup>

SCS-71 This analysis is particularly critical in light of the discussion at the 2006 Tongass Conservation Strategy Workshop where it was noted that a road density was not the best method of assessing marten vulnerability.<sup>77</sup> Instead, it was suggested that a more effective means of addressing marten vulnerability would be to develop an area wide assessment of areas large enough to contain marten home ranges that are free from trapping – trapping refugia.<sup>78</sup> A trapping refugia model could then be

<sup>74</sup> DEIS, 3-66-74.

<sup>75</sup> Flynn et al. 2004.

<sup>76</sup> See Traitor's Cove Timber Sale FEIS at 3-195- 3-197.

<sup>77</sup> Tetra Tech 2006 at 12 (Ex. C in Baht Appeal).

<sup>78</sup> Tetra Tech 2006 at 12

SCS-71  
(cont.)

useful in evaluating new roads and determining to what degree they could expose marten to new trapping pressure.<sup>79</sup>

Although the concept of a trapping refugia model is an evolving development, the discussion about how the availability of refugia habitat is a key component of population viability needs to be fully considered. Because the DEIS seems to rely exclusively on the Forest Plan guidelines and habitat model and did not analyze how much of the acreage of high value marten habitat provided refuge from trapping effort, it does not fully evaluate the effect of the project in light of updated scientific theories and in view of the Forest Service's goal of promoting adaptive management. In further NEPA documentation, please supplement your habitat capability and road density analysis that addresses the need for trapping refugia. This material should be included to accommodate NEPA's mandate to disclose possible shortcomings in models.

SCS-72

Also, we are concerned about the absence of discussion about prey availability. The multi-scaled study on Chichagof Island conducted between 1991 and 1998 indicates that populations fluctuate greatly in response to food availability and trapping.<sup>80</sup> Marten on Chichagof Island utilize winter-killed deer carcasses during the spring.<sup>81</sup> In view of the extreme winter deer kill in 2006-2007, we have specific concerns about seasonal prey availability. Another primary prey species, particularly on Chichagof Island, is the long-tailed vole.<sup>82</sup> When long-tailed vole numbers are low, marten prefer salmon over other small mammals.<sup>83</sup> Please include an analysis about prey availability in future NEPA documentation and discuss the role of deer in marten population viability and whether areas designated as high value marten habitat contain salmon-bearing streams.

## 2. The Road Density Analysis Should Apply Flynn's (2006) Curve

SCS-73

We note that road density analysis in the DEIS relies on Suring's assumption that habitat suitability began to decline when road density reaches 0.20 miles per square mile and decreased sharply when road densities reach 0.60 miles per square mile.<sup>84</sup> Thank you disclosing both the total road density of 0.83 miles per square mile in the Wildlife Analysis Area (WAA) and the open road density of .56 miles per square mile.

At the recent Tongass Conservation Strategy Workshop, it was recommended that road density analyses for wolves should be adjusted for total road density and access and that open road density guidelines are too high.<sup>85</sup> Although this recommendation has to do with wolves, the underlying problem is the same – human access needs to be considered in view of total road density. But the analysis in Suring's 1992 model seems to take into account only open roads. Please include a table in future NEPA documentation that adjusts the habitat suitability index to reflect total road density.

SCS-74

Also, we request that you consider applying the curve in Flynn (2006) that was based on field research. Flynn has done a number of peer-reviewed studies on marten and is the Alaska Department

<sup>79</sup> Tetra Tech 2006 at 12

<sup>80</sup> Flynn 2004.

<sup>81</sup> Ben-David et al (1997, pp. 288-289); *see also* Wildlife and Subsistence Resource Report at 55.

<sup>82</sup> Tetra Tech at 28.

<sup>83</sup> Tetra Tech at 28.

<sup>84</sup> DEIS at 3-67.

<sup>85</sup> TetraTech 2006 at 74.

SCS-74  
(cont.)

of Fish and Game’s lead researcher on the species in Southeast Alaska. The differences between the amount of high value marten habitat that is available under the updated curve can be dramatic. Under the older approach, it is assumed that there is a maximum impact at 0.60 miles per square mile. Flynn 2006. But Flynn’s research indicates that the road density impacts are continuous and continue to increase up to 0.93 miles per square mile. Flynn 2006. As you indicated in the Baht Timber Sale FEIS, the difference between the road density adjustments can be the difference between having only 1,275 acres of marten habitat with an HSI between 0.7 and 1.0 under Suring’s curve and having no valuable marten habitat at all under Flynn’s curve.<sup>86</sup> If you choose to apply the older curve, please explain why and include a table or discussion that indicates how much valuable marten habitat would be available using Flynn’s curve.

SCS-75

First, these road density numbers do not match with those in the Transportation Specialist Report. There, road density is calculated this way:

QuickTime™ and a decompressor are needed to see this picture.

87

QuickTime™ and a decompressor are needed to see this picture.

88

SCS-76

Under the TLMP, S&G WILD112.XVI.A.1: “where marten mortality concerns have been identified, cooperate with the ADF&G to assist in managing marten mortality rates to within sustainable levels. Consider both access management on National Forest lands and hunter/trapper harvest.”

The DEIS only considers hunter/trapper harvest, without the required consideration for reducing open road density. ADF&G should not need to be in the midst of an emergency for the Forest Service to help manage marten by not creating a sprawling road system. Ultimately, the DEIS discounts the impact of road density, saying only that, “increases in open road densities may result in increased

<sup>86</sup> Baht Timber Sale FEIS at 3-160.  
<sup>87</sup> Sandall & Heinrichsen 2007, p.5  
<sup>88</sup> Sandall & Heinrichsen 2007, p.10



SCS-76  
(cont.)

trapping of marten."<sup>89</sup> However, regardless of the number, there is no doubt that it is high, and above levels known to facilitate unsustainable marten harvest. The proposal would stretch roads into new areas, further impacting marten populations. There is no doubt that ADF&G has identified concerns for marten in this area. The DEIS says,

ADFG initially expressed a concern that the harvest level of marten resulting from the high road densities and the placement of the roads adjacent to low elevation riparian habitat in the Iyoktug project area could impact marten populations (Mooney 2007, pers. com.). However, the harvest data does not indicate that there is mortality concern and that marten populations are stable or increasing on Chichagof Island (Mooney 2007, pers. com., ADFG 2004, Flynn et al. 2004).<sup>90</sup>

SCS-77

The S&G goes on to require effective road closures where populations have been found to be declining. We feel that given existing information, there is sufficient justification to consider closing additional roads and foregoing new road building.

### 3. The DEIS Should Include Updated Information About Trapping Effort

SCS-78

Marten are particularly vulnerable to trapping effort – one study demonstrated that all martens with roads in their home ranges were caught by trappers during the first month of winter.<sup>91</sup> Alaska Department of Fish and Game biologist Phil Mooney expressed the concern that harvest levels could increase from high road densities and placement of roads adjacent to low elevation riparian habitat could impact populations.<sup>92</sup> We believe that the DEIS placed too much reliance on older harvest data in concluding that there is not a mortality concern. The DEIS indicates that there was good recruitment and moderate trapping pressure based on 2003-2005 harvest statistics.

But the DEIS also acknowledges that during the 2005-2006 trapping season, the percentage of males harvested and the age ratio exceeded recommended levels. The Wildlife Resource Report assumes that the explanation for this exceedance was because of a seasonal variance.<sup>93</sup> But we would like to point out that there was a dramatic increase in prices for marten pelts in between the 2004-2005 trapping season and the 2005-2006 trapping season – pelt prices increased from \$30-\$40 each to \$80 each.<sup>94</sup> Moreover, this trend is expected to continue based in large part on the entry of China into the global marten pelt market.<sup>95</sup> Because price is one of the most critical variables affecting trapping pressure, please include updated harvest statistics and price information in subsequent NEPA documentation. The hard look required by NEPA mandates an accurate analysis of the factors motivating trapping effort.

<sup>89</sup> DEIS, p. 3-73

<sup>90</sup> DEIS, p. 3-67

<sup>91</sup> Tetra Tech at 32.

<sup>92</sup> DEIS at 3-68.

<sup>93</sup> Wildlife Resource Report at 62.

<sup>94</sup> Lowell, October 17, 2006 (Exhibit BM in Baht appeal).

<sup>95</sup> Opportunities North at B-12, June 2007.

**B. Bears:**<sup>96</sup>

SCS-79

The area is home to one of the highest concentrations of brown bears in the world and the project would reduce migratory corridors, jeopardize riparian foraging areas and displace bears from winter denning areas. Bears utilize primarily estuary and closed forested riparian habitats and the summer/fall season is most critical period for bears concentrated in riparian areas. There were consultations with ADF & G for stream surveys in potential bear foraging habitat

**1. Road Density and Bears**

Road density is an important factor in brown bear mortality and habitat. Please consider it in the Final EIS. The ATM EA identified Brown Bear as a primary, alternatives-driving issue with regard to road management. The ATM FONISI showed that commenters supported closing roads near important feeding areas, riparian areas and beach meadows, including within Old-Growth LUDs. At a minimum, this should include the vicinity of all Class I streams. The 2003 Roads Analysis also found that roads would increase brown bear mortality. The DEIS however does not consider this important factor.

**2. Increase Riparian Buffers for Bear**

SCS-80

Please incorporate the recommendations of the recent studies on the importance of riparian buffers to brown bear in this area.<sup>97</sup> All of the action alternatives propose timber harvest in bear foraging areas with only a 100 foot minimum riparian buffer along class I streams. SCS pointed out in scoping comments that 500 foot buffers should be on both sides of class I streams regardless of whether there have been project field observations of an absence of anadromous fish. This recommendation conforms to the recommendations made based on the most recent studies.<sup>98</sup> The use of only a 100 foot buffer ignores the best available science. Riparian vegetation is perhaps the most important habitat element for brown bear, and it ought to be considered for protection in the Final EIS.

SCS-81

Finally, thank you for excluding from the preferred alternative the concentrated area of bear and salmon use along Iyouktug Creek in Unit 108. If you decide to proceed under a different alternative, please continue to exclude this area.

**C. Cavity dependent MIS**

SCS-82

For each of the cavity nesting forest birds, community composition and abundance are correlated with forest buffer width and widths in excess of 1000 feet.<sup>99</sup> The Wildlife Resource Report discusses general brown creeper habitat needs and broad population trends. But beyond the note that field surveyors observed brown creepers, there is no substantive analysis about the project area.<sup>100</sup> The

<sup>96</sup> DEIS, 3-75.

<sup>97</sup> Flynn, R.W.; S.B. Lewis; R.B. LaVern & G.W. Pendleton (2007). "Brown bear use of riparian & beach zones of N.E. Chichagof Island: Implications for Streamside Management in Coastal Alaska." Alaska Dept. of Fish & Game, Douglas, Alaska.

<sup>98</sup> Id.

<sup>99</sup> Tetra Tect at 59

<sup>100</sup> Wildlife Resource Report at 81.

SCS-82

report simply acknowledges a lack of population or density estimates.<sup>101</sup> With regard to hairy woodpeckers, the Wildlife Resource Report simply concludes that suitable habitat exists.<sup>102</sup> There was not much information about the red-breasted sapsucker or the red squirrel.

NFMA required the Forest Service to develop regulations that “provide for diversity of plant and animal communities.” 16 U.S.C. § 1604(g)(3). Those regulations require management of wildlife that maintains viable populations. 36 C.F.R. 219.19 (1982). To implement that goal, certain species are selected as management indicator species (MIS) for the purpose of indicating the effect of management activities on other species with similar habitat requirements. 36 C.F.R. § 219.19(a)(1) (1982); TLMP FEIS 3-351; *see also* Inland Empire Pub. Lands Council v. U.S. Forest Serv., 88 F.3d 754, 762 n. 11 (9<sup>th</sup> Cir. 1996)(explaining that management indicator species are a “bellwether” for species with the same habitat needs or population characteristics). Application of the MIS concept is project specific - the Forest Service should evaluate each project alternative in terms of the impact on both MIS species habitat and MIS populations. Idaho Sporting Congress v. Rittenhouse, 305 F.3d 957, 971-74 (9<sup>th</sup> Cir. 2002)(emphasis added).

Because the species discussed above are MIS that stand in for other species and their habitat needs, more rigorous analysis was required in the DEIS. This is relevant not only for these MIS, but also because they are prey species for other animals. Please provide more detailed analysis in your subsequent NEPA documentation.

#### D. Endemic Mammals:

SCS-83

Forest Plan Standards and Guidelines for endemic mammals require the Forest Service to “maintain habitat to support viable populations and improve knowledge of habitat relationships of rare or endemic terrestrial mammals that may represent unique populations with restricted ranges.”<sup>103</sup> The DEIS discloses that cable and shovel yarding and road building would most likely result in direct mortality of Keen’s mice and affect nest sites and other habitat structures. Clearcuts would reduce habitat capability for roughly the first ten years and habitat would then be optimum for a period of 10 to 30 years. The DEIS assumes that single tree harvest selections would cause little change to Keen’s mouse habitat because the canopy cover and available downed wood would remain similar to pre-harvest conditions. Again, please explain whether this assumption accounts for single tree harvest of the largest trees.

SCS-84

### V. THERE ARE SIGNIFICANT ERRORS IN THE DEER ANALYSIS.

#### A. Introduction

Neither the viability of deer populations in areas affected the project nor the viability of wolves (not present on Chichagof Island, but whose primary prey is deer) are at issue concerning the Iyouktug project. The DEIS therefore focuses on providing a sufficient number of deer to meet the needs of

<sup>101</sup> Wildlife Resource Report at 81.

<sup>102</sup> Wildlife Resource Report at 83.

<sup>103</sup> Standard & Guideline XVII.

SCS-84  
(cont.)

subsistence and sport hunters. We contend that the analyses in the DEIS and the Wildlife & Subsistence Report fail to fairly disclose the cumulative impact of the project on deer numbers and hunters, that the DEIS has accordingly misled the public that is commenting on the project now, and that unless this is corrected NEPA will be violated and the decision maker will be misled.

SCS-85

The DEIS relies on the notion that "a deer population at carrying capacity should be able to support a sustainable hunter harvest of approximately 10 percent of the habitat capability while also providing a reasonably high level of hunter success."<sup>104</sup> The Forest Service has used the 1997 Forest Plan deer model<sup>105</sup> to "provide an estimate of the potential number of deer available for hunter harvest and the habitat within the WAA that can support them over time."<sup>106</sup> The model was run with the Vol-Strata dataset.<sup>107</sup> The estimate was made by applying to the unitless output of the deer model a multiplier of 100 deer per square mile that was pegged to an HSI<sup>108</sup> of 1.0 in the model's range of habitat values.<sup>109</sup> This deer model has an HSI range of zero to 1.3, of which 1.3 is best quality deer winter habitat.<sup>110</sup> The best habitat in the project area (and WAA) was considered in the modeling to have an HSI score of 1.0 because the area is in an intermediate snow zone.<sup>111</sup> Logging units that have a silvicultural prescription of 25 percent removal of the existing old-growth were scored as if they will not be logged in the modeling that was done for this project.<sup>112</sup> These units include most of the coarse canopy forest that would be logged by the project,<sup>113</sup> and this loss is not accounted for in the modeling. There are 900 acres of units with the 25 percent removal prescription in three of the action alternatives (all except Alternative 5, which does not use that prescription).<sup>114</sup> This acreage is a significant exclusion from the deer modeling. The DEIS claims "the model over-estimates the reduction of habitat capability;"<sup>115</sup> however, there is no authority<sup>116</sup> to disregard the 25 percent removal units (which can cause capability to be over-estimated) and the many shortcomings of the model and the Vol-Strata dataset have not been disclosed in the DEIS and can be expected to cause over-estimation. The deer model has also been used in the DEIS analysis of deer habitat by quartiles and in terms of "prime" and "high value" habitat.<sup>117</sup> All of this analysis, including the definitions of the terms "prime" and "high value" habitat rely on the deer model. The analysis also discusses "quick cruise" surveys that were made of deer habitat;<sup>118</sup> however, the quick cruise discussion is not directed toward determining effects on habitat quality, deer numbers, subsistence hunters, and other hunters, and does not provide sufficient information to compare alternatives.

<sup>104</sup> DEIS at 3-129 and 131 and Wildlife & Subsistence report at 114 and 116 (comparing an estimate to the 10%).

<sup>105</sup> Also known as the DeGayner (1997) deer model, often confused with the Suring et al. (1992) deer model that was created by an interagency work group.

<sup>106</sup> Wildlife & Subsistence Report at 116.

<sup>107</sup> DEIS at 3-80 and Wildlife & Subsistence Report at 92.

<sup>108</sup> HSI means Habitat Suitability Index, and HSI values have no units of measure.

<sup>109</sup> DEIS at 3-81 and 92.

<sup>110</sup> DEIS at 3-80. "Best quality habitat" and "optimal habitat" are the same thing, used interchangeably by biologists.

<sup>111</sup> DEIS at 93. In a low snow zone the HSI for best habitat is 1.3, the best score the model can give.

<sup>112</sup> DEIS at 81, Wildlife & Subsistence Report at 101.

<sup>113</sup> Wildlife & Subsistence Report at 24, 25, and 26.

<sup>114</sup> This is not disclosed in the DEIS or the Wildlife & Subsistence Report, and was determined by our analysis of the unit cards.

<sup>115</sup> DEIS at 101.

<sup>116</sup> The Forest Service has consistently contended that the deer model cannot be modified at the project level, but that is what this action does.

<sup>117</sup> DEIS at 3-81, 82, 83 (Fig. 3-6), 87, and 88, and Wildlife & Subsistence Report at 93, 95-97 and 103..

<sup>118</sup> DEIS at 82 and Wildlife & Subsistence Report at 93, 95 and 98.

SCS-85  
(cont.) | This introduction has provided background information and has hinted at some of the inadequacies of the deer and subsistence analyses. The failures of those analyses are discussed below.

SCS-86 | A. Using the Deer Model to Determine Deer Availability to Hunters Is Improper.

The Alaska Department of Fish & Game commented to the Forest Service in June 2006 that the deer model is "completely unsatisfactory" for the kind of deer availability analysis that has been done in this DEIS and the project's Wildlife & Subsistence Report. Similarly, the authors of the principle authors of 1996 interagency paper "*The Alexander Archipelago Wolf: A Conservation Assessment*" later wrote to the Regional Forester and the TLMP Team Leader in reference to both that paper and Appendix N of the Forest Plan, "We avoided any reference to the deer HSI model in the wolf conservation assessment because we believe that it is unreliable as an estimator of actual deer numbers."<sup>119</sup> The flaw in the use of the deer model for this project is that hunters don't hunt habitat capability or some fraction of it, they hunt real deer. The model is being used in a back-handed way to predict that a satisfactory number of deer will be available, for which it is unsuited. Also, the DEIS failed to disclose the long standing resistance to this use of the model in the scientific community and among resource agencies.

SCS-87 | In the balance of our comments regarding deer, discussion of the deer model is not an endorsement of using the model as it has been in this project, but to point technical flaws in how the model has been used, in recognition that the Forest Service will most likely continue to use the model in this way that it shouldn't.

SCS-88 | B. The Forest Service Erred in Considering Only Average Hunter Success.

The subsistence analysis in the Wildlife & Subsistence Report relies on an "estimated average" deer harvest of 227 deer, and calls that "hunter demand." There are two problems with this approach. First, the number is a reflection of success, not demand. Success can be expected to be less than demand because deer numbers fluctuate. Demand may be satisfied in no years, some years but not others, or all years. Accommodating demand needs to be the focus of the analysis.

SCS-89 | Further, reliance on average success is inappropriate because providing for only the current average can be expected to cause a future decline in the average. To maintain the average it is necessary to provide enough habitat capability to sustain years of high success, not just those that provide success at the current average or lower. Eliminate the potential for high success years, and the average will drop substantially.

SCS-90 | C. The Forest Service Erred in Considering Only Average Winters.

The deer model only considers habitat capability as constrained by average winters, a fact that is not explicitly disclosed in the DEIS although the it does disclose that severe winters can cause greater impacts than suggested by the analyses that it presents. That disclosure is very general, though, and

<sup>119</sup> Person et al. (1997), letters to Phil Janik and Beth Pendleton.

SCS-90 (cont.) | numeric results from the modeling for average winters are used to reach conclusions about satisfying hunters' demand for deer.<sup>120</sup>

SCS-91 | The Forest Service has been advised by the Alaska Department of Fish & Game of a way to better take severe winters into account for deer modeling. It was not disclosed in the DEIS, but is applicable to this project because the area analyzed is in an intermediate snow zone (according to the GIS snow layer that is used with the model). The department said:

Planning for severe winter events is the best policy when considering protection of winter habitat for deer. The deer HSI model fails to do this. Further, climate change predictions for Southeast Alaska indicate the likelihood of extremes of warm and cold during future winters, along with much greater precipitation. That may mean occasional extreme snowfalls, not unlike what was experienced during the 2006-2007 winter. It would be wise, therefore, to emphasize the need to retain winter habitat for deer and calculate HSI under the assumption that all areas are at risk of deep snow. This would result in more scientifically credible evaluations.<sup>121</sup>

We note from the deer model's HSI table that modeling as if the project were in a high snow zone would mean that the highest possible HSI would be 0.70 rather than 1.0.<sup>122</sup> This would make a significant difference in the analysis.

SCS-92 | In view of significant winter of 2006/2007 and the emergency closure of the doe season on NE Chichagof Island just made as a result of it,<sup>123</sup> and the opinion of British Columbia deer biologist Michael Gillingham (in a peer review of the Tongass deer model)<sup>124</sup> that as many as four severe winters in a row should be considered, we believe that at a minimum modeling should be done for this project in way requested by ADF&G.

SCS-93 | In combination, using average hunter success and modeling based on average winters can be expected to have heavily skewed the deer/subsistence analysis in an adverse direction for the resource and use that are at risk.

D. The Forest Service Erred in Modeling the ST25 Units As If They Are Not To Be Logged.

SCS-94 | As noted in the introduction to this section, three of the action alternatives for the Iyouktug project include about 900 acres of units that have a 25% basal area removal prescription (called the "ST25" prescription). In running the deer model these units were treated as if they will not be logged.<sup>125</sup> There

<sup>120</sup> See DEIS at 131 and Wildlife & Subsistence Report at 116.

<sup>121</sup> Detailed comments at 21-22, attached to State of Alaska's April 27, 2007 comments on the Forest Plan DEIS.

<sup>122</sup> The maximum scores (i.e. for best quality habitat) for low, intermediate and high snow zones are 1.3, 1.0 and 0.70 respectively, under the 1997 Forest Plan deer model.

<sup>123</sup> See ADF&G emergency closure notice of November 6, 2007.

<sup>124</sup> His February 14, 1997 peer review of the deer model was done for the U.S. Fish & Wildlife Service in connection with consideration of whether to list the archipelago wolf as threatened. He said models such as this "are deterministic and do not take into account stochastic events so often important in biological systems. It may not matter what the average winter conditions are, if by chance 4 severe winters occur in sequence." And we know that one or two winters can have significant effect from what happened on Kuiu/Kupreanof/Mitkof around 1970.

<sup>125</sup> DEIS at 3-81, Wildlife & Subsistence Report at 101.

SCS-94  
(cont.)

are two problems with that approach. First, it constitutes a fundamental change in the deer model, and in its response to comments on other Tongass DEISs and in its reviews of timber sale appeals, the Forest Service has steadfastly refused to make needed changes to the deer model (e.g. correcting the application of the deer multiplier or using TimTyp or Size-Density vegetation data instead of Vol-Strata) on the basis that changes are not allowed at the project level.

SCS-95

Second, the justification given in the DEIS to exclude ST25 units from modeling is that the prescription is “assumed to maintain a diversity of (plant) communities in the understory and cover in the overstory.” The Wildlife & Subsistence Report says this understory will be “diverse and abundant” and “comparable to plant communities typically found in old-growth stands.”<sup>126</sup> How, or even whether, this relates to the capability of habitat in winter was not discussed. Sources the Forest Service relied on were Deal (2007), Deal & Tappeiner (2002), and Deal (2001). Of these, Deal (2007) is a synthesis of the other two plus other partial cut studies.<sup>127</sup> Although these studies looked at vegetative “structure,” that was done only in terms of basal area and species composition, not canopy structure. Canopy structure is a critical element that affects snow cover, which in turn is a critical factor for the deer model.

The studies above by Deal and others do not substantively consider the effect of partial cuts on deer winter habitat. Deal (2007) refers to what it calls deer “carrying capacity” and includes a graph<sup>128</sup> portraying modeled capacity both in summer and winter in relation to the percentage of red alder in the stand. In the first place this is incongruous with the analyses for deer (and other wildlife) in the DEIS and Wildlife & Subsistence Report, for which alder was not a topic of discussion at all. More importantly, the source of that graph is a study (Hanley et al. 2006) that used a food-based deer model that has not been approved for use on the Tongass, and what it for convenience calls carrying capacity might better be thought of as faux carrying capacity to avoid confusion when doing a winter carrying capacity analysis:

For simplicity, we termed that number “carrying capacity” (deer-days per hectare) while fully realizing that our value does not involve any consideration whatsoever of the dynamics of plant-herbivore interactions or the long-term sustainability of that level of use. Our estimates of food biomass in winter were the summer values minus all deciduous species or plant parts; we did not include any effect of snow.<sup>129</sup>

We see no justification in the documents cited for excluding ST25 units from deer modeling. In addition, the descriptions of the ST25 prescription in Chapter 3 and Appendix B of the DEIS are vague in relation to how and how much the structural elements of deer winter habitat would be affected in either particular units or overall the project alternative that would be selected..

Clumps will range from several trees up to an acre in size with occasional clumps as large as 2 acres. Emphasis for harvest will be placed on selecting Sitka spruce 24 inches DBH or greater and Alaska yellow cedar of all sizes. Harvest of other species and diameter classes will be refined during layout

<sup>126</sup> Same pages in both above documents.

<sup>127</sup> See the abstract in Deal (2007).

<sup>128</sup> Deal (2007) at 528.

<sup>129</sup> Hanley, Deal & Orlikowska (2006) at 741.

- SCS-95  
(cont.)
- based on market conditions at the time. Trees to be retained will represent all species and most of the diameter classes currently in the stand; especially large diameter (30" +DBH) high defect trees that meet safety guidelines and nine to sixteen inch DBH spruce and yellow cedar with high vigor and good seed producing potential.<sup>130</sup>
- SCS-96
- Removal of one to two acres clumps is essentially the creation of small clearcuts, and at the 25 percent rate of removal it is more aggressive than the consideration given explicitly to "group selection" in the Forest Plan deer model. The model considers group selection to be only 10 percent removal. At the other extreme of the prescription, the removal of clumps of "several trees" perhaps would not cause significant harm to wildlife, but problem is that the public reviewing the DEIS has been given no idea how this prescription will be implemented. It could be done almost entirely in, say, 1.8 acre clearcuts with a few of two acres. That may have a significantly different effect, over the 900 acres of ST25 units, than if the majority of removal was in several tree clumps. The prescription needs to be tightened up, and interagency biologists who are familiar with the deer model need to be consulted in how the model should be applied in this project.

SCS-97

E. Deer Modeling and Other Wildlife Analysis Was Done With the Faulty Vol-Strata Dataset.

As pointed out in Caouette et al. (2000), Caouette & DeGayner (2005), and comments by the State of Alaska on both the 2007 Forest Plan DEIS and the 2005 preliminary draft of the Conservation Strategy Review Workshop proceedings, the Vol-Strata dataset is uncorrelated to habitat quality and should not be used for wildlife modeling or analysis. Either TimTyp or Size-Density data should be used instead, and in fact Size-Density data was used for deer modeling in the Forest Plan DEIS. In contravention, in project level planning the Forest Service has been relying on Doerr et al. (2005), which reached the opposite conclusion that Vol-Strata is the preferred dataset. We believe the latter paper should be dismissed from consideration in this project and that all analysis done with Vol-Strata should be redone with either TimTyp or Size-Density.

We believe the Doerr paper should be dismissed for these reasons. It cites the two above Caouette papers but fails to disclose that its conclusions are inconsistent with them or to explore that inconsistency. We believe the inconsistency results from the design of the Doerr study and particular characteristics of the study area (Mitkof Island), in which the forest has been heavily logged and heavily high-graded. From the localized study a conclusion was reached that Vol-Strata should be used for deer modeling forest-wide; however, no justification whatever was provided for that leap. Although Doerr et al. (2005) was peer reviewed, the peer review process must be regarded as fallible<sup>131</sup> and this paper should be viewed with skepticism unless its results can be repeated by a better designed and more comprehensive study. Which means we believe it is premature to apply the study and that it should not be used in this project area that is remote from the study area.

<sup>130</sup> DEIS at 3-112.

<sup>131</sup> See: "Getting it Right," William Block (co-Editor-in-Chief), *Jrnl of Wildl. Mgmt.*, 71(4):1023. This is the journal that Doerr et al. was published in. See also: "Fraud in Science," Jerald Schnoor (Editor) *Env. Sci. & Tech.*, March 1, 2006 at 1376. (We do not allege fraud, but together the two editorials show a broad range of reasons that some peer reviewed published science can mislead and why skepticism can be justified.)



SCS-98

An identified issue for this project is: "*Issue: The effect of the project on deer should be analyzed using volume class not volume strata.*" (DEIS at 1-19) The Forest Service response was that a 2005 directive by Forest Supervisor Cole requires using Vol-Strata data with the deer model. The best available science is that either TimTyp (i.e. volume class data) or Size-Density should be used, and in fact Size-Density data was used in deer modeling for the 2007 Forest Plan DEIS. The National Forest Management Act regulations require that the Forest Service use best available science, and therefore reliance should be placed on Size-Density data, which the Forest Service has already adapted for use in the deer model.

SCS-99

In addition, broadening from the topic of deer, to apply best available science, all wildlife analyses and maps (such as Figs. 3-2) need to use Size-Density data rather than Vol-Strata.

The Forest Service has not disclosed the shortcomings of its Vol-Strata data.

SCS-100

F. The Deer Multiplier Has Been Applied Incorrectly.

The deer multiplier of 100 deer per square mile was derived for an older deer model (Suring et al. 1992) that had a maximum HSI (representing best quality habitat) of 1.0,<sup>132</sup> and ambiguously specified that the multiplier be applied at that numeric value without mentioning that the value corresponds to best habitat. The Forest Service is misapplying the multiplier in an oddball habitat model that has an HSI range to 1.3, without first calculating an equivalent multiplier value that can be used at an HSI of 1.0 in that model. That the multiplier was derived for a best habitat HSI of 1.0 is clear from x-axis in Fig. 1 and Fig. A-1 of the derivations cited in the footnote above. ADF&G has attempted to clarify the Forest Service's error this way:

The only empirical review of HSI values was Dave Person's work relating HSI scores for pellet survey transects and the deer population density along those transects estimated from average pellet groups per plot. That analysis showed that:

1. HSI scores positively correlated with deer density estimated from pellet groups but there was much noise (not surprising).
2. An HSI score of 1 corresponded to a density of 100 deer/mi<sup>2</sup>. At the time of the analysis in 1996, an HSI score of 1.0 was the highest score possible. Subsequently, the highest HSI score was increased to 1.3. Therefore, the 100 deer/mi<sup>2</sup> used by Person would now apply to an HSI score of 1.3.<sup>133</sup>

and in this way:

The 1997 description of the model and its application was incorrect with respect to the deer multiplier. The highest HSI value (whether

<sup>132</sup> Person & Bowyer (1997) Appendix 1 (the wolf PVA), and Person et al. (1997) Appendix 2 (letters to Regional Forester and TLMP Team Leader, August 18 and September 19).

<sup>133</sup> ADF&G comments of June 15, 2006 at 3 on the preliminary draft proceedings of the Tongass Conservation Strategy Review Workshop.

SCS-100  
(cont.)

it is scaled to 1.0 or 1.3) should correspond to a density of 100 deer/mi<sup>2</sup>.<sup>134</sup>

The Forest Service's incorrect use of the deer multiplier causes a 30 percent over-estimation of current and future habitat capabilities, and a consequent under-estimation of the impacts of logging.

SCS-101

G. Significant Shortcomings of the Deer Model Were Neither Disclosed Nor Taken Into Account.

The deer model is useful but has significant shortcomings that need to be taken into account when using it results. The Forest Service has neither disclosed these shortcomings in the DEIS nor has it taken them into account. The shortcomings include no consideration of stochastic events (e.g. severe winters, large-scale blowdown) and no consideration of juxtaposition of habitats, among other factors. We are providing for the record Kiester & Eckhardt (1994) which contains summary material and number of individual peer reviews that review the deer model, and peer reviews of the model that were done at the request of USF&WS in 1997 by Hanley, Klein, Marcot, and Suring.

SCS-102

H. Cumulative Impacts Are Under-estimated By Assuming Past Logging Was Volume Class 5.

The analysis of deer (and marten) habitat capability lost to date to logging was based on the unjustified assumption that past logging was Volume Class 5 old-growth.<sup>135</sup> No substantive proof was provided that this is a reasonable assumption, and we believe that it an under-estimation of the loss of habitat value that has occurred to date.

Table 3CO-6 (p.3-19) predicts a loss of as much as 9 percent of the currently existing coarse canopy forest, as a result of this project. No data are presented in the DEIS for the cumulative loss of coarse canopy forest that has occurred since the advent of industrial-scale logging in the area. We believe the loss up to now has been significant, and the cumulative impact of this project will be more so. These data must be disclosed in the EIS and taken into account in deer and other wildlife analyses.

SCS-103

I. The Analysis of "High-Value" Deer Habitat Based on Quartiles Is Flawed.

The division of deer habitat into quartiles is flawed because it is based on the Vol-Strata dataset, which has no correlation to habitat quality,<sup>136</sup> and as recommended by ADF&G should be based on using the model with an assumption of deep snow (see subsection C, above).

The analysis focuses on percent reduction of the top quartile (so-called "High Value" habitat) for each alternative by logging system. (See DEIS at 3-87.) No aggregate loss is presented, no meaning for this analysis is described, and no standards, guidelines or other criteria are suggested for interpreting the data. Why should any of these further reductions be considered acceptable? It must be borne in mind

<sup>134</sup> Detailed comments attached to State of Alaska's April 27, 2007 comments on the Forest Plan DEIS, at 24.

<sup>135</sup> Wildlife & Subsistence Report at 8, 56, and 92.

<sup>136</sup> Caoette et al. (2000), Caoette & DeGayner (2005), ADF&G comments on the 2006 CSR Workshop preliminary draft proceedings, and detailed comments attached to State of Alaska comments on the 2007 Forest Plan DEIS.

SCS-103 (cont.) | as well that predicted reductions can be expected to be under-estimates, on the basis of the points we have discussed earlier.

SCS-104 | Further, to be useful to the public, quartiles should be mapped with unit boundaries and existing elevational corridors shown.

SCS-105 | J. The Analysis of "Prime" Deer Habitat is Flawed.  
The location and amount of "prime" deer habitat was determined by a different means that relies directly on the Vol-Strata dataset. Because Vol-Strata views timber volume irrespective of tree size (Caouette et al. 2000), it is not a valid indicator of prime deer habitat and can be expected to inflate the amount of such habitat that truly exists.

SCS-106 | In addition the analysis of the prime habitat data that was produced (see DEIS at 3-88) suffers from the same pitfalls in paragraph two of the section above.

SCS-107 | K. The Effect of Increased Road Density and Access on Deer Should Have Been Considered.  
As with wolves and marten, high road densities have adverse impacts on deer populations by allowing unsustainable hunting pressure. The recent ADF&G emergency order (November 6, 2007) expresses the obvious and clear link between road access and deer mortality.

"Roads permit vehicle access into all major watersheds resulting in a popular deer hunting area for local and non-local hunters."<sup>137</sup>

The DEIS does not incorporate road density into its consideration of effects on deer. Please do so in the Final EIS.

## VI. Recreation

SCS-108 | As we pointed out in our scoping comments, some of the information in the recreation section should have been included in the economic analysis section. For example, the fact that recreation and tourism account for 51% of the direct resource dependent employment to SE AK communities is highly significant.<sup>138</sup> The DEIS also indicates that tourism development has increased in the area in recent years and continues to grow. There are four outfitting and guide permits issued – doubled from two in one year (2004). Two permittees reported 55 total clients in 2004. In 2006, one guide reported fifty clients on tours. Tours use the road system to access areas for viewing scenery and hiking.<sup>139</sup> We reiterate that this information needs to be included in the economic analysis section so the decision maker is fully informed about the value and existence of competing resource uses.

<sup>137</sup> ADF&G, November 6, 2007 emergency order

<sup>138</sup> Iyouktug Timber Sales DEIS, 3-92.

<sup>139</sup>

505-109 | Also, in view of this local growth and the larger growth of the recreational industry that we discussed in the economic section, the impacts to recreation are unjustified. The DEIS indicates that the consequences of the project are moderate. But recreational uses such as camping, hiking, fishing and subsistence activities will be disrupted throughout the project area. Scenery will be disrupted. Wildlife viewing will be disrupted for a 10 year period during operations.

The effects are apparently only moderate because activities would recover “quickly” after completion of harvesting. But there will be detrimental effects to the development of a Hoonah-based outdoor recreation industry. Moreover, visitors are not interested in seeing forests that are harvested – visual effects would remain for 20-30 years. In our view, there are major effects on growing guiding and outfitting industry – further degradation of the area could stop growth and shut down existing businesses. In view of our discussion in the economics section about the changing trends toward more benign and economically beneficial uses of the Tongass, the impacts on recreation are unjustified.

**VII. Silviculture and Vegetation**

505-110 | **Blowdown**  
Clearly, blowdown is the dominant force on these forest stands. A naturally high blow-down rate has combined with a legacy of vast, contiguous clearcuts to make blowdown here severe. Please see the Ground-Truth report for information on how the sale should be modified to better account for blowdown. We add the following discussion of blowdown rates in another watershed in the northeast Chichagof area:

The natural rate of windthrow in the Game Creek watershed is high because of its location on northeast Chichagof Island. This area is subjected to frequent southeast and northwest gales. An accelerated rate of blowdown appears to be occurring along harvest unit edges in productive timber areas. There is no apparent correlation between presence of wind damage in the watershed and soil-site factors or in orientation of the buffers and unit edges. Three of five traversed post-Tongass Timber Reform Act buffers in one subwatershed have significant blowdown. In addition, extensive additional blowdown in post-Tongass Timber Reform Act buffers in Game Creek is anticipated over the next 10 years. This expectation is based on historical evidence and the accelerated blowdown that has occurred in the 2 years since harvest.<sup>140</sup>

505-111 | Please analyze the risk of blowdown in view of the Ground-Truthing report and the above comments. Also, please review climatological data related to the intensity of windstorms in the project area. There is ample evidence to suggest that climate change is affecting the intensity of storms on a large scale. Please consider the additional risks posed by increasing high-intensity storms in your cumulative effects analysis.

505-112 | **Cedar**  
Cutting units appear designed to high-grade yellow-cedar trees from the forest. We cannot support this approach, for several reasons.

<sup>140</sup> USDA Forest Service, Report to Congress: Anadromous Fish Assessment (January 1995).

SCS-112  
(cont.) First, with yellow cedar decline, these magnificent trees are becoming rare.<sup>141</sup> This area has always been very near the northern extreme end of the species range, and we fear the cumulative effects of logging will be extirpation of large cedars from the area entirely. The Draft EIS dismisses yellow cedar decline as a consideration, saying it “presently not documented in the Iyouktug project area (Hennon 2006).”<sup>142</sup> Please consider cedar decline as more than a curiosity, and recognize that there is special reason to conserve healthy stands of Alaska yellow cedar.

SCS-113 Second, since cedar is almost always exported from the Tongass, it fails to meet the need of this sale to provide wood for local mills. It is our understanding (based on conversations with local mill owners) that helicopter logging of cedars is not well-suited to their operations. These portions of this sale could be dropped, without any adverse impact on volume to local mills.

SCS-114 **Regeneration**  
Based on ground-truthing these units and evidence from other places, we are concerned that regeneration will be poor in the area’s wet, cold soils. Especially with experimental partial-cut prescriptions, we’re not sure the scientific basis is adequate to support the DEIS optimistic projections. Thus it may not be true that,

“After clearcut harvest, rapid establishment and regeneration of conifers, shrubs and herbaceous plants are expected...[After single-tree selection harvest] regeneration will result in a mosaic of multiple age classes that maintain structure features,”<sup>143</sup> and, “natural regeneration is expected to be abundant and include the same species mix as the original stand.”<sup>144</sup>

SCS-115 **Partial Cuts**  
While we appreciate the effort to explore alternatives to clearcutting, after considering the available evidence we do not see enough support for partial cut logging prescriptions. The Draft EIS describes the effects of this prescription as, “[t]his prescription would maintain or create uneven-aged stands with multiple age (size) classes of trees while maintaining existing species composition.”<sup>145</sup>

Important elements may not have been considered. This prescriptions raises problems of high-grading, since the biggest spruce and yellow cedar will be targeted.<sup>146</sup> Ground-truthing information<sup>147</sup> suggests that there is a big component of large cedars in these units, that are by far the most windfirm trees. Given the uniquely sensitive Karst and wet soils of this area, a spread-out partial cut is probably not the best approach. The potential effects of harvest on the ecology of these areas is not fully known and

<sup>141</sup> Pacific Northwest Research Station May, 2007. *Science Findings*.; Hennon, P.E., D’Amore, D., Zeglen, S., Grainger, M. 2005 *Yellow-cedar decline in the North Coast District of British Columbia*. Res. Note RN-549. Portland OR: USDA Forest Service, Pacific Northwest Research Station. 16 p.

<sup>142</sup> DEIS p.3-110

<sup>143</sup> DEIS p. 3-17

<sup>144</sup> DEIS p.3-111

<sup>145</sup> DEIS p.3-112

<sup>146</sup> Given that one species (cedar) are targeted for removal, how is it reasonable to expect the remaining mix of species to include the full cedar component? The Draft EIS (pp.3-112—3-113) seems to imply that tree planting or other future treatment might be necessary to influence species composition. We are not comfortable relying for regeneration on the vague idea of future planting, etc. projects. Given funding realities, that sounds like the kind of thing that would go in the “deferred maintenance” pile for a generation.

<sup>147</sup> Sitka Conservation Society Groundtruthing team, “Comments on Iyouktug Timber Sale,” January 2007.

SCS-115  
(cont.) | the Draft EIS does not acknowledge the slow growth rate and misinterprets the rotation age. It also can spread impacts to wildlife, watersheds and soils, because ground impact is spread over a larger area, and more frequent entries. Damage to residual trees is substantial with partial-cut prescriptions. Blowdown of remaining trees would be extreme.

SCS-116 | Therefore, although selective cutting would normally be preferable to clearcutting, because of the post-harvest windthrow potential the selective cutting program will affect twice the acreage as a clearcut. There is no clear idea about the "unraveling" potential due to potential blowdown of the remaining trees. SCS's Groundtruthing researchers have documented this unraveling in the area in connection with previous logging, making the scale of the partial cutting proposed here a very risky experiment.

SCS-117 | Finally, the project targets the biggest remaining trees. Because the valley bottom is very wet, there never was a significant amount of big tree forest - only nine percent of the project area was big tree forest before the initial logging. If the sale goes through, there will be only a miniscule portion of these big tree forests remaining.

**VIII. Subsistence**<sup>148</sup>

SCS-118 | The Alaska National Interest Lands Conservation Act (ANILCA) requires the Forest Service to evaluate potential effects on subsistence uses and needs and determine if there is a significant possibility of a significant restriction on subsistence uses.<sup>149</sup> If there is a significant restriction, additional analyses and findings are required by Section 810 and the proposed action must (1) be modified to remove the significant restriction, (2) be dropped, or (3) proceed with the stipulation that formal subsistence hearings are held and subsequent findings published.

The DEIS indicates that the project area lies within documented community use areas for Hoonah, Angoon and Gustavus – approximately 75% of the average annual deer harvest is obtained from WAA 3551. The uses include finfish, shellfish, marine plants, berries and cedar bark. The agency relied on the Forest Plan (p.3-658) to support the conclusion that the only subsistence resource that may be affected in the future by forest activities is deer even though it notes that there could be some risk to fish habitat.

The DEIS assumes that the deer population at carrying capacity should be able to support harvest of approximately 10% of habitat capability while providing a reasonably high level of hunter success. Hunter success declines when demand represents 10 to 20% of habitat capability. If demand exceeds 20% of habitat capability, deer harvest may be directly or indirectly restricted. The DEIS concedes that under all alternatives, habitat capability would decrease and deer distribution would change. And the Deer section concludes by stating that "[a]lthough the Forest Plan conservation strategy maintains for the population viability of deer, the cumulative reduction of elevational connectivity in association with a cumulative reduction in deer habitat capability as a result of past, proposed and future harvest activities and a severe winter in 2006 will likely result in a decline in the deer population."

<sup>148</sup> DEIS, 3-127.

<sup>149</sup> 16 U.S.C. § 1320(a).

SCS-118  
(cont.)

As we have emphasized throughout our comments, deer populations in the project area are severely imperiled. In our economics section, we also addressed the economic value of subsistence resources – for communities using the project area, it is tantamount to a part-time seasonal job. For this reason, we remind you of the Congressional findings that justified the enactment of ANILCA: “the situation in Alaska is unique in that, in most cases, no practical alternative means are available to replace the food supplies and other items gathered from fish and wildlife which supply rural residents dependent on subsistence uses.”<sup>150</sup> We have heard that the Hoonah grocery store is ordering extra beef this winter – a protein source that must be paid for by many people who would normally rely on local hunters for their food. Also, the policy purposes underlying ANILCA are in part to ensure that “the utilization of the public lands in Alaska is to cause the least adverse impact possible on rural residents who depend upon subsistence uses of the resources of such lands.”<sup>151</sup>

ANILCA requires that there be a hearing in affected communities before public lands are used in a way that “would significantly restrict subsistence uses.”<sup>152</sup> A proposed action would significantly restrict subsistence uses in one of two circumstances: (1) “if, after any modification warranted by consideration of alternatives, conditions or stipulations, it can be expected to result in a substantial reduction in the opportunity to continue subsistence uses of renewable resources” and (2) “restrictions for subsistence uses would be significant if there were large reductions in abundance or major redistribution of these resources, substantial interference with harvestable access to active subsistence-use sites, or major increases in non-rural resident hunting.”<sup>153</sup>

After the hearing, the project may occur if the significant restriction is necessary, if the activity involved the “minimal amount of public lands necessary” and if reasonable steps will be taken to minimize adverse impacts.<sup>154</sup> In view of our previous discussion about the economic value of subsistence and the costs of timber harvest, we question whether there is any economic necessity that would justify the significant restriction. Also, please explain how this large sale involves the “minimal amount of public lands necessary.” Finally, please detail the steps that will be taken to minimize adverse impacts – we believe that at a minimum this would mean a substantial downsizing of the sale.

#### **IX. Threatened, Endangered and Sensitive Wildlife Species: Queen Charlotte Goshawk**

SCS-119

Queen Charlotte goshawk have been observed in many of the proposed cutting units and there are nest sites in units 107 and 901. The Queen Charlotte goshawk, is a candidate species proposed for listing under the Endangered Species Act. There are nest sites in two of the proposed units. The goshawk is the rarest and most old-growth dependent of all the North American goshawks and it has been virtually extirpated from Washington and Oregon and is listed as a threatened species in Canada due to extensive logging of old growth forests in those areas. The Forest Plan requires an area of not less than 100 acres of productive old growth forests centered over nest tree or probable nest tree. The DEIS designates a 122 acre nest buffer around the Hippoback nest site and 128 acre nest buffer around the Iyouktug nest site.

<sup>150</sup> 16 U.S.C. § 3111(2).

<sup>151</sup> 16 U.S.C. § 3112(2).

<sup>152</sup> 16 U.S.C. § 3120(a)(2).

<sup>153</sup> DEIS at 3-127.

<sup>154</sup> 16 U.S.C. § 3120(a)(3).

SCS-119  
(cont.)

The wildlife resource report acknowledges that action alternatives will have moderate effects because of disturbances to nest sites resulting from harvest and reductions in foraging and potential nesting habitat.<sup>155</sup> Clearcut and helicopter harvests will occur adjacent to goshawk nest buffers.<sup>156</sup> The planning record shows that there was at one time a biologically preferred recommendation for the goshawk nest buffer that lies in between cutting units 107, 104 and 172.<sup>157</sup> The preferred buffer appears to be substantially larger than the buffer that was actually utilized. Please explain the reason for the reduction.

SCS-120

Also, the analysis should do more than merely dismiss impacts based on buffering the known nest sites. It was pointed out at the Tongass Conservation Strategy Workshop that an emphasis of future research points to prey availability for Queen Charlotte goshawks, particularly related to the second growth component and dynamics across the landscape.<sup>158</sup> There should be discussion about goshawk use for activities besides nesting, including for foraging and winter habitat use (reliance for winter prey availability) which are limiting factors for goshawks in S.E. Alaska. The information regarding present forest structure as well as post-project and stem-exclusion should make it possible to evaluate the impacts on goshawk habitat. The DEIS should also discuss the impacts of road construction and logging, which can deter goshawk nesting and foraging in impacted areas. Even though the U.S. Fish and Wildlife Service did not grant a petition to list Tongass populations of the Queen Charlotte goshawk as a threatened or endangered species, it is clear that current and anticipated habitat loss caused the listing of British Columbian populations. In view of the goshawk's biological vulnerability, the DEIS should provide the hard look required by NEPA.

SCS-121

logging, which can deter goshawk nesting and foraging in impacted areas. Even though the U.S. Fish and Wildlife Service did not grant a petition to list Tongass populations of the Queen Charlotte

SCS-122

goshawk as a threatened or endangered species, it is clear that current and anticipated habitat loss caused the listing of British Columbian populations. In view of the goshawk's biological vulnerability, the DEIS should provide the hard look required by NEPA.

**X. Transportation**

SCS-123

By expanding a transportation system that is already too large, the Iyouktug timber sale represents a step backward in transportation management in this area.

At all levels of the Forest Service, the need for a coherent and sensible transportation strategy is apparent. A vast and decaying road infrastructure exists on the Tongass. Most of this road system was built with short-term timber objectives in mind, and without proper regard for long-term maintenance obligations. In the intervening decades, scientists and communities have learned hard lessons about the side effects of vast wildland road networks, in particular the ways that roads degrade habitat for salmon. In this project area, these national problems are mirrored and complicated by local factors, such as karst, deer, and marten. In scoping, we identified the need to develop and consider a range of transportation options, and to carefully consider the effects of road development.<sup>159</sup> It is very disappointing to see that these concerns have been largely ignored and discounted in the Draft EIS. It is not too late to take the time necessary to take a real hard look at transportation decisions here. Please supplement and modify the FEIS in the ways identified below. We believe that if all relevant factors are adequately considered, the proposed action will look very different than it does now.

<sup>155</sup> Wildlife and Subsistence Resource Report at 51.

<sup>156</sup> Wildlife and Subsistence Resource Report at 51.

<sup>157</sup> Appx 6 to Wildlife and Subsistence Resource Report at 2.

<sup>158</sup> Tetra Tech at 39.

<sup>159</sup> See CWP Scoping comments, October 2, 2006



**A. Transportation priorities are not adequately balanced in the Alternatives.**

**1. New Roads not justified**

SCS-124

The proposed roads for this sale are not warranted, given funding shortfalls and ongoing resource damage from the roads, and loss of roadless areas. Fiscal caution in road construction is demanded by President Bush's transportation policy.<sup>160</sup> The Forest Service Manual at 7703.1 says to, "give priority to reconstructing and maintaining needed roads and decommissioning unneeded roads...", and to "add new roads only where resource management objectives and benefits are clearly demonstrated and where long-term funding obligations have been carefully considered." The TLMP Transportation S&Gs also command that roads only be constructed where they are justified given funding, ecological and economic realities.

SCS-125

The approach in the Iyouktug sale, however, was not one of balance, but of designing a system of roads to serve the timber needs regardless the cost. First the decision was made to cut the timber, and then a road system was designed to support it. According to the Transportation Specialist Report, The transportation systems for the action alternatives were developed to provide necessary road access to timber units in accordance with their respective harvest methods.<sup>161</sup>

SCS-126

This is not balance, or reasoned judgement. At least, an alternative that doesn't build any new road could be a feasible option, and ought to be considered.

**2. Roads not identified for closure**

SCS-127

Additional roads should have been considered for closure, and different methods of decommissioning and restoration should have been considered. There are 34.37 miles of road in Old Growth Habitat LUDs, which is incompatible with the conservation strategy. Yet the project proposes to do nothing about this, and even to build more new roads on top of it. Those road miles should be targeted for closure, as a higher priority over convenient timber extraction. If there are good reasons to keep roads in OGR open, then OGRs logically would need to be moved. Please, at least consider the costs and benefits of a stronger approach towards restoration.

SCS-128

Specific roads that should be targeted for closure include the 8534 road, including the various spurs, and #85093. Also, road 8535 appears to cross medium-vulnerability karst, and could be evaluated for restoration and decommissioning.

SCS-129

**3. Roads Analysis process is not properly completed**

As a general comment, some very good work has been done on Roads Analysis for the project area. However, what good information is available wasn't incorporated into the decision-making process. Also, some additional works remains to be done before any Decision could be made.

The recently updated 36 CFR 212 establishes substantive requirements for the Forest Service in transportation management, including identification of a minimum road system, and a basis for decisions on science-based roads analysis. These and other policies come in response to the recognized

<sup>160</sup> 36 CFR 212.4(a)

<sup>161</sup> Sandall & Heinrichsen 2007, p.6

- SCS-129  
(cont.)
- priority of dealing with a backlog of unmaintained legacy roads. Funding priorities are a special concern. The Forest Service Manual requires Required for road work FSM 7712.12b
- “ 1. New Road Construction. Consistent with the direction in FSM 7703.1, ensure that the addition of new roads serves a documented need and that the decision is informed by a roads analysis (FSM 7712.1).  
2. Maintenance, Reconstruction, and Decommissioning. Use roads analysis (FSM 7712.1) to evaluate opportunities and priorities for reconstruction and decommissioning of roads and to provide the context at a scale and intensity commensurate with the scope of the road management issue or concern. Implementation of road maintenance activities does not require a roads analysis before proceeding; however, roads analysis is a useful management tool to help set maintenance priorities.”
- ...A roads analysis is required whenever “proposed road management activities would result in changes in access, such as changes in current use, traffic patterns, and road standards, or where there may be adverse effects on soil and water resources, ecological processes, or biological communities (road construction, reconstruction, and decommissioning), those decisions must be informed by roads analysis.” (FSM 7712.13)
- For this timber sale, the Draft EIS explains that the roads analysis process being used is a tiered process that includes the Forest Wide Roads Analysis (USFS 2003), an Iyouktug Roads Analysis (Matter 2003), and both an old (2002) and a new (in-process) Access Travel Management EA for the Hoonah Ranger District. The DEIS says,  
“The proposals in this EIS are based on, and compatible with, the past analysis, and the road management objectives from this decision will be included in the new ATM plan.” (DEIS, p.3-141)
- It is great to hear this necessary work has been done. This is a vast improvement over past projects that have had no Roads Analysis at all. However, there are several issues with the Roads Analysis that need to be dealt with before any Decision.
- First, it is not clear how the good information in the Analysis is actually being incorporated into the Decision. It was not used to drive alternatives.<sup>162</sup> The substantive considerations in the Roads Analysis are vital information for a decision-maker, and thus should be contained within the EIS.<sup>163</sup> We encourage you to publish the pertinent area Roads Analysis—or at least the pertinent parts—in the Final EIS as an Appendix.
- SCS-130
- SCS-131
- Also, there appear to be some problems with the Roads Analysis that may have skewed the analysis. For example, road 85305 was apparently not included in the Roads Analysis.<sup>164</sup> Also, the Roads Analysis assumes that everything is open for subsistence use unless designated closed,<sup>165</sup> even though this past policy has changed with the November 2005 planning rule.<sup>166</sup>
- SCS-132
- 4. Motorized Routes are not identified**  
36 CFR 212.50—212.57, adopted in November of 2005, requires that vehicle use on “National Forest System roads...shall be designated by vehicle class”<sup>167</sup> according to certain criteria,<sup>168</sup> and with

<sup>162</sup> This is a major problem in itself, discussed in more detail under point B., above

<sup>163</sup> *Trout Unlimited v. Morton*, 509 F.2d 1276, 1282 (9<sup>th</sup> Cir. 1974). (EIS must contain all pertinent information that is or should be a part of the decision making process);

<sup>164</sup> Putz, 5/17/2007 notes. (#329.pdf in project file)

<sup>165</sup> Matter 2003, see p.5

<sup>166</sup> 36 CFR 212.50—57

<sup>167</sup> 36 CFR 212.51(a)

SCS-132 (cont.) public<sup>169</sup> and government<sup>170</sup> involvement. Non-designated routes are closed to motor vehicles under 36 CFR 261. This is a direct reversal of the old, TLMP strategy of leaving the whole forest open for motorized use, except for the rare closure. How are these regulations being dealt with for this timber sale, and this area?

**B. Adequacy of the DEIS information regarding transportation.**

SCS-133 The Draft EIS contains little information regarding the existing state of the transportation system, or information for cumulative effects. According to the DEIS, there are 57.2 miles of existing road in the project area, including system, unauthorized and decommissioned roads. (DEIS, p.3-140) The DEIS says, "about 36.2 miles of road are currently considered to be open in the project area." (DEIS, p.3-141) It is not clear how this number was arrived at. The area Roads Analysis lists 135.34 miles of road in the area, 93.74 of which was in Forest Service jurisdiction.<sup>171</sup>

SCS-134 Important questions remain about the transportation system. What is the condition of the non-open roads? What is the condition of the open roads? Is there deferred maintenance? Red culverts? Surface erosion problems? Are there transportation alternatives available? Have priorities for obliteration, maintenance and/or restoration been identified? The need to replace all the bridges certainly hints that there are issues, as does information in the project record.<sup>172</sup> Please consider this information in the Final EIS.

**1. Road impacts are not consistently considered correctly**

SCS-135 The Draft EIS takes a fundamentally mistaken view in considering the impact of transportation management decisions. While we support the concept of closing roads after their useful life is over, the EIS goes too far in forward-looking speculation about future decommissioning/ storage/ maintenance work that will take place. The Draft EIS presents false confidence in our ability to make long-term commitments to close out roads after the conclusion of a ten-year-long timber sale, to the degree that the "direct impact" of the sale is understood to be a landscape where roads proposed to be built are already closed. Whatever the merits of closing the roads later, all sorts of events could intervene to prevent this from taking place, and it's not an intrinsic part of the decision. Funding priorities could change. Public demand could change. An outfitter could start a business down one of the roads, raising a significant new issue. Additional timber sales could be scheduled on the road system. This approach is not consistent with NEPA, which requires consideration of direct and indirect effects.<sup>173</sup>

SCS-136 Also, the DEIS does not consider the effect of increased use of roads as a result of this sale. There will be substantial log truck and administrative traffic as part of and a direct consequence of the proposed

<sup>168</sup> §212.55

<sup>169</sup> §212.52

<sup>170</sup> §212.53

<sup>171</sup> Matter 2003, p.2

<sup>172</sup> For example, the 2001 ATM FONSI identifies Roads 8534 and 85093 as causing sedimentation and landslide problems, and indicates some road may be through critical brown bear habitats.

<sup>173</sup> 40 CFR 1502.16 "Direct effects...are caused by the action and occur at the same time and place." 40 CFR 1508.8(a) "Indirect effects...are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable," such as growth inducing effects. 40 CFR 1508.8(b)

- SCS-136 (cont.) | action. The DEIS says, "In all action alternatives the amount of road use in the area is not expected to change substantially as a result of these closures because the roads receive very little use." (DEIS, p.3-147) Please consider the thousands of trips required over a period of decades to carry out this very large timber sale, and the impact that will have on wildlife, sediment, and the transportation system.
- SCS-137 | Also, connected transportation actions are improperly classified as "ongoing" maintenance operations under cumulative effects, rather than indirect consequences of the proposed action. The reconstruction and bridge-repairs are connected actions under NEPA. Appendix D of the DEIS indicates that (NFS Roads 85305, 85307, 85309, and perhaps part of 8534) are anticipated "ongoing" actions. In the case of the 8534 road, this is not correctly classified as an "ongoing" action, because under ATM plan itself, closure of this road hinges on the present decision. In the case of 8534 and all other potentially-closed roads in the project area, at a minimum the Iyoutug Decision will keep them open for several years longer. This is the direct effect of the project. Once open and maintained for this sale (+/- 10 yrs), there is no guarantee that the 8534 road, or any other roads, will actually be decommissioned.
- SCS-138 | Furthermore, by committing the area to timber harvest on a short rotation, this Decision will also require it be reconstructed more often in the future.
- SCS-139 | The Draft EIS says keeping the Road 8534 open for this sale is called for in the ATM plan. However, the FONSI only says this road "may be needed to access a timber sale scheduled in the next few years." (2001 ATM FONSI, p.1) (emphasis added) Nothing about this ATM Decision moots NEPA's requirement to consider impacts. Whether or not it is needed, and the impacts of that decision, need to be evaluated in an EIS by comparing alternatives. Please take a hard look at the impacts and management alternatives available for the 8534 road. Our recommended action for this road is to close it, and to forego harvest of the large helicopter units (Units 125, 185, 184) to mitigate the need for future administrative road access.
- SCS-140 | **2. Please assure accurate roads mapping**  
There is no transportation system map in the Draft EIS. Please include a transportation map in the Final EIS. The information of a map is essential to identifying impacts of roads, and planning road system management. Especially useful would be identified locations of surface erosion, red culverts, bridges that need repair, and other flagged places of interest.
- SCS-141 | How sure are you of road mile figures, and what are they based on? According to the area Roads Analysis (Matter 2003), "in almost all instances the miles of road documented in the ATM, are different than what is reported in INFRA (the official Tongass Road Atlas)."<sup>174</sup> The mix of transportation analysis, and shifting definitions and regulations covering various roads, makes careful attention to detail important. Please assure the best available mapping data is used and all roads are accounted for. Please also get the road atlas straightened out, and establish some adequate mapping protocol for tracking closed temporary and stored roads, that will not be shown on the official maps but will be part of the forest service transportation infrastructure.
- SCS-142 |
- SCS-143 | It is not clear from the Alternatives maps in the DEIS what the status is of the last segment of Road 8534. The legend indicates it is "other existing road," rather than "existing road."

<sup>174</sup> Matter 2003, p.7

**3. Please take a harder look at transportation system maintenance.**

SCS-144

The fact is, building new roads and implementing timber sales on a road system inescapably cause long-term maintenance obligations. These follow relatively fixed costs that can be estimated and tracked. In the short term, the project will impose the cost of bridge reconstruction, resurfacing, and lost opportunity cost of roads that could otherwise have been decommissioned. In the long-term, proposed roads will have to be maintained for administration of these units, including notably possible commercial thinning. We notice these calculations were begun in the Transportation Specialist Report (2007). Please do a complete cost accounting for roads, and include these long-term obligations in the economic calculation in the Final EIS.

SCS-145

In the Draft EIS, a major part of the ecological and economic equation, maintenance, is being left out, masking negative long-term impacts of the proposed sale. The DEIS does not indicate any long-term maintenance obligation from proposed roads and units. It is not counted in the timber economic calculation. The DEIS says that under action alternatives, 35.7 miles of open road will remain post-harvest, compared with 34.9 miles under No-Action, a difference of 0.8 miles, "increasing the amount of road maintenance required in the project area. (DEIS, p.3-146) But, under Alternatives 3, 4, and 5, it says, "the cumulative effect of these three alternatives is a reduced amount of road maintenance required in the project area." (DEIS, p.3-146)

SCS-146

The government track record on meeting maintenance obligations is mixed. Inadequate maintenance money is the gorilla in the room for transportation management. There is not maintenance money available to meet the needs created by the proposed action. Forest Roads Analysis at all levels show very high amounts of deferred maintenance.<sup>175</sup> In the project area, the Roads Analysis finds a current backlog of \$1,260,054, and says, This and other recent roads analysis on the Tongass have pointed out that the actual funding, for road maintenance, is around 10% of the estimates that are displayed in INFRA. This amount of annual road maintenance funds is not sufficient to keep all the forest roads in the IRAP2 fully maintained. This district as well as others have fallen behind and are building up an ever growing backlog of deferred maintenance needs.<sup>176</sup>

SCS-147

There are many examples of "temporary" roads that were never closed out,<sup>177</sup> and of designated open roads that were abandoned to fall into disrepair. The Final EIS should take a hard look at the numbers. How much money, exactly, is available? What are the other maintenance priorities? If there is a maintenance backlog, how big is it? How much would these roads cost to fix?

SCS-148

Additionally, please take a hard look at substantive compliance with maintenance obligations, along existing roads. The DEIS says, All roads, both existing and proposed, would be located, designed, constructed or reconstructed, and maintained following Best Management Practices (BMPs) and other applicable laws, regulations, and specifications."<sup>178</sup>

<sup>175</sup> Tongass Roads Analysis 2003;

<sup>176</sup> Matter 2003 p.22

<sup>177</sup> See footnote to Table 3TR-1, DEIS p. 3-143 The DEIS includes 0.22 miles of existing, unauthorized road as "temporary" road.

<sup>178</sup> DEIS, p.3-144

SCS-148  
(cont.)  
SCS-149

This is a comforting but perhaps unwarranted assertion. Existing roads are not maintained according to BMPs, as evidenced by erosion, red culverts, miles of unauthorized roads and years of deferred maintenance. Why is it reasonable to assume this timber sale will buck the trend? An especially critical question is: What impact do un-maintained roads have on resources? There is evidence that failure to achieve BMPs on roads in the project area may cause sedimentation, in apparent violation of State Water Quality Standards.<sup>179</sup> Red pipes are another impact of deferred maintenance, and another violation of the Clean Water Act.<sup>180</sup> The locations of these pipes should be considered in the FEIS, and they should all be fixed.

QuickTime™ and a decompressor are needed to see this picture.

181

SCS-150

The Draft EIS is dancing around an issue that should be fairly straight-forward. It is a clear part of the cumulative effect of this project that long-term maintenance obligations will be incurred. Please list them out by alternative so we know what we're getting into.

**4. Road reconstruction**

SCS-151

The approach to the difference between road maintenance and road reconstruction is not clear in the Draft EIS. A lot of what is being counted as routine maintenance actually is road reconstruction with an effect-cause relationship with this timber sale. The DEIS says, Road maintenance consists of periodic repairs to an existing road surface, brushing, and cleaning and repairing drainage features to keep the roads in the safe and useful condition for which they were designed. Road reconstruction is heavier maintenance of an existing road such as culvert replacement, surface rock replacement, and subgrade repair. Road maintenance and reconstruction consists of performing the work necessary to retain the road's traffic service level.<sup>182</sup>

SCS-152

The DEIS indicates that ten of the eleven stringer bridges "must be replaced to accommodate log trucks prior to timber haul." (DEIS, p.3-140) The DEIS says, "Even if timber sales are not offered in the Iyoutug area, these bridges would need to be replaced in the near

<sup>179</sup> Section 313 of the Clean Water Act, 33 U.S.C. §1323(a). See Idaho Sporting Congress v. Thomas, 137 F.3d 1146, 1153 (9th Cir. 1998); National Wildlife Federation v. U.S. Army Corps of Engineers, 384 F.3d 1163, 1167 (9th Cir. 2004).

<sup>180</sup> Section 404 of the Clean Water Act, at 40 CFR 232.3(c)(6)(vii), "The design, construction and maintenance of the road crossing shall not disrupt the migration or other movement of those species of aquatic life inhabiting the water body."

<sup>181</sup> Matter 2003, p.11

<sup>182</sup> DEIS, p.141

SCS-152  
(cont.)

future, 3 to 5 years, if the roads are to remain open for public use.<sup>183</sup>  
Please take a closer look at this conclusion. It seems that except for this sale, these bridges could continue to function at a diminished standard for other users. Recreation, subsistence, administrative access and timber management (e.g. thinning) may not require bridges be fixed— at least not to the same high standard. Replacing and upgrading these bridges therefore is an indirect (or direct) impact of the proposed action.

SCS-153

**5. “Temporary” roads are mislabeled.**

Temporary roads are a big part of the transportation strategy in the DEIS. The proposed action would construct 3.8 miles of new NFS road, and 13.4 miles of temporary road, and recommission-then-decommission 6.9 miles of existing road. The definition of a forest road, under **36 CFR 212.1**, is: Forest road or trail. A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

The definition of “temporary road,” under **36 CFR 212.1**, is:

A road or trail necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road or trail and that is not included in a forest transportation atlas.

What are being called “temporary” roads in the EIS actually appear to be the same thing as system roads. The Transportation Specialist Report in the project file refers to them as system roads, “National Forest System (NFS) roads are planned either for long-term management or for temporary use ...”<sup>184</sup> On the ground, the management actions appear identical. In all three cases, they will be shotrock roads found to be necessary and built to accommodate log truck traffic. They will all have drainage structures removed. For Alternative 3, the DEIS says, “All of the new NFS road would be closed and placed into storage after the harvest. Temporary roads would be decommissioned post-harvest. Approximately 6.3 miles of existing road would be reconstructed and then closed after timber harvest completion...”<sup>185</sup> In fact, “decommissioning,” “storage,” and “closure” of roads are identical in every respect—culverts are pulled and the roadbed abandoned to alder regeneration. This method is in contrast to a true temporary road, as under the Clean Water Act regulations, in which “all temporary fills shall be removed in their entirety and the area restored to its original elevation.”<sup>186</sup> The Transportation Specialist Report indicates, “the physical on-the-ground changes are similar to a decommissioned road; however, roads in storage are considered part of the long-term forest road transportation system and may be opened to vehicular traffic in the future.”<sup>187</sup> Apparently the difference is simply speculation about future decisions. In all probability all of the roads that would be closed, whether temporary or system roads, will under proposed silvicultural rotations be opened again (if they are ever closed). The accuracy of the term “temporary road” is also challenged by the quarter-mile of existing “unauthorized” road which is proposed for reconstruction in this sale, and which is somehow considered a “temporary” road.<sup>188</sup>

SCS-154

The only unique thing about “temporary” roads seems to be that they won’t be mapped along with

<sup>183</sup> DEIS p.3-140

<sup>184</sup> Sandall & Heinrichsen 2007 *Iyoutug Transportation Specialist Report*. @p.1

<sup>185</sup> DEIS, p.3-145; emphasis added

<sup>186</sup> 40 CFR 232.3 (xv)

<sup>187</sup> Sandall & Heinrichsen 2007, p.5

<sup>188</sup> footnote to Table 3TR-1, DEIS p. 3-143

- SCS-155 | system roads, and the Forest Service does not intend to monitor or maintain them once the crossings are pulled. Thus, temporary roads could cause increased environmental impacts due to lack of monitoring or other restoration or maintenance work.
- SCS-156 | This misapplication of the term “temporary” roads masks the long-term environmental and economic impacts of proposed roads. “Temporary” roads presumably will not be designated for motorized use, and so will not show up on maps or be counted for road density calculations. Thus, this and all future decisions will underestimate the existing impact of roads on the landscape.
- SCS-157 | The problem is not merely semantic. We fear there is too much confidence placed in road closure to mitigate impacts, at the expense of making hard choices about building roads to begin with. To be clear, pulling crossings is in general a wonderful approach. It is much better to do, than not to do. However, it is not adequate to compensate for the road damage. A recent study from the Pacific Northwest is worth quoting at length:  
Accelerated surface erosion from roads is typically greatest within the first years following construction although in most situations sediment production remains elevated over the life of a road (Furniss et al. 1991; Ketcheson & Megahan 1996). Thus, even “temporary” roads can have enduring aquatic impacts. Similarly, major reconstruction of unused roads can increase erosion for several years and potentially reverse reductions in sediment yields that occurred with non-use (Potyondy et al. 1991). Where roads are unpaved or insufficiently surfaced with erosion resistant aggregate, sediment production typically increases with increased vehicular usage (Reid & Dunne 1984)...  
  
...It is perhaps widely accepted that “Best Management Practices” (BMPs) can reduce damage to aquatic environments from roads. However, time trends in aquatic habitat indicators indicate that BMPs failed to protect salmonid habitats from cumulative degradation by roads and logging (Espinosa et al. 1997). Ziemer and Lisle (1993) noted a lack of reliable data showing that BMPs are cumulatively effective in protecting aquatic resources from damage. Although road location, design, construction, and maintenance may have improved over the years, many tens of thousands of kilometers of roads remain on public and private lands that were constructed with relatively low concern for their environmental consequences (e.g., see Figure 2). Until problem “legacy roads” are improved (e.g., surfaced, stabilized, obliterated) they will continue to degrade water quality and aquatic systems for many years. Furthermore, the assumption that road obliteration or BMPs will offset the negative impacts of new road and landing construction and use is unsound since road construction has immediate negative impacts and benefits of obliteration accrue slowly.”<sup>189</sup>
- SCS-158 | **4. Please consider helicopter yarding in transportation management**  
  
The Draft EIS completely fails to incorporate helicopters into its transportation planning. None of the Road or Transportation Analysis documents plan for helicopters. Yet, there are important considerations for sales with a large helicopter component such as this. For example, the locations of landings and sortyards and fueling stations need to be determined. Fuel, with the inevitability of leaks and spills, raises unique issues. Possible overflights of sensitive areas, such as buffered bear dens or goshawk nests, should be identified and avoided. Please consider these issues in the Final EIS.
- 5. Economic impacts of roads**
- <sup>189</sup> Beschta, R.L., Rhodes, J.J., Kauffman, J.B., Gresswell, R.E., Minshall, G.W., Karr, J.R., Perry, D.A., Hauer, F.R., Frissell, C.A., 2004. Postfire management on forested public lands of the Western USA. *Conservation Biology*, 18: 957-967.



SCS-159

Thank you for including actual numbers for road construction and reconstruction costs. (DEIS, p.3-144) This is very useful and topical information. According to Table 3TR-2 (DEIS, p.3-144) Alternative 1, no action, would require \$240,000 for four bridges, whereas Alternative 2 would require \$1,020,000 for seventeen bridges, a difference of \$780,000 and thirteen bridges. Missing from the equation however are the indirect effects of maintenance, and long-term transportation obligations intrinsic in the decision to log units on the road system. These costs are externalized onto the taxpayer, and onto damage to resources like fish.

**XI. Watershed and Fish**

SCS-160

The project area contains five watersheds and one frontal unit which range in size from 2,851 to 14,925 acres and provide habitat for six species of fish – chum, coho and pink salmon, steelhead, cutthroat & dolly varden trout and other aquatic and riparian species. There are 330 miles of streams and 12 acres of ponds in the project area. The Iyouktug creek watershed contains the more valuable anadromous fish habitat because there are more accessible channels and Suntaheen Creek contains high quality resident habitat.

The project would remove up to 28% of the forest canopy in several subwatersheds, increasing stream temperatures. Road construction and other logging activities increase sediment load and stream flows, compromising spawning and rearing habitat. Because of existing damage to watersheds in the project area and to watershed in adjacent private lands, further compromise of fish habitat is unjustifiable.

**A. Water Quality**

**1. Temperatures**

SCS-161

Timber harvests affect stream temperatures due to a loss of shading with its consequential temperature increases and decreases in the amount of dissolved oxygen. Fish streams should have temperatures of less than 15 degrees Celsius for migrating and rearing areas and temperatures should be less than 15 degrees Celsius for spawning, egg and fry incubation areas. Higher stream temperatures reduce egg and fry survival, reduce growth rates due to increased rates of respiration and metabolism, cause premature smolting and shifts in emigration timing reducing marine survival, increase vulnerability to pollution by increasing the toxicity of organic chemicals and metals and increase risks of predation and disease.<sup>190</sup>

The DEIS relies on data from Prince of Wales Island watersheds as establishing that there is “no predictive relationship between harvest and high stream temperature.”<sup>191</sup> This data was collected at least 15 years after harvest occurred and the DEIS relies on the fact that the majority of logging in

<sup>190</sup> Richter, A. and S.A. Kolmes. 2005. Maximum Temperature Limits for Chinook, Coho, and Chum Salmon and Steelhead Trout in the Pacific Northwest. Reviews in Fisheries Science, 13:23-49.

<sup>191</sup> DEIS 3-152.

SCS-161  
(cont.)

Iyouktug occurred 15-20 years ago, making it unlikely that this harvest is causing temperatures to exceed 15 degrees.

We question relying on the Prince of Wales study because the effects of timber harvest on stream temperatures can be specific to the character of the riparian buffer. As an initial matter, timber harvest is correlated with increases in stream temperature but it seems to be agreed that the most critical problem is the removal of riparian vegetation.<sup>192</sup> Therefore, stream buffers seem to be the most effective tool for addressing stream temperature increases.

SCS-162

But we have two concerns about stream buffers in the project area and request that you provide additional analysis in subsequent NEPA documentation. First, studies show that even though buffer width is the simplest means of minimizing effects on stream temperatures, the maximum benefit would be achieved by designing riparian buffers that maintain a desired angular canopy density.<sup>193</sup> Please discuss the quality of riparian vegetation and angular canopy density. Second, as we previously noted, watersheds on northeast Chichagof Island experience a high natural rate of windthrow and significant blowdown has occurred in 60% of the post-Tongass Timber Reform Act buffers traversed.<sup>194</sup> In view of the high windthrow potential in the project area, please discuss whether the riparian buffer will be adequate to protect riparian vegetation.

SCS-163

We recognize that in a general sense, riparian buffers may have once been adequate to ensure adequate stream temperatures in Tongass watersheds. But the concerns noted above are more compelling in view of rising global temperatures. A recent stream monitoring study by Cook Inlet Keeper and Homer Soil and Water Conservation District showed that in 2005 there were more days than ever before that exceeded temperature limits considered healthy for salmon.<sup>195</sup> In Southeast Alaska, the 2006 pink salmon run was nearly 80% less than predicted.<sup>196</sup> The management director of the Alaska Department of Fish and Game's commercial fisheries division attributed the poor run in large part to the warm temperatures that occurred during the parent year, 2004.<sup>197</sup> Scientific data taken from the Yukon River indicates that salmon are already suffering from the effects on rising stream temperatures in Alaska: "[e]xamination of historic temperature data suggests that rising average water temperatures during the past three decades appear to be associated with the increase in disease and potential pre-spawning mortality among Yukon River Chinook salmon."<sup>198</sup>

SCS-164

Because of the economic, cultural and recreational value of salmon, we request that you incorporate a discussion of climate change and rising stream temperatures in your cumulative effects analysis. The assumption that stream temperatures will be fine because of a fifteen year old study done on Prince of

<sup>192</sup> Patrick Teti, The Effects of Forest Practices on Stream Temperature: A Review of the Literature (1998)  
<sup>193</sup> Patrick Teti, The Effects of Forest Practices on Stream Temperature: A Review of the Literature (1998)  
<sup>194</sup> USDA Forest Service, Report To Congress: Anadromous Fish Habitat Assessment (1995).  
<sup>195</sup> See Sue Mager, Changes in Alaska Salmon Stream Habitat Due to Climate Warming (October 10, 2007).  
<sup>196</sup> Deborah Williams, The Evidence in Alaska – 2004/2005/2006: The Epicenter for Global Warming in the Nation (2007)(compiling and summarizing news articles about the various effects of global warming in Alaska).  
<sup>197</sup> Deborah Williams, The Evidence in Alaska – 2004/2005/2006: The Epicenter for Global Warming in the Nation (2007)(compiling and summarizing news articles about the various effects of global warming in Alaska).  
<sup>198</sup> Koran, R., P. Hershberger and J. Winton. 2003. Effects of Ichthyophonous on Survival and Reproductive Success of Yukon River Chinook Salmon. Federal Subsistence Fishery Monitoring Program, Final Project Report No. FIS 01-200. U.S. Fish and Wildlife Service, Office of Subsistence Management, Fishery Information Services Division, Anchorage, Alaska.

- SCS-164  
(cont.)
- Wales Island ignores the differences between the two islands and more importantly ignores the very real possibility that stream temperatures in the project area have already been affected by climate change. Alaska based studies anticipate a predicted water temperature change of 3 degrees Celsius or more in non-glacial systems.<sup>199</sup> The cumulative effects analysis is incomplete without that discussion. Also, in order to ensure that the cumulative effects analysis and your discussion of existing watershed conditions are informed by the best available data, please collect current stream temperature and stream flow data in project area watersheds.
- SCS-165

## 2. Sediment Loads and Roads

- SCS-166
- The Draft EIS does explain some substantial negative impacts from roads on fish and watersheds, and does a fair job explaining the ways that roads can kill salmon. The analysis of effects, however, by grouping impacts into vague categories does more to prevent understanding than improve it. Very specific information is available about effects of roads on watersheds, so why reduce that great information to a vague "moderate" label? Much more useful information for the Final EIS would be pinpoint locations of sedimentation, passage problems, slides, etc. on a map.
- SCS-167
- We are concerned with the cumulative effects of 230 stream crossings, including five red culverts in the project area, and apparently several identified (but unmapped in the EIS) slides and washouts at steep stream crossings.<sup>200</sup> The Iyoutug watershed in particular is very intensively roaded. One concern is the 8534 road, which is identified in the project file as an ongoing sediment problem that is waiting only on this timber sale to be fixed. As indicated in our comments the "Transportation" section, we would like to see much closer attention paid to maintaining the road system with regard for fish.
- SCS-168
- We are also concerned about the effects of increased sediment on fish. Increase in sediment beyond natural conditions may be caused by equipment in the stream, inadequate crossings, logging or road induced landslides & storm runoff over disturbed areas. Roads contribute more sediment to streams than any other land management activity. Higher erosion rates occur with heavy traffic. Salmonid survival declines in some Alaska streams when timber harvest increased amount of fine sediment. The DEIS seems to excuse this as a short term effect because the amount of gravels returns to prelogging condition in 5 years. This statement completely ignores the life cycle and habitat use patterns of salmon. Most salmon species complete their spawning cycle within 2-4 years. If they are displaced from spawning habitat in their natal streams, the run can be lost permanently. Please explain the basis of the assumption that degradation of salmon habitat would have only short term effects. The Iyoutug and Suintaheen watersheds have the highest sediment risk due to extensive past and proposed harvest and in view of the potential to affect channel stability and available spawning gravels as well as 119 cumulative stream crossings, road construction will have unacceptable consequences for fish habitat.

## B. Clean Water Act Compliance

<sup>199</sup> Kyle, R.E. and T.B. Brabets, 2001. Water temperature of streams in the Cook Inlet basin, Alaska, and implications of climate change. U.S. Geological Survey Water Resources Investigation Report 01-4109.

<sup>200</sup> DEIS p.3-153

SCS-169 | Section 313(a) of the Clean Water Act provides that all federal agencies “engaged in any activity resulting, or which may result, in the discharge or runoff of pollutants,” must comply with the Clean Water Act’s requirements, including limits imposed by states through the Act. 33 U.S.C. § 1323(a). The logging and road building activities approved by the Forest Service in this sale will likely violate the Clean Water Act. Additionally, NEPA requires the Forest Service to discuss likely water quality violations and their impacts in an EIS. The DEIS has not discussed likely water quality violations.

SCS-170 | For streams classified for all fresh water uses under 18 AAC 70.020, the turbidity standard is:  
  
May not exceed 5 nephelometric turbidity units (NTU) above natural conditions when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU.<sup>201</sup>

As the most recent monitoring data indicates, the turbidity standard is often violated following the commencement of construction activities.<sup>202</sup> This data suggests that activities associated with this project will violate the water quality standard for turbidity. Please discuss any data collected that analyzes turbidity exceedances resulting from road construction.

SCS-171 | The sediment standard for streams classified for water-supply uses is: “No measurable increase in concentration of settleable solids above natural conditions, as measured by the volumetric Imhoff cone method.”<sup>203</sup> The sediment standard for streams classified for growth and propagation of fish does not permit increases more than 5% by weight above natural conditions.<sup>204</sup> The Forest Service’s own studies show that logging and road building activities violate the sediment standard. For example, a 1987 report by Steven Paustian concluded that “[s]ome short term degradation of water quality from increased turbidity and suspended particulates is unavoidable, particularly during road building.”

SCS-172 | Consequently, this project will result in violations of the sediment standard. / It is our impression that there has not been monitoring of sediment loading in streams since the 1980s in violation of the Forest Plan’s monitoring requirements. Given the admission that short-term degradation from sediment loading is unavoidable, the Forest Service needs to find cost-effective ways to monitor sediment loading from logging and road construction activities.

**C. Water Yield**

SCS-173 | Your cumulative effects analysis should include a discussion of the impacts of climate change on water yield. There may be increases in annual precipitation, flooding events, reductions in summer baseflows and more frequent rain-on-snow events. Please seek out and discuss how climate change combined with canopy removal could increase risks of higher peak stream flows.

**XII. Wetlands**

<sup>201</sup> 18 AAC 70.020(b)(12).

<sup>202</sup> Forest Service’s Annual Monitoring & Evaluation Report – 2004, Soil and Water at 21.

<sup>203</sup> 18 AAC 70.020(b)(9).

<sup>204</sup> 18 AAC 70.020(b)(9).

SCS-174

The DEIS indicates that that past and proposed road construction has avoided wetlands because 42% of existing roads are on wetlands, which constitute 48% of the project area. Executive Order 11990 requires federal agencies to avoid adverse impacts associated with wetland modification. In our view, the presence of 42% of the roads in 48% of the area does not meet this standard. If you proceed with this sale, please remove any cutting units which would require additional road construction in wetlands.

### XIII. Submission of Comments

These comments are respectfully submitted by:

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Responses to Comments

Appendix B



Larry Edwards  
<larry.edwards@wdc.greenpeace.org>

11/19/2007 11:35 PM  
Please respond to Larry Edwards

To: comments-alaska-tongass-hoonah@fs.fed.us  
cc: Bruce Baker <bhbaker@alaska.net>, Gabriel Scott <gscott@cascwild.org>, Gregory Vickrey <gregory@tongassconservation.org>, Paul Olson <paul@sitkawild.org>

Subject: Iyouktug

Hello,

Attached are joint comments on the Iyouktug DEIS by five organizations.

Some graphics submitted for these comments are non-functional, and if you will accept an update we will submit a revision that includes them tomorrow.

-- Larry Edwards  
907-747-7557  
Sitka Field Office

Greenpeace Iyouktug\_DEIS\_Comments\_SCS\_GP\_CWP\_TCS\_JGSC\_\_19Nov07.pdf



SCS-175

**Responses to SCS – Paul Olson, Larry Edwards, Gabe Scott, Gregory Vickrey, Bruce Baker, Sitka Conservation Society, Greenpeace, Cascadia Wildlands Project, Tongass Conservation Society, Juneau Group of the Sierra Club**

**SCS-1** – Thank you for reviewing the Iyouktug DEIS and for providing references. The documents you placed in the “ftp” site were provided to the IDT and placed in the project record. The IDT reviewed the documents provided and used what they considered to be the best available science (Iyouktug project record).

**SCS-2** – We recognize you support the No-action Alternative. Please see responses to BC-4, BC-5, and EH-1.

**SCS-3** – This project is in compliance with the Forest Plan. Please also see responses to BC-4, 6, 17, 18, 23, and 27; these comments are also further discussed below.

**SCS-4** - The emphasis for the Timber Production LUD is timber management. Multiple uses are maintained throughout the Forest. All Forest Plan Standards and Guidelines were incorporated into the Iyouktug project through project design. These comments are also further discussed throughout these responses.

**SCS-5** – The Forest Service corrected the deficiencies identified by the U.S. Court of Appeals for the Ninth Circuit by completing the 2008 Tongass National Forest Land and Resource Management Plan (Forest Plan) Amendment. As described in detail in the Final EIS and Record of Decision for the Forest Plan Amendment, the amended Forest Plan provides extensive protection for roadless areas. All of these documents are available at <http://tongass-fpadjust.net/>.

The Iyouktug Timber Sales project is consistent with the 2008 Forest Plan amendment, as described in the transition language in the 2008 Forest Plan Amendment Record of Decision (USDA Forest Service 2008b and see Chapter 1 of the Iyouktug FEIS, Forest Plan Amendment).

Related to climate change, please also see responses to SCS-26 through SCS-29.

**SCS-6** – The Forest Plan Amendment did further analysis on the allocation of LUDs in roadless areas. Alternative 1 in the Forest Plan Amendment would have assigned non-development LUDs to all inventoried roadless areas. The decision whether the inventoried roadless areas in the Iyouktug project area will be managed for timber production was made at the Forest Plan level. The Iyouktug roadless areas are lower value roadless areas in the 2003 Roadless SEIS and the Iyouktug project area is within the Phase 1 portion of the suitable land base in the 2008 Forest Plan Amendment.

**SCS-7** - A revised market demand analysis was done for the Forest Plan Amendment process. This market demand analysis was used to determine the 2007 market demand as stated in the Iyouktug DEIS Appendix A and has been used to update the market demand for FY 2008 (Iyouktug FEIS Appendix A).

See the responses from SCS-54 to 59 for more information.

**SCS-8** – The IDT and the Responsible Official considered many alternatives in addition to Alternatives 1 through 5. As described in the DEIS and FEIS, Chapter 3, several “downsized” options and alternatives that build no new roads and/or do not enter roadless areas were

considered. Alternative A considered harvesting timber using only existing roads. Alternative B considered harvesting timber using only existing roads and helicopter yarding. Alternative D avoided entering roadless areas and used only ground-based systems. And Alternative F looked at small sales only. These and additional alternatives were eliminated from detailed analysis for the reasons described in the DEIS and FEIS, Chapter 2, Alternatives Considered but Eliminated from Detailed Study section. Please also see responses to BC-4 and EH-1.

**SCS-9** – Alternatives 3, 4, and 5 respond to all the significant issues to varying degrees (DEIS and FEIS, Chapter 2, Issue Comparison). As stated in the DEIS and FEIS, Alternative 3 was designed to comprehensively address both Issues 1 and 2: “Alternative 3 was developed to minimize impacts to deer habitat and connectivity while providing for an economic timber supply.” (DEIS, page 2-9). In addition, Alternative A considered harvesting timber using only existing roads; this would provide the most economical alternative, would not enter roadless area, and would impact the least acres of forest. Alternative A responds to all of the issues; however, it does not meet the need for this project and was eliminated (see the DEIS and FEIS, Chapter 2, Alternatives Considered but Eliminated from Detailed Study section and the project record for more information). Please also see response to BC-4.

**SCS-10** – Alternative 2 was the proposed action used to solicit scoping comments. It was designed to meet the purpose and need, not to address the issues. The other action alternatives address the issues in various ways. Alternative F proposed timber harvest only through small sales; it was eliminated because it was not substantially different from Alternative 5 (DEIS and FEIS, Chapter 2, Alternatives Considered but Eliminated from Detailed Study).

**SCS-11** – Alternatives 1 and 4 do not enter roadless areas. Alternatives 3 and 5 both focus on economic viability. Although Alternatives 2, 3 and 5 impact roadless areas, the analysis in Chapter 3, Roadless Area Resources, IRA Area Affected By Harvest and Roads section in the DEIS and FEIS is a conservative estimate of Roadless Area impacts. In these alternatives, most of the timber harvest in the IRAs is helicopter harvest with a single tree selection prescription.

Several additional alternatives were considered that did not go into roadless or build new roads, but these alternatives were eliminated for the reasons described in Chapter 2, Alternatives A, C, and D, Alternatives Considered but Eliminated from Detailed Study.

**SCS-12** – The DEIS and FEIS (and the Wildlife and Subsistence Resource Report) supports your statements that Alternative 3 proposes to harvest in roadless areas and to construct fewer miles of roads than Alternatives 2 and 5. The Management Indicator Species and Other Wildlife section also address the effect roads have on marten, deer and bear. However, a range of alternatives with varying degrees of impact are presented to the decision maker (DEIS and FEIS, Chapter 2). Although road construction is proposed in all of the action alternatives, all of the roads in Alternative 3 would be closed and stored, or decommissioned after harvest activities to eliminate motorized use. There are no standards and guidelines for miles or density of roads for wildlife that occur in this analysis area.

The DEIS and FEIS Chapter 3 (and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth section supports your statement that corridors will be reduced as a result of the action alternatives. Please see responses to BC-5, BC-8, BC-9 and BC-10 for additional information on connectivity.



**SCS-13** – The ADFG emergency order closing the doe hunting season on Northeast Chichagof Island and the subsequent Federal closure have been added to the FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth section, Management Indicator Species and Other Wildlife, Affected Environment for Deer section, and the Subsistence section. Although the analysis already recognized that record snowfalls during the winter of 2006-2007 “likely” resulted in a substantial winter kill of deer, the analysis was updated to reflect that the winter did result in a substantial winter kill of deer.

The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth, Management Indicator Species and Other Wildlife, and Threatened, Endangered, Petitioned, and Sensitive Wildlife Species sections considered and clarified road construction and associated activities as part of the analysis of “harvest activities”. The Wildlife and Subsistence Resource Report, Analysis Methods, Analysis Assumptions section was updated to reflect that “harvest activities” were assumed to encompass all activities associated with the harvest of timber including but not limited to an increase in human activity, felling, bucking and yarding of timber, noise and activity associated with the use of all equipment, construction and use of roads and gravel pits, construction and use of decking, landing and yarding areas, construction and use of helicopters and helicopter landing areas and, as part of the cumulative effects, the potential for windthrow. Although there are no standards and guidelines addressing fragmentation of habitat in Timber Management LUDs, connectivity was used as a critical habitat element to address fragmentation. Please see response to BC-5, BC-8, BC-9, and BC-19 for additional information on connectivity.

**SCS-14** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences for Deer (please see response to SCS-12) and the Environmental Consequences on Subsistence, Sitka Black-tailed Deer, Access section address the effects of roads on deer. A range of alternatives with varying degrees of impact is presented to the decision maker (DEIS and FEIS, Chapter 2). Alternatives A and B (described in Chapter 2) do not include any new roads. These alternatives were considered and eliminated from detailed analysis.

**SCS-15** - Through the analysis process, it was determined that the significant issue would focus on habitat connectivity that directly effects deer habitat and populations which in turn effects subsistence harvest. Subsistence was initially considered for an issue (please see Chapter 1, Other Issues and Concerns). The DEIS and FEIS, Chapter 3, Habitat Connectivity and Old Growth section, Management Indicator Species and Other Wildlife sections, and Subsistence section all address the effects to deer and deer habitat.

**SCS-16** - The DEIS and FEIS, Chapter 2, already consider an alternative in detail that addresses connectivity as a critical habitat element to address fragmentation. (please see response to BC-5, BC-8, BC-9, and BC-19 for additional information on connectivity).

Recent information about the deer winter mortality is not considered a “significant new circumstance” because the DEIS took into consideration that the 2006/2007 winter would result in a high mortality of deer and the FEIS was updated to reflect the most recent information (please see response to SCS-13).

The viability of the deer population was not considered an issue driving an alternative because viability is assessed at the forest level and not the project level. The Forest Plan contains a comprehensive conservation strategy using a system of old growth reserves (OGRs) designed to

provide old growth habitats in Old Growth LUDs in combination with other non-development LUDs to maintain viable populations of native and desired non-native fish and wildlife species and subspecies that may be associated with old growth forests (USDA 1997c, p. 3-76). This strategy, in addition to the implementation of Forest Plan standards and guidelines, was developed to maintain species viability (please see response to SCS-5).

**SCS-17** – A range of alternatives with varying degrees of impact is presented to the decision maker (DEIS and FEIS, Chapter 2). Alternative 4 was developed to minimize impacts to the roadless character while Alternative 3 was developed to maintain deer habitat and connectivity. Alternative 5 was developed to address economic viability. Every alternative does not have to address every issue. Each alternative was analyzed to determine how it addressed the issues, and all alternatives respond to the issues to varying degrees. The decision maker can choose and modify any alternative in the ROD. Please also see response to SCS-9.

**SCS-18** – The DEIS and FEIS, Chapter 2, Alternatives Considered in Detail and Alternatives Considered but Eliminated from Detailed Study address the range of alternatives. Alternative A (harvest using only existing roads) was eliminated mainly because it does not meet the purpose and need of the project. Additional reasons for dropping this alternative relate to the transportation system. Bridge replacements/ reconstruction would be needed to support large log trucks on currently open roads in this and other alternatives; if these replacements do not occur, the volume of Alternative A would be substantially lower than 5 MMBF. In addition, one of the Forest Plan goals for the Timber Production land use designation (LUD) is “to plan a transportation network of roads and helicopter access that will eventually access most of the suitable timber lands for standard logging or helicopter yarding systems.” By harvesting only units along existing roads, this alternative would increase road construction and helicopter yarding costs of future projects while removing the lowest cost units with this entry. As stated in Chapter 2, this alternative would not meet Forest Plan goals and would raise costs of future projects.

The DEIS and FEIS address the timber supply in Chapter 1, Purpose and Need, and Decisions to Be Made, and in Chapter 3, Affected Environment for Timber Economics (Employment). Appendices A, Reasons for Scheduling the Environmental Analysis, in both the Iyouktug and Couverden EISs (USDA Forest Service 2005c) further describe why timber sales were proposed in each of these places. In addition, as described in the Couverden ROD, larger economic timber sales may be offered from the Couverden area, potentially making less timber available to small operators in the Hoonah area.

Please also see response to BC-5.

**SCS-19** – Any operator can hire helicopters to yard timber. However, helicopter logging is the most expensive logging system. A small sale using helicopter costs more per mmbf because helicopter mobilization costs are the same for large or small volumes of timber. Please see FEIS, Chapter 3, Timber Economics, Environmental Consequences on Timber Economics, Logging Systems section for information on the economics of the proposed timber sales and Chapter 2, Alternatives Considered in Detail; Chapter 1, Purpose and Need, Proposed Action, and the Decision to be Made sections for the range of considered alternatives. In addition, please see responses to SCS-8 and 50.

**SCS-20** – Various levels of open roads were considered in the Iyouktug Timber Sales analysis. While Alternatives 2, 4, and 5 leave all new road open, Alternative 3 would close and store all

new roads in the project area DEIS and FEIS, Chapter 2, Alternatives Considered in Detail). The request to close additional roads is noted but is not done through this project (see DEIS and FEIS, Chapter 2, Alternatives Considered but Eliminated from Detailed Study, Alternative J). Additional road closures and other restoration activities will be considered in the future ATM analysis. The Hoonah Ranger District Access and Travel Management Plan EA will examine the district-wide road system.

In terms of individual requests: All of the action alternatives close (and store) reconstructed roads, and decommission all temporary roads. Road closure methods to be used in the Iyouktug project area include installation of a barrier, classification of system roads as closed, not identifying a road as open on the Motor Vehicle Use Map, and some of the physical actions that decommission temporary roads and store Maintenance Level 1 roads (see Appendix C of the DEIS and the Glossary in Chapter 4 of the FEIS). Gating of roads was not considered; usually gating is used for seasonal or administrative access. Snowfall in the area closes the roads to vehicles seasonally from December to May. A Forest Road Order is an option to close roads except for subsistence users, but would require substantial law enforcement costs. This has not been proposed for this project. ANILCA does assure access, but does not assure motorized access. Roads can be left open for subsistence, but that is not currently being proposed; the future ATM analysis may consider that as an option. No karst features were noted during field reconnaissance on proposed roads; none on the roads in Project Area have existing problems with sinkholes. Prioritizing habitat impacted is important due to the amount of time and money necessary to fix a single pipe. Red pipes that had the most significant impact to anadromous and resident fish have been fixed in two phases of replacement. Fourteen red pipes have been retrofitted or replaced within the Iyouktug project area since 2000 (six in 2000 and eight in 2004-05) and several others were fixed by removing the structures on the 85311 Road. Please also see response to OHMP-3.

**SCS-21** – Two alternatives that do not build any new roads were considered but eliminated from detailed study for the reasons described in the DEIS and FEIS (Chapter 2, Alternatives Considered but Eliminated from Detailed Study, Alternative A and Alternative B).

**SCS-22** - 36 CFR Parts 212, 251, 261, and 295 Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule defines forest roads as: A road ... wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources. Our analysis considered the future need for protection, administration and utilization of National Forest as well as resource concerns. Small and larger sales included in the Iyouktug alternatives may occur over an extended time period; these sales would depend on using roads for a longer time frame than temporary roads would allow. Depending on the alternative selected, the amount of remaining suitable and available productive forest land in the project area would range from 9,970 to 6,668 acres. Please see the FEIS, Chapter 3, Affected Environment for Forest vegetation, Chart 3SV-1 and Direct and Indirect Effects on Forest Structure and Health, Table 3SV-5. No future harvest is planned, but potential future harvest is also not precluded in the Iyouktug project area due to Forest Plan LUD objectives. Please also see response to BC-23.

**SCS-23** – At the time of the Couverden decision, small sales were identified as a subset of the selected alternative; the Couverden decision also includes large sales (USDA Forest Service

2005c). Small sales are also a component of the Iyouktug Timber Sales project along existing and new roads. Please also see responses to SCS-10, 18, and 21.

**SCS-24** –The range of alternatives is addressed in responses to SCS-8, 9, 10, 11, 17, and 37.

Please see responses to BC-5, BC-8, BC-9, BC-19, SCS-12 and SCS-13 for information on fragmentation and connectivity and SCS-13 for information on the analysis of roads related to wildlife.

The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Report), Habitat Connectivity and Old Growth section discloses the effects to connectivity. The connectivity analysis considered the location of Old Growth Reserve LUDs and beach and riparian buffered habitat, and changes to productive old growth habitat, coarse canopy habitat, and road density. A range of alternatives with a varying degrees of impact is presented to the decision maker (DEIS and FEIS, Chapter 2). Alternative 1 maintains the existing condition, with all of the travel corridors remaining intact and no new road construction. Alternative 3 was developed to minimize impacts to deer habitat and connectivity by excluding specified units and closing roads after harvest activities. The construction of roads was considered as part of the harvest activities in this analysis (please see response to SCS-13). This alternative was not developed to address or eliminate all wildlife concern. Although corridors are reduced in width in all of the action alternatives, landscape level connectivity is maintained as required in the Forest Plan (USDA Forest Service 1997a). Forest Plan Standards and Guidelines do not require any specific number, width or distribution for corridors.

Road construction was not considered to fragment habitat because deer generally are not deterred by roads even with steep cut-banks and these are not high use roads. Alternative 3 was design by deferring or modifying units to retain corridors of old-growth forest to allow deer easier travel between elevations for winter and summer habitat and within lower elevation habitat in the winter.

A range of alternatives with a varying degrees of impact is presented to the decision maker (DEIS and FEIS, Chapter 2). Alternative 1 maintains the existing condition, with all of the travel corridors remaining intact and no new road construction. Alternative 3 was developed to minimize impacts to deer habitat and connectivity by excluding specified units and closing roads after harvest activities.

An alternative that would have responded to all issues was considered but eliminated. Please see Chapter 2, Alternatives Considered but Eliminated from Detailed Study, Alternative A, and response to SCS-9.

**SCS-25** – Please see responses to BC-4, and SCS-9, 11, 17 and 24. The Forest Plan also has standards and guidelines that provide base levels of protection for various resources in the action alternatives

**SCS-26** - Climate change, like timber market demand, is best analyzed at a broader scale than on a project-by-project basis. The current timber demand is calculated for the Tongass National Forest and not on the project basis. The analysis takes into account timber harvest on non-National Forest lands and that timber which is shipped to other markets, both lower 48 and overseas. See Tongass National Forest Timber Sale Procedures, (Alexander) 2008. Likewise, analysis of climate change needs to be analyzed on a scale that is meaningful.

Because of this, climate change has been identified as part of the National Strategic Plan for FY 2007-2012. As Chief Kimball said in September 2007 speech - “ In this connection, I propose a national effort to reach two forest-related goals. This would not be just a Forest Service effort, but a concerted national effort based on public/private partnerships:

- The first goal would be to sustain and strengthen the role of America’s forests as a net carbon sink. All forests, public and private, currently take up enough carbon from the atmosphere to offset about 10 percent of America’s carbon emissions. I propose a national effort to double that amount by 2020.

The second goal would be to increase the amount of America’s energy that comes from forests. Our scientists tell us that with the technologies now becoming available, we could replace as much as 15 percent of our current gasoline consumption with ethanol from wood —and not just any wood, but wood that is not now being used for other purposes and in some cases being burned. I propose that we set that as a national goal as well.”

The Forest Plan Amendment analysis discusses the likelihood of the effects across the Tongass and in adjacent ownerships. This amendment to the Tongass Forest Plan responds to the Renewable Resources Assessment and Program (RPA) by updating the framework for management actions, refining the goals, objectives, standards and guidelines to adapt to trends and changes, and monitoring to measure accountability. Even at this scale, the uncertainty of what may happen does not provide qualitative measures that can be used to compare alternatives.

At the project level, perhaps the only indicator of the effects to climate change can be equated to the amount of timber harvested and the amount of road construction. However, the magnitude of this project is so small compared to all the factors that contribute to climate change that the effects would be negligible if measurable at all.

Two aspects of climate change are air quality and carbon sequestration. Air quality in Southeastern Alaska is currently rarely affected by natural or arson-related fires or the use of prescribed burns to eliminate logging slash or control insects. The possibility of fires is expected to increase but at a scale that would not have noticeable effects within the foreseeable future. Emissions from vehicles would be limited to local traffic, traffic associated with logging and fishing operations and cruise ships. Cruise ship monitoring has occurred in Juneau, which receives 1,000 cruise ships per season and air quality thresholds are within federal and state standards. The negligible direct effects from the Iyouktug project are expected to be temporary and can be compared by the amount of proposed timber harvest and road building. This information is found in the Findings and Disclosure Section of the Iyouktug FEIS under Clean Air Act.

Carbon sequestration, the removal of carbon dioxide from the atmosphere, is harder to evaluate. The productive mature forests in Alaska are considered to be carbon ‘sinks’ meaning that it stores more carbon than is released by natural processes. The regeneration that follows timber harvest has rapid growth which also locks carbon into the system. Whether the net carbon losses or gains occur with the harvest of old-growth forests is currently unknown.

**SCS-27** – As your comment indicates and NFMA (Sec. 219.4) confirms, the RPA program is managed at the national level. NFMA further discusses how the objectives of the RPA program are incorporated into the Forest planning process. The cumulative effects for climate change

were discussed in the Forest Plan Amendment FEIS and included those effects from both Forest Service and non-Forest Service activities to indicate that the current information is incomplete and provided the following summary - "In summary, general agreement exists that the climate is warming and indications are that summer precipitation may decline. However, there is considerable uncertainty surrounding specific predictions and even more uncertainty regarding the effect of these changes on the extent of fire, tree mortality, blowdown, air quality, fish and wildlife, subsistence, and recreation (USDA Forest Service, 2008b).

The Iyouktug project incorporates the information in the Forest Plan Amendment FEIS (USDA Forest Service, 2008b) on climate change by reference and no further project-specific information is available at this time except as indicated through observations addressed in other resource sections. Acknowledgement of incomplete information is in the Introduction to Chapter 3 of the Iyouktug FEIS, under Available Information. Please also see response to SCS-26.

**SCS-28** – Analysis was done to identify the highest quality deer winter habitat. These comparative habitat values will not change significantly within the reasonably foreseeable future and would not affect the ranking of the alternatives whether the interagency deer model was modified to class all areas as high snow levels as suggested by the State in their comments on the Forest Plan Amendment DEIS. Therefore, an SEIS would not provide the decision maker with more information and is not required.

Some studies (Juday et. al, 1997) indicate that there has been a decrease in snow levels at lower elevations which has resulted in less deer mortality in recent years. Also, the Forest Plan Beach and Estuary Standards and Guidelines do not allow this low elevation forest to be harvested. In addition much of the lower elevation lands in northeast Chichagof are within old-growth reserves.

**SCS-29** – Please see responses to SCS-26 and SCS-27.

**SCS-30** – The DEIS and FEIS, Chapter 3, Habitat Connectivity and Old Growth, Environmental Consequences on Connectivity section discloses the effects of the action alternatives would reduce habitat connectivity. Please see responses to BC-5, BC-8, BC-9, BC-19, SCS-12 and SCS-13 for more information on connectivity.

**SCS-31** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth, Affected Environment for Connectivity, Coarse Canopy section and the Management Indicator Species and Other Wildlife, Environmental Consequences to Deer section (prime habitat) section address the effects of past logging activities and of harvesting coarse canopy (big tree forests) to deer. Please see responses to BC-5, BC-8, BC-9, BC-19, SCS-12 and SCS-13 for more information on connectivity.

**SCS-32** - Please see response to SCS-13 and SCS-16 for information on the effects of the 2006/2007 winter on deer. Your comment states that "Hoonah residents report" that there are "no deer to harvest". Although it is apparent that deer are harder to hunt for this year, deer have been observed and have been harvested on Northeast Chichagof Island and in the Iyouktug area during the 2007 hunting season. Of the 40 people that attended the Hoonah ADFG public meeting on October 10, 2007, ten people raised their hands to say that they had been hunting and six of these were successful (personal communication, Phil Mooney, ADFG). Recent information from the "Staff Analysis Special Action Request WSA07-05" that was an enclosure

to the USDI letter to Mr. Denby S. Lloyd, Commissioner, states that Hoonah residents expressed concern about the deer population because there was a lack of deer along the road system. Since the August 1, 2007 opening of the deer season, hunters found that deer were not present in large numbers at low elevations, that fawns were rarely seen, and that fawns seen in early August were relatively small in comparison to previous years. However, this report also states that “deer taken” in August by hunters, in sub-alpine elevations, were of both sexes and generally in good condition; therefore supporting that deer are present and have been harvested.

In reference to the project area as the “only sanctuary nearby” for deer; old growth reserves and other habitat maintained as a result of the Forest Plan conservation strategy will provide habitat for deer and other wildlife species. There are two small and a large old growth reserve in the project area and the project area is bordered by the large old growth reserve to the south. There is also a medium old growth reserves that surround the head of Port Frederick east of the town of Hoonah.

The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences to Deer section supports your statement that the action alternatives would further affect the deer populations in the Iyouktug area.

**SCS-33** – Please see response to BC-7, BC-9 and BC-19 for information on the reduction in connectivity in the North Fork of Iyouktug Creek.

Alternative 3 was developed to minimize impacts to deer habitat and connectivity. The alternative was not developed to address or eliminate all wildlife concern. Please see response to SCS-24 for additional information. Although roadless areas may provide habitat for deer, it is the LUD, not the roadless classification that designates the level of management or protection. The analysis and the project adhere to Forest Plan Standards and Guidelines.

**SCS-34** – Although we considered your recommendation to identify the location of travel corridors, the Forest Plan Standards and Guidelines do not require any specific number, width or distribution for corridors. Connectivity was addressed at the landscape and elevational levels and is maintained as required in the Forest Plan (USDA Forest Service 1997a).

**SCS-35** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences to Deer section supports your statement that the action alternatives would further affect the deer populations in the Iyouktug area. The FEIS (and the Wildlife and Subsistence Resource Report) was updated to include recent information about the effects of the 2006-2007 winter to deer (please see response to SCS-13 and SCS-16). This analysis does rely on the assumption that the Forest Plan conservation strategy will maintain viable populations. The conservation strategy and population viability was addressed in the Forest Plan and Forest Plan Amendment and found to be adequate to maintain viable populations of wildlife (please see response to SCS-5 and SCS-16). The analysis and project were completed in compliance with the Forest Plan.

This comment, and many of the following comments, pertains to the interagency deer model. Most of the model questions and concerns will be addressed in this response to comment. Your comments conclude that there has been an “erroneous application of the deer habitat capability model” (SCS-35), that the model is not an appropriate tool for use to assess deer available to hunters (SCS-86), that the model should consider high snow years not average snow (SCS-90

and 91), that 25 percent partial harvest should have been included in the model (SCS-85) and because it was included the model does not overestimate the effects, that TimTyp or size density and not volume strata should have been used in the application of the model (SCS-97, 98, 99, 105), that the deer multiplier was applied incorrectly (SCS-100), that the shortcomings of the model should have been disclosed and considered (SCS-101), that cumulative effects were underestimated because the model assumed past harvest to be volume class 5 (SCS-102), and that the quartile analysis that is derived from the model is flawed (SCS-103 and 104).

The Wildlife and Subsistence Resource Report, Management Indicator Species (MIS) and Other Wildlife, Sitka Black-tailed Deer section discloses the parameters and assumptions used for the deer model. The model was designed as a tool to assess habitat capability across a large scale and to provide a measure to estimate and compare the relative effects of alternatives on deer winter habitat. The model was not designed to reflect actual deer numbers or to identify the precise value or location of habitat. Therefore the percent change in habitat capability was used in the deer analysis (DEIS and FEIS, Chapter 3 and the Wildlife and Subsistence Resource Report, Management Indicator Species (MIS) and Subsistence sections, Black-tailed Deer portion).

We recognize your concern that the interagency deer model is an appropriate tool for use in this analysis and that the short comings should be defined. The deer model was developed and is maintained and updated at a Forest level; therefore the shortcomings of the model were considered and disclosed during the Forest Planning process. During the 2005 Forest Plan 5-year review, concerns with the deer model were identified (Concern Item 04-7 and 04-23). The model was reviewed and adjusted to incorporate the new vegetation mapping model (size density model) during the recent Forest Plan Amendment process. However, this update is not yet approved for use at the project level.

Because the model works better for larger sized landscapes, a new food-based model, which shows more promise for use at a local scale, is being developed by Pacific Northwest Research Station, University of Alaska, and other scientists. This model, which is referred to as the Forage Resource Evaluation System for Habitat – Deer (FRESHDEER) is still in the development stage therefore is not yet approved for use. Until that time, the current deer model is used as one method to estimate effects.

Consistent application and use of the deer model across the forest is important to be able to compare projects forest-wide and to the Forest Plan. The currently approved deer model was run using the guidelines as currently directed. The parameters of the model, including using average winter estimates, volume strata, and the deer multipliers were applied as directed. In the 2005 letter of direction, the Forest Supervisor directed to follow the procedures of the 2000 Monitoring Report that included using 100 deer for an HSI of 1.0. This letter also directed that we follow the procedures in the MOU between the State of Alaska and the USDA Forest Service on Coastal Zone Management Act/Alaska Coastal Management Program agreement with the State of Alaska. The quartile analysis was applied consistent with this direction. As for your request that the model consider severe snow years, the model currently predicts snow depth to be moderate to high (no low) throughout the project area.

The DEIS incorrectly stated that the assumptions made for the model include that stands harvested in the past were volume class 5. The model assumes that past harvest were at a minimum volume class 5 (no volume class 4); this also considers soils and slope. This was



corrected in the resource report. Assumptions made for the model also include that low-impact harvest prescriptions such as individual tree selection where only 25 percent of the basal area is removed by helicopter were not classified as harvested for this model analysis because this harvest method was assumed to maintain POG forest, a diversity of plant communities in the understory, and cover in the overstory (Deal 2007; Deal and Tappeiner 2002; Deal 2001). This level of harvest is not expected to change the volume strata estimate of the stand (please see response to SCS-83 for additional information on why this harvest method was excluded). Individual trees or clumps of trees no more than 2 acres in size would be harvested. Although snow interception capability in and around gaps would be reduced, gaps in the canopy can also result in an increase in understory forage diversity and availability (Deal 2007) which would improve summer habitat for deer. In addition, 73% of the 25% single tree selection in Alternative 2 is proposed to occur above 800 feet in elevation in habitat that is not considered as high value or prime deer winter habitat.

Since the model assumes that every harvest is a clearcut, including up to 25% single tree selection would overestimate the model results because this harvest method would not change the volume strata associated with the POG forest. The model continues to over estimate effects because the model classifies harvest of up to 40% as clear cut harvest. Yet that harvest method would retain 60% of the POG forest and therefore some habitat for deer.

It is important to consider that the model was not the only means used to assess effects of alternatives on deer habitat. All of the following data were used to assess the effects to deer and deer habitat: habitat capability (derived from the deer model), high value deer habitat (derived from the deer model), prime habitat (derived from GIS data), quick cruise plots (field data) and observed use (field data). Field observations from wildlife biologists and other professionals were utilized to document deer use and movement patterns and to identify specific concerns. In addition, research papers were consulted and incorporated, consultation and personal communications were held with ADFG and FWS personnel, ADFG data was studied and incorporated, and public comments and local knowledge were considered when assessing the effects of alternatives on deer habitat.

**SCS-36** – The Inventoried Roadless Areas (IRAs) would still provide benefits to wildlife and other resources in all Alternatives. These areas would still qualify for wilderness based on the size remaining. The DEIS and FEIS, Table 2-2 comparison of alternatives by significant issue notes that in most cases, the effects will be negligible to minor. There will be a moderate effect to roadless values in a few instances.

**SCS-37** – Impacts to roadless areas were considered to be a significant issue, and Alternative 4 was designed to avoid inventoried roadless areas (DEIS and FEIS, Chapter 1, Significant Issues and Chapter 2, Alternatives Considered in detail). We did design and analyze a roadless alternative so that the Decision Maker could understand the trade-offs between roadless and non-roadless alternatives. Timber harvest is proposed within Forest Plan Land Use Designations that allow for timber harvest and follows our Forest Plan. The goals and objectives and outputs from the Forest Plan were based on using the entire suitable land base within the development LUDs rather than concentrating the effects on the roaded areas.

Under NEPA, an agency's consideration of alternatives is sufficient if it considers an appropriate range of alternatives, even if it does not consider every available alternative. An agency need not, therefore, discuss alternatives similar to alternatives actually considered, or alternatives which

are infeasible, ineffective, or inconsistent with the basic policy objectives for the management of the area. By providing a range of alternatives even if some are not studied in detail, we provide the decision maker with enough information to make an informed decision. The decision maker can consider modifications to alternatives in the Record of Decision (ROD).

**SCS-38** – The Roadless characteristics, or special Roadless values, are analyzed in Chapter 3, Roadless Areas of the DEIS and FEIS. Please refer the discussion of the values of the roadless areas in Chapter 3 of the FEIS and in the Forest Plan SEIS, Appendix C. The effects to the roadless areas are by extensions from the existing road system and much of the roadless areas remain intact. The analysis shows these areas retain most of their special values. See also response to SCS-36 and 37.

**SCS-39** - The timber sale that was associated with this study was partially exported and partially manufactured locally. At that time, market conditions were such that helicopter logging was economically feasible and several other sales that relied entirely on helicopter-logging were sold, harvested and manufactured locally. Usually the Alaska yellow-cedar was exported as part of the current Alaska Regional policy.

Since the study, several sales have been sold that included both ground-based and helicopter logging systems. Some of this wood has been processed locally within Southeast Alaska and some has been exported, primarily Alaska yellow-cedar. Most of the helicopter-logging has been contracted to a company that specializes in this type of operation and would not have the same employee turn-over experienced during this study.

Helicopter-logging is still the most expensive system and is used when other resource values can be realized such as scenery or retaining structure for wildlife or where road construction would be more expensive than the use of helicopters. Helicopter logging has fewer effects on roadless areas than building roads especially when combined with the silviculture prescription that will retain 60-75% of the stand.

**SCS-40** – The entire Tongass was evaluated and reviewed for possible Wilderness recommendation in the 2003 Tongass Forest Plan SEIS. All Tongass National Forest lands were assessed to determine if they were suitable for wilderness consideration based on the Wilderness Act and procedures in the Forest Service’s forest planning directives. Appendix C (SEIS Volumes II and III) includes documentation of the analysis and evaluation for each inventoried roadless area, and describes the relative contribution each roadless area would make to the National Wilderness Preservation System. The SEIS documents the results of a very intensive additional roadless area evaluation for the Tongass conducted in 2002 and 2003. This included updated mapping and evaluation of all unroaded lands, which led to the 109 inventoried roadless areas analyzed in the Final SEIS. All inventoried roadless areas were evaluated and none were recommended for Wilderness.

In NFMA, Congress directed that forest management continue under existing plans while the first NFMA forest plans were being developed [16 U.S.C. 1604(c)]. Likewise under NEPA, the Council on Environmental Quality has recognized that the “no action” alternative for forest plans is the current management direction, not a halt of all activities [CEQ’s “40 Questions” #3].

We considered and analyzed the effects to the IRA special values in Chapter 3 (Roadless Resources). The Forest Plan conservation strategy, in addition to the implementation of Forest Plan standards and guidelines, was developed to provide quality habitat for wildlife. Based on

Table 1-1 in the DEIS and FEIS, 75 percent of the area is designated for timber production, and 24 percent of the project area is already roaded (based on Table 2-2). Please also see response to SCS-36.

**SCS-41** – In terms of roadless, please see responses to SCS-6, SCS-36 and SCS-40. Wildlife is addressed in the DEIS and FEIS, Chapter 3, Habitat Connectivity and Old Growth, Management Indicator Species (MIS) and Other Wildlife Species, Subsistence, Threatened, Endangered, Petitioned, and Sensitive Wildlife Species sections.

**SCS-42** – Although only specifically mentioned in relation to goshawks (DEIS and FEIS, Chapter 3, Threatened, Endangered, Petitioned, and Sensitive Wildlife Species, Goshawk section), helicopters activities were considered as part of the “harvest activities” for all of the wildlife analysis (please see response to SCS-13). The analysis assumed that harvest activities would displace most wildlife species addressed, especially directly within or adjacent to the units being harvested. Because helicopters, outside of the harvest unit or decking areas, are usually moving through an area and not stationary, disturbances would generally be short term.

The project would adhere to Forest Plan Standard and Guidelines that require no continuous disturbance within 600 feet of an active goshawk nest from March 15 to August 15 (USDA Forest Service 1997a). Although there are no shorebird rookeries currently identified to occur in or around the project area, if they are identified, helicopters will be required to maintain a constant flight direction and airspeed and a minimum flight elevation of 1,500 feet (458 meters) (USDA Forest Service 1997a).

Although there are no bald eagle nests currently identified within the areas of proposed activities, if active nest are identified in areas of proposed activities, repeated helicopter activities within ¼ mile of active bald eagle nests will be avoided (USDI and USDA Bald Eagle MOU). We added information on these Standards and Guidelines to the Unit Card introduction to respond to your comment.

**SCS-43** – Effects of partial harvesting are discussed and analyzed in Chapter 3 of the FEIS, Silviculture and Vegetation, Species Composition and Long-term Productivity. The use of helicopters allows us to harvest through single tree selection. Please see responses to BC-22 and BC-23.

Please see response to SCS-31 for information on harvesting large trees. Please see response to SCS-33 and SCS-41 for information on the roadless areas and wildlife. Please see responses to SCS-5, SCS-16, and SCS-35 for information on maintaining species viability.

**SCS-44** – Please see responses to SCS-17, 36 and 40.

**SCS-45**- The entire project area was surveyed during 2005 and 2006; this information is on file in the project record. It is possible but unlikely that significant areas of karst were overlooked given the field reconnaissance by geology, soils, and hydrology resource specialists who were responsible for identifying and mapping these resources, at least within any area considered for harvest or adjacent to these areas.

Designation of Special Interest Areas for Geology is beyond the scope of this project and was part of the Forest Plan Amendment decision. These Special Interest Area LUDs were not designed to include all karst.

**SCS-46** – On October 19, 2007, the Tongass National Forest implemented a supplement to the Forest Service Manual concerning invasive plant species (Supplement No.: R10 TNF – 2000-2007-1). This document clarifies the responsibilities of the Forest Service in managing for invasive plant species on the Tongass National Forest. The release of this document occurred after the DEIS for the Iyouktug Timber Sale was published. In response to this direction, an invasive plant risk assessment for the Iyouktug project was completed and included in the project record with the Botany resource report. This risk assessment clarifies the management concerns, objectives and mitigation measures proposed to address invasive plant species for the Iyouktug project.

Prior to 2007 there were no Forest Service procedures in place to control or eradicate invasive plant species on Chichagof Island. A Decision Memo to control invasive plants by manual or mechanical means was signed in 2007 (USDA Forest Service 2007d). As of 2007, the Forest Service, and contractors, have completed weed surveys on most of the major road systems on Chichagof Island, including the main roads of the Hoonah road system. A weed control plan is being developed to address high priority weed populations for the Hoonah Ranger District.

Limited control measures have already begun in the city of Hoonah to address some of the high priority weed concerns known in the area. From a practical and strategic perspective, the most effective weed control efforts should occur in Hoonah because this is where most of the still controllable, high priority weeds are currently found. Partnerships with the City of Hoonah and other public and private entities are being formed to address the weed concerns in or near Hoonah. The primary objectives for the Iyouktug area will be to prevent the introduction of new invasive plant species and to limit the spread of existing weed species beyond the road corridor, where possible. Many of the weeds found in the Iyouktug area were introduced by roadside seeding about 30 years ago. These plants are now well established along the road corridor and successful eradication is likely not possible. Control measures will therefore focus on controlling the spread of existing populations rather than eradication.

Invasive weed species currently in the Iyouktug project area do not appear to pose a threat to rare plant populations known from the area. Habitat for the known rare plant species is typically unfavorable to weed species because of shade, high organic component to the soil or poorly drained soils and lack of disturbance. Most weed species are not expected to spread much beyond the road prism. Reed canary grass, *Phalaris arundinacea*, is one of the most invasive and widespread weed species in the project area and is known to invade open forest, young second growth and some wetlands. So far it has not been associated with rare plant populations found even a short distance away from roads.

No herbicide use is currently proposed for the project area. However, the Forest Service plans to evaluate future control measures using an Integrated Pest Management approach, including use of herbicides, through future NEPA analysis.

**SCS-47** –Climate change may influence the range and distribution of both rare plant species and invasive species.

**SCS-48** – The impact of the Timber Sale on the IRAs was addressed in the DEIS and FEIS in Chapter 3, Roadless Area Resources. The impacts on Whitestone IRA would be minor because there is no proposed harvest or road building in the Whitestone IRA area regardless of the type or amount of recreation use. The current outdoor recreation industry is road-based (DEIS and FEIS in Chapter 3, Recreation).

**SCS-49** – Please see responses to SCS-7, SCS-36, SCS-40, and SCS-41.

**SCS-50** - Alternative 5 is a ground-based alternative that does not include helicopter harvest. The other action alternatives include helicopter harvest as only a portion of the total volume. The inclusion of helicopter volume allows for flexibility in responding to yearly fluctuations in the timber market and as well as demand. Please see The FEIS-chapter 3 timber economics Section and responses to BC-3, SCS-19 and SCS-54.

**SCS-51** - The average helicopter logging cost of \$338 per MBF includes the decrease in helicopter logging costs based on the regional cost collection procedures. Based on Christian and Brackley, as retention increases, helicopter logging costs also increase. In other words ST25 units are generally less economic than ST40 units. Brackley also concludes that other factors such as crew training, experience, equipment had a greater impact on helicopter logging productivity than the silviculture prescriptions themselves.

**SCS-52** – Please see responses to BC-4 and SCS-18.

**SCS-53** – NEAT\_R was applied to be consistent across the Forest. NEAT\_R includes maintenance costs imbedded in the logging costs, but does not include storage/decommissioning costs or opportunity costs (FEIS, Chapter 3, Timber Economics, Timber Financial Efficiency). NEAT\_R is used for comparing the relative differences among alternatives and is not meant to reflect absolute values.

Logging costs include cost for road maintenance; work is performed by the Purchaser. The Purchaser is also responsible for post harvest road storage and decommissioning. These costs would be included in the Purchaser's sale bid included in total logging costs. We recognize that the cost to decommission or place a road in storage, when the Purchaser is on site, is far less than long term costs of road maintenance or decommissioning. Mobilization costs of equipment to and from site after the Purchaser has left are considerable considering current and future costs of fuel. Also work would have to be accomplished under a Public Works Contract with higher labor, equipment and administrations costs. For this reason, we state in the action alternatives that the roads we close will be closed and placed into storage "after timber sale harvest" (we expect that roads will be closed by the Purchaser right after harvest, rather than waiting until after silvicultural activities, such as stocking surveys, have occurred).

**SCS-54** – Brooks and Haynes (1997, p. 3) warned against equating timber demand with actual harvest:

“As with our previous projections, the volume of projected National Forest harvest is neither the volume likely to be harvested nor, necessarily, the volume that ought to be offered for sale. It is the volume of National Forest timber harvest that is consistent with projected consumption of Alaska products...we do not intend to imply that ‘gaps’ will be created by levels of National Forest harvest that differ from our projections.”

In deciding how much timber to offer for sale in any given year, the agency uses the Morse methodology (Morse 2000). That methodology has the advantage of being self-correcting in that when actual harvest falls below demand projections, offerings for future years are reduced. The methodology also adjusts for changes in mill capacity due to openings and permanent closures of facilities.

The effect of underestimating timber demand is much more serious than overestimating demand. When the agency underestimates timber demand, mills can close for lack of adequate timber supply. Conversely, if the agency prepares more timber than is demanded, the excess timber will not be sold and no environmental impacts will occur. Timber demand on the Tongass has always been volatile, and can differ significantly from actual harvest in any given year or series of years.

To evaluate the status of the timber flow, Morse (2000) established that it is important to assess the ratio of contract volume to harvest. This ratio can indicate how many years of supply (volume under contract) mills have compared to what they are sawing (i.e., harvest). During the 1981-1995 time period, historical ratios of volume under contract to harvest for the independent sale program (in other words, not including volume in the long-term contracts associated with the pulp mills in Ketchikan and Sitka) ranged from 1.0 to 3.4 with an average of 1.8 (Morse 2000). As shown in Table B-1, the ratio of contract volume to harvest peaked in 2002, at 6.8, but dropped closer to the three-year supply objective in 2003. In 2004 and 2005 the ratio dropped to 1.7, but rose again in 2006 to 2.6, closer to the three year goal for volume under contract.

Table B-1: Historical Available Timber Volumes and Harvest (Fiscal Years, MMBF).

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Volume Under Contract</b>	226	465	498	395	313	332	322	230	193	78	83	111
<b>Harvest</b>	221	120	107	120	146	147	48	34	51	46	50	43
<b>Contract Volume / Harvest ratio</b>	1.0	3.9	4.7	3.3	2.1	2.3	6.7	6.8	3.8	1.7	1.7	2.6

Source: USDA Forest Service, Alaska Region. Data on file with: Regional Economist, Ecosystems Planning, USDA Forest Service, PO Box 21628, Juneau, AK 99802-1628.

The ratio of volume under contract to harvest is only one indication of whether there is sufficient timber volume under contract to ensure industry viability. There can be increasing contract volume to harvest ratios while there are declining contract volumes. Some volume under contract in 2002 and 2003 was in sales cancelled in 2004 and 2005. In 2002 on the Tongass National Forest, an injunction was placed on permitting timber harvest and road building in inventoried roadless areas, which included the signing of decision documents for timber sales in inventoried roadless areas (*Sierra Club v. Rey*, J00-0009CV (JKS)). Although the injunction ended in spring 2003, the effects lasted throughout the rest of the year. Volume under contract in 2003 dropped to 193 MMBF from 230 MMBF of available volume in 2002 (see Table B-1). In 2002, an additional 65 MMBF was under injunction and so unavailable for harvest. Volume under contract continued to decline in 2004 to 78 MMBF and rose to 83 MMBF in 2005 and 111 MMBF in 2006. The decline in volume under contract in 2004 and 2005 from levels in previous years was largely due to cancelled timber sales.

In 2004, Section 339 of the Department of the Interior and Related Agencies Appropriations Act for fiscal year 2004, Public Law No. 108-108, provided that the Secretary of Agriculture may cancel, with the consent of the timber purchaser, a number of timber sale contracts on the Tongass National Forest awarded between October 1 1995 and January 1 2002. A given sale could be cancelled provided that the Secretary determined, at the Secretary's sole discretion, that the sale would result in a financial loss to the purchaser, and the costs to the government of

seeking a legal remedy against the purchaser would likely exceed the cost of terminating the contract. By the end of FY 2005, a total of seventeen sales (with approximately 122 MMBF) on the Tongass National Forest were cancelled. It is the intent of the Tongass National Forest to reconfigure cancelled timber sales and re-offer that portion of the volume that is economically viable.

The last of the long-term lease timber sale volume was harvested in 2000. The industry in Southeast Alaska has changed considerably in response to the shift in industry structure, and has seemed to stabilize somewhat in the past five years. For the past five years, Tongass National Forest-related employment in logging and sawmilling (there is essentially no employment in pulp and paper any longer in Southeast Alaska) has ranged from 199 in 2003 to 158 in 2006. Total industry employment in southeast Alaska, including some self-employed sawmill owners, has ranged in the past five years from a high of 561 in 2003 to a low of 421 in 2006. A current dip in employment is to be expected as wood products markets throughout North American are low, due to the mortgage loan industry problems.

Brackley and Haynes (in press) state that current production levels and shipments in southeast Alaska demonstrate how the industry has transitioned to operate in current market opportunities. They state that the availability of high quality wood, as evidenced by stress grading and high visual qualities, give Alaska wood manufacturers an advantage over producers in other western North American regions. Southeast Alaska wood manufacturers' shifts to higher proportions of shop lumber, larger sizes of dimension lumber, heavy timbers and cants enable Alaska producers to supply products of relatively higher value to both domestic and export markets. This production of high quality wood, in conjunction with burgeoning populations, projections of lessening production in some competing regions, and demand in end markets, means demand for southeast Alaskan wood will increase in the long run.

**SCS-55** – The Brooks and Haynes (1997) model was not rejected by the 9th Circuit Court in *Natural Resources Defense Council v. United States Forest Service* (421 F.3d 797) in August 2005. The Ninth Circuit held that the revised Tongass Land and Resource Management Plan (Forest Plan) was defective because the Forest Plan Record of Decision (ROD) and FEIS *misinterpreted* the Brooks and Haynes projections.

The Threemile Timber Sale depended on the Brooks and Haynes (1997) long-term calculation of derived demand as input to the annual sale model offer calculation (Morse 2000). The U.S. District Court for the District of Alaska in *Organized Village Of Kake, Southeast Alaska Conservation Council, Natural Resources Defense Council, Sierra Club, The Wilderness Society, and Center For Biological Diversity v. United States Forest Service*, Case No. J04-029, said the 1997 derived demand projections needed to be updated, and the updated derived demand projections used in the Morse (2000) calculations of annual timber sale offer levels. The Brooks and Haynes (1997) demand projections were updated by US Forest Service Pacific Northwest Research Station scientists in Brackley et al. (2006), and those updated projections were used to calculate annual offer levels as input to planning in the Iyouktug EIS.

**SCS-56** - Brackley and Haynes (in press; footnote 2) detail how the demand studies from the USFS PNW Research Station have defined Pacific Rim. They state that the “demand studies traditionally considered the Pacific Rim as the major producing areas of the three contiguous Pacific coast states, British Columbia, Alaska, Russian Far East, and the major consuming regions of Japan, Korea, Taiwan, and China (Haynes and Brooks 1990)”. Brackley et al. (2006)

recognized that the US is a net importer of timber. A mill in Alaska has the option to ship products to traditional export markets (Japan), emerging new markets, or the lower 48 states. Demand for wood products is global in nature and increasing amounts of wood products are being imported into the United States. Alaska products constitute a small proportion of the total US market; very small shifts in how much of the US market Alaska supplies can mean a big change in Alaska.

Brackley and Haynes (in press) state that several short and long-term changes point to an increase in demand for wood products from all sources, including Alaska. Lumber production in sawmills in western Canada has slowed, in addition to longer-term factors, such as interest in renewable energy applications and a projected steady increase in US population and concurrent increasing demand for softwood products. They state that the probability of a future decrease in demand for lumber from all Pacific Rim markets is virtually zero. In fact, they argue that projected consumption in domestic markets alone will increase substantially. Therefore, there was no compelling reason for the Brackley et al. (2006) study to include a scenario showing demand falling, which would be contrary to the best scientific information available.

Estimated demand for Alaska sawn products declined considerably between Brooks and Haynes (1997) and Brackley et al. (2006). The lowest projection of derived demand for sawn products from Alaska in Brooks and Haynes (1997) for the period 2003 to 2007 was 130 million board feet (MMBF). The lowest projection in Brackley et al. (2006) for the same period was 30 MMBF. These differences were due to changing assumptions from one projection to another, and shifts in the structure of the industry as it adjusted after the end of the long-term contracts.

Brackley and Haynes (in press) state that “the existing model is a robust system that remains a valid approach to model demand for Tongass timber because of the limited data on lumber shipments and values and production costs.” They go on to explain that Alaska producers are sawing lumber products that are, on average, better quality and enter higher priced markets, than lumber manufacturers are producing in the western pacific states and in Canada. These high quality products have similar prices in domestic and foreign markets. Using historic data with scenario assumptions to model movement of these products in both domestic and foreign markets is a valid approach.

Brackley and Haynes (in press) state that “the RPA timber Assessments (Haynes et al. 2007) provided the background for the many assumptions needed in the demand model. The size of the U.S. market ... suggests that Alaska softwood lumber producers have access to a large domestic market assuming they can compete with other producers. That is, the relatively small amount of southeast Alaska production should be able to find markets in domestic or export markets for clear (shop and factory grades) and other high quality lumber (large sizes of dimension lumber 2 by 10, 2 by 12, and heavy timbers). These markets have the higher prices needed to cover the higher Alaskan costs. Since these high value markets are not modeled directly in the RPA timber assessment, the Pacific Rim market data are a reasonable proxy for describing the demand for high value products produced in southeast Alaska. In the demand model, the demand facing Alaskan producers is than made up of two parts: one part that is assumed to go to Japan and another part that goes to U.S. domestic markets.”

Brackley and Haynes (in press) state that “current production levels and shipment patterns in Southeast Alaska demonstrate how the industry has transitioned to operate in current market opportunities”. They go on by saying that shifts to “higher proportions of shop lumber, larger



sizes of dimension lumber, heavy timbers, and cants should give Alaska producers an opportunity to supply products of relatively higher value to both domestic and export markets.”

Brackley and Haynes (in press; footnote 16) state that “there is not [an] official source of information for shipment of lumber from Alaska to domestic markets. Exports to foreign markets are based on export declaration forms submitted to the U.S. Department of Commerce as reported by Warren (for two most recent publications see Warren 2006 and Warren 2007). Total production from the mills is estimated from several sources. Given estimates of total production and exports, domestic production is determined by the subtracting exports from total production.” They also state that “other than some observations of past flows, there is no consistent historically reported annual data series for shipments from southeast Alaska to the lower 48 states.”

**SCS-57** - Brackley et al. (2006) selected four scenarios they deemed reasonable and possible, given their assumptions. The Limited Lumber Production and the Expanded Lumber Production scenarios assume the wood processing industry in Southeast Alaska is focused only on processing of sawlogs. The primary difference between these two scenarios is the assumption that Alaska will increase its market share in the North American export market from 0.39 percent to 1.14 percent in the Expanded Lumber scenario, while the Limited Lumber scenario maintains the same market share for Alaska products in the North American market as a whole. The Medium Integrated Industry and High Integrated Industry scenarios both assume markets for low grade material will increase in the future, equivalent to chip and utility processing facilities being built in Southeast Alaska. These two scenarios assume an increase in Pacific Rim lumber imports, but not to the extent assumed in the first two scenarios. These two integrated industry scenarios also assume varying increases in the Alaska share of the North American export market. The Medium integrated scenario assumes markets for chip and/or utility material will increase in 2008, while the High integrated scenario assumes markets for chips and/or utility material will increase in both 2008 and again in 2012. Although Brackley et al. (2006) in their publication postulated that these markets would be the result of processing facilities built in Alaska, any market stimulation that results in higher demand for chip or utility material would have the same result. The recent policy change regarding appraisal of lower grade material for shipment to the lower 48 states could be regarded as the equivalent of building a processing facility for lower grade material, in terms of demand stimulation. In fact, Brackley and Haynes (in press) regard recent developments such as the limited shipment policy and the startup of a veneer mill in Ketchikan as increasing long-term demand, and pushing the most likely scenario toward something between their expanded lumber and medium integrated scenarios.

Brackley et al. (2006) chose to discuss how their scenarios might look “on the ground”, to give an idea to the reader as how demand might actually be stimulated under the assumptions in the model. The structure of the model itself, however, is simply driven by changes in relative market shares, given other assumptions discussed above. They based this discussion of how changes in demand might take place based on efforts to plan and build various facilities in southeast Alaska to utilize lower grade material that have been under discussion for some time. However, as mentioned, the demand stimulation could also take place as a result of other events, such as policy changes in timber sale appraisals or construction of new manufacturing facilities like the Ketchikan veneer mill.

**SCS-58** – See response to SCS-54 regarding equating demand with harvest.

Brackley and Haynes (in press; pagination not set (may be 29)) state that

“Several comments focused on why we did not consider a scenario of decreased demand. We did not because we consider the low scenario as representing present conditions. That is, a set of conditions representing a future where the markets have adjusted for both the collapse of the Asian markets and the structural shifts in the U.S. market, resulting from reductions in federal timber flows. In addition, several events have occurred since the release of the original report that demonstrates the demand for forest products is increasing. One event has been the ability of southeast lumber producers to find markets for their chips at pulp mills in British Columbia as lumber production has slowed at sawmills in western Canada reducing the availability of chips. Another event is an increasing demand for low-grade fiber as a feedstock for energy applications and products such as wood pellets (Perlack et al. 2005). Third, the ongoing congressional efforts to consider legislation on climate change, high energy costs (oil is in the vicinity of \$90-\$95 a barrel as we write), a need to reduce carbon emissions, and conversion to sources of renewable energy all suggest increased demand for wood. Most of these have the potential to create new markets for residual products produced from sawmills and also change the competitive positions of the various producing regions in North America. Finally, U.S. demand for softwood products is expected to increase at just below 1 percent per year mirroring the expected growth in population (from the RPA Timber Assessment, Haynes et al. 2007).”

“Given the range of these events, we judge that the probability of a future decrease in demand for lumber to the Pacific Rim is almost zero; the probability of no change in demand small; and, the probability of an increase in demand extremely high. If demand to the export markets does decrease or remain constant, Alaska producers will ship products to the domestic market as consumption—especially in residential construction (including new, repair, and alteration)—is expected to increase.”

**SCS-59** – The purpose and need for the Iyouktug project responds to the goals and objectives in the Forest Plan. Please also see response to EH-1.

**SCS-60** – As described in the DEIS, page 3-43, purchasers may elect to process all the sawlogs locally or to ship up to 50% of the total sawlog volume to markets outside Alaska. Timber sales are sold to purchasers with different business goals and under changing market scenarios. Historically, the percentage of the volume harvested on the Tongass that has been shipped out of state has fluctuated widely. Given those variables, it is not possible to precisely predict what will be manufactured locally; hence, a range of employment and income figures is considered the most reasonable approach to display potential effects on jobs and income. See also response to comment JM-4 for more information on interstate shipments.

**SCS-61** - The fact that such benefits and activities as commercial fishing, tourism, mining, recreation, and subsistence are not assigned monetary values and quantified in the economic efficiency analysis does not lessen their importance in the overall decision-making process. Decision makers routinely choose alternative that do not maximize present net value. The Forest Service Manual states that decision makers must “(c)onsider economic efficiency, *along with other factors* (emphasis added), in making decisions and in implementing and reviewing projects, programs, and budgets” (FSM 1970.3(3)).

A large portion of the EIS is spent evaluating potential effects that cannot be reasonably assigned a monetary value at this time. The type of benefits identified on this subject may be generally classified as ecosystem services. Ecosystem services are those services and benefits provided by healthy ecosystems. Definitions of ecosystem services can be broad and include both use and non-use values. A number of different definitions have been identified, including a typology developed by the Millennium Ecosystem Assessment (2005), which is featured on the Forest Service's Ecosystem Services website. The Assessment identifies four general categories of ecosystem services: provisioning, regulating, cultural, and supporting. Interest in ecosystem services has increased in recent years, and economists have made useful progress in developing and improving methods and techniques that can be used to value non-market ecosystem services.

Recognizing the potential utility of the ecosystem services concept, the Forest Service recently proposed that ecosystem services be used as a framework for describing and evaluating the many benefits associated with NFS lands and established an Ecosystem Services web site (<http://www.fs.fed.us/ecosystems-services/>) that provides detailed information and resources, identifies and discusses Forest Service efforts in this area, and issues a regular Ecosystem Services newsletter. In addition, the Forest Service's Pacific Northwest Research Station (PNW) recently issued a technical report that attempts to define an economics research program to describe and evaluate ecosystem services (Kline 2006). Kline (2006, pg. 7) identifies several key challenges or steps that are involved in applying the ecosystem services concept. These include defining a typology of ecosystem services or, in other words, defining what to measure and how to measure it. An important aspect of this measure involves, in Kline's (2006, pg. 10) words: "translating ecosystem complexity into manageable sets of well-defined ecosystem metrics." The next challenge is to determine how these metrics are affected by specific Forest policy and management actions and, then, identifying these effects in terms of measurable units or outputs that can be assigned monetary values in a way that will allow meaningful comparison between alternatives. The third challenge is to measure the value of these units or outputs in monetary terms that accurately reflect the societal values of these services.

As Kline (2006, pg. 15) notes, "total ecosystem values provide little guidance to policy or management decisions unless these decisions can be expressed as marginal or incremental changes in ecosystem services." Evaluating the impacts of the alternatives on, for example, subsistence in these terms would require that the potential impacts to subsistence be quantified in pounds of edible resources potentially foregone and in the case of deer, for example, would require estimating the actual number (or at least a reasonable range) of deer that would be affected, negatively or positively, by the alternatives. This type of analysis would also be required for salmon, marine mammals, moose, berries, and so on. The ecological impact assessments presented in this EIS follow standard scientific approaches to these types of analysis and typically assess impacts in terms of probability and risk, not in numbers of affected deer or salmon, etc. The difficulties associated with identifying production relationships and the corresponding units of measurements is, as noted earlier, generally considered one of the main challenges currently facing ecosystem services analyses. Kline (2006, 11) notes that, in general, "ecologists have not been forthcoming with the types of ecosystem output measures economists typically desire or expect for formal economic analysis" and because "ecology is not particularly well suited to prediction, production relationships may be highly or purely uncertain."

The draft report prepared by Phillips and Silverman (2007) and included in the Wilderness Society comments provides a rough approximation of total economic values of "wildlands" on

the Tongass and Chugach National Forests. These values are not sufficiently refined for use in policy and management analysis. They are a mix of different kinds of values (total worth, marginal value, market and nonmarket, etc.) from a variety of studies. Even if these total economic value estimates were more accurate, they would provide little guidance with respect to evaluating the alternatives in this EIS because the ecological impacts of the project alternatives are not expressed as marginal or incremental changes in a way that can be assigned monetary values. This reflects the current state of knowledge and available secondary data. The Forest Service, as noted above, has developed and is in the process of further refining a research agenda based on ecosystem services that will allow these types of non-market ecosystem services values to be incorporated into management decisions in the future. We are just not there yet.

With respect to the Tongass National Forest, scientists from the PNW Research Station in Juneau have recently initiated an ecosystem services research program that is aimed at using the Tongass as a case study of the impacts of forest management on the long-term provision of ecosystem services and goods. The initial phase of this program has involved working with the MIMES (Multiscale Integrated Models of Ecosystem Services) model developed by leading ecosystem services researchers at the University of Vermont. Initial work has focused on developing a simplified, dynamic model of forests and ecosystem services and goods. Future research plans involve adapting MIMES to model the impacts of management decisions on the flow of ecosystem services and goods.

**SCS-62** – Tourism is addressed in the DEIS and FEIS in Chapter 3, Recreation, Affected Environment for Recreation Use and Tourism Trends. Please also see response to SCS-108.

**SCS-63** –The Alaska Department of Commerce (the original reference comes from the Alaska Department of Fish and Game) Alaska Wild Food Harvest by Census Area was not used in this analysis because this data does not reference Hoonah individually but combines the communities of Skagway, Hoonah and Angoon. Regardless, the DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Subsistence section does address the importance of subsistence to the community of Hoonah and tiers to the Forest Plan that assessed subsistence specifically for the community of Hoonah.

**SCS-64** - Please see response to SCS-61

**SCS-65** – Please see responses to SCS-46 and 47 and the Invasive Plant Risk Assessment in the Project Record.

**SCS-66** - These existing roads cross small areas of moderate vulnerability karst lands. There is little to no threat of introducing sediment to the karst hydrological system in moderate vulnerability karst lands (DEIS, Karst and Geology, Karst Vulnerability). No karst features were found along these road segments. Each road segment has been analyzed in relation to karst features by the Tongass Karst specialist.

**SCS-67** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences for American Marten, support your statement that the area is a high risk Biogeographic Province and that more roads would increase trapping efficiency for marten. The Cumulative Effects on Marten, Effects Common to All Action Alternatives section states that Forest Plan Standard and Guideline retention requirements will be implemented. These standard and guidelines require that a minimum of 10% of the stand structure will be maintained in high value marten habitat. Partial

harvest of up to 25% of the stand meets retention requirements because 75% of the stand structure will be maintained. Structure retained would include large trees that would meet marten standard and guidelines (see response to BC-22). In addition, the standards and guidelines only apply to vegetation management that creates openings greater than 2 acres in size. Partial harvest would remove individual or clumps of trees no more than 2 acres in size.

**SCS-68** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Affected Environment and Environmental Consequences for American Marten sections address the factors considered to address the effects of alternatives on marten and their habitat. Although the marten model does not consider trapping pressure, prey densities or fragmentation, the model was not the only means used to assess effects of alternatives on marten habitat. Field observations from wildlife biologists and other professionals were utilized, research papers were consulted and incorporated, consultation and personal communications were held with ADFG, ADFG data was incorporated, and public scoping comments and local knowledge were considered. High value marten habitat, trapping pressure and road densities were specifically address in this analysis. Indirect and cumulative effects considered the effects to prey species habitat. The resource report was updated to reflect information about the deer mortality that resulted from the 2006-2007 severe winter. Although there are no standards and guidelines addressing the fragmentation of habitat in Timber Management LUDs, connectivity was used as a critical habitat element to address fragmentation.

**SCS-69** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Affected Environment and Environmental Consequences for American Marten sections describe the factors considered in the application of the marten model. Although your suggestions for the marten model were considered, because the marten model is maintained and updated at a Forest level, the model was run using the guidelines as currently directed. This is important to maintain a consistent application and use across the forest. Therefore the model was run using volume strata (not timtype) and was not adjusted to include road density. Although there are no Forest Plan Standard and Guideline for road densities or coarse canopy habitat for marten, a separate evaluation of road densities (reference the Trapping and Road Density section) and coarse canopy habitat, using volume class from TimType data (refer to the DEIS and FEIS, Chapter 3, Habitat Connectivity and Old Growth, Affected Environment for Connectivity, Coarse Canopy section) was completed.

**SCS-70** – Thank you for providing an example of a patch size/fragmentation analysis for marten. Although we considered your recommendation, this is a Timber Management LUD and there are no Forest Plan Standards and Guidelines addressing the fragmentation of habitat in any LUD. Connectivity was used as a critical habitat element to address fragmentation. Please see response to BC-5, BC-8, BC-9 and BC-10 for additional information on connectivity. Please see response to SCS-68 for information on other data considered in addition to the marten model.

**SCS-71** – Although you recommend completing an area wide assessment of marten home ranges, a trapping refugia model has not been developed to address this issue. An assessment of marten home ranges was not completed at the project level because this was addressed in the development of the Forest Plan conservation strategy. Both access management on National Forest lands and hunter/trapper harvest regulations administered by ADFG can be used to manage marten habitat.

Old-growth reserve (OGR) LUDs (please see response to BC-15, BC-26 and SCS-35) were designed to support areas large enough to maintain marten home ranges. The Iyouktug project area includes, or is bordered by 2 small OGRs to the north and by a large OGR to the north, east and south. The action alternatives propose to implement the interagency OGR recommendations that will improve the size and location of the small OGRs. Because the majority of these reserves are unroaded, they would provide a “trapping refugia”. In addition, the DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Affected Environment and Environmental Consequences for American Marten sections describe how a potential increase in trapping pressure would effect marten.

**SCS-72** – The Wildlife and Subsistence Resource Report, American Marten, Affected Environment section, supports your statements that prey availability (including deer and salmon) is important to marten and reference Flynn’s work in numerous places. The Effects Analysis section states that the availability of prey, mostly as it relates to habitat, was considered as an indirect effect to marten. The effects to prey species were also addressed indirectly in the analysis of Endemic Species that focused on the Keen’s mouse. The deer mortality that occurred as a result of the 2006/2007 winter would have provided marten with an increased food source in 2007. However, if deer numbers continue to decline, then this food source may not be as available in future years. As for the availability of salmon to marten, a riparian management area buffer will be maintained around all fish bearing streams and a portion of Suntaheen Creek was included in the proposed OGR to maintain quality salmon habitat.

**SCS-73** – As you stated, some total road density information is available in the DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Affected Environment and Environmental Consequences for American Marten, Trapping and Roads Density sections. The analysis defines the rationale for assessing open road densities and this is consistent with other analysis completed across the forest. If you are interested in more information on total road densities, the data is available in the project record in document IY 5p 219 (Stangl 2007-existing road miles for wildlife analysis). Please see response to SCS-69 for additional information about the road density analysis.

**SCS-74** – Your recommendation to apply the “Flynn Curve” to the marten analysis was considered. The Flynn Curve describes a marten and road density analysis that was described by Rod Flynn, Alaska Department of Fish and Game, in March of 2006. Flynn submitted this two page “Marten and roads” document to an individual biologist on the Tongass National Forest. Although Flynn has completed some peer reviewed studies on marten, this document has not been peer reviewed or published and was not considered as an ADFG agency recommendation. Because this model has not been accepted for use on the Tongass, it was not applied to the marten road density analysis for this project.

**SCS-75** – The roads data that you display from the Transportation section is based on all roads occurring in the project area and includes some decommissioned roads. It does not match the wildlife road densities because this data was based on a larger analysis area (the WAA).

**SCS-76** – Your reference to the Forest Plan Standard and Guidelines addressing marten mortality concerns is correct. The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Affected Environment for American Marten, Trapping and Road Density section states that the current marten data does not support that marten populations are unsustainable. Therefore road densities restrictions were

not assessed. ADFG was consulted before and after the DEIS was published. ADFG has not identified a mortality concern with marten at this time (reference the personal communication record with Phil Mooney of ADFG in the project record). This information was documented and added to the project record.

In addition, a range of alternatives with varying degrees of impact will be presented to the decision maker (DEIS and FEIS, Chapter 2). Although Forest Plan Standards and Guidelines do not require any specific miles or density of roads for marten, all of the newly constructed roads are proposed for closure or decommissioning in Alternative 3 to eliminate motorized use and reduce the effects to marten. Please also response to see SCS-11.

**SCS-77** – The Forest Plan Standards and Guidelines state that, “Where road access has been determined, through the analysis, to significantly contribute to unsustainable marten mortality, implement effective road closures to reduce mortality” (USDA Forest Service 1997a). Road access has not been determined to significantly contribute to unsustainable marten mortality in this area. Please see response to SCS-76 for information on alternatives that address road closures.

**SCS-78** – Thank you for the information on the increase in prices for marten pelts. The Wildlife and Subsistence Resource Report, Management Indicator Species and Other Wildlife, American Marten, Affected Environment, Trapping and Road Density section was updated to reflect some of this information. The trapping data used in the DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Affected Environment for American Marten, Trapping and Road Density section was acquired from ADFG in 2007 (personal communication, Phil Mooney). Although the price increase of marten pelts that occurred between 2004 and 2006 was not specifically addressed in the marten analysis, this information does not change the results of the analysis. The action alternatives will continue to have a “moderate” effect to marten as a result of cumulative activities that will noticeably affect and possibly have long term affects on individuals and their habitat. Also, in compliance with the Forest Plan, if marten concerns are identified in the future, we will cooperate with ADFG to manage marten (USDA Forest Service 1997a).

**SCS-79** - The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Affected Environment and Environmental Consequences for Brown Bear section, discloses the effects on bears and bear habitat as a result of the action alternatives. Although this was initially considered as an issue, an increase in mortality as a result of an increase in road access was considered in the analysis (DEIS and FEIS, Chapter 3, Environmental Consequences for Brown Bear and the Wildlife and Subsistence Resource Report, Brown Bear, Affected Environment, Human-Induced Mortality section the Effects Analysis section).

**SCS-80** – Although your recommendation for additional stream buffers for bear was considered, the brown bear analysis was completed in compliance with the Forest Plan Standards and Guidelines. Standards and guidelines do not require a 500-foot buffer on all Class I streams and because brown bear populations in this area are healthy, this recommendation was not adopted. Areas along specified streams were intentionally included in the proposed OGR to maintain bear foraging habitat.

**SCS-81** – Your recommendation to exclude a portion of Unit 108 from all alternatives to address bear foraging habitat was considered. Your recommendation can be considered in any

alternative the ROD. Additionally, Alternative 3 excludes portions of Unit 108; this would maintain bear foraging habitat.

**SCS-82** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species (MIS) and Other Wildlife address all MIS species. Analysis for birds was also addressed in the DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Migratory Bird section. These analyses considered the current population trend data and the reduction in productive old growth forest, coarse canopy forest and disturbance of MIS bird species. These analyses were completed in compliance with the Forest Plan Standards and Guidelines.

**SCS-83** – The Wildlife and Subsistence Resource Report, Endemic Terrestrial Mammals, Affected Environment section discloses effects related to your comments. The analysis assumes that 25 percent single tree helicopter harvest would cause little change to Keen's mouse habitat because, as described in the DEIS and FEIS, Chapter 3, Habitat Connectivity and Old Growth section, this harvest method would maintain a diverse and abundant plant understory comparable to plant communities typically found in old growth stands (Deal 2007; Deal and Tappeiner 2002; Deal 2001, p. 2074). The research referenced was based on the review of partial harvest stands that removed large trees. In addition, Smith (2005) found that Keen's mouse thrived in a variety of habitats and that young growth appeared to be the highest quality habitat for this species.

**SCS-84** – The DEIS and FEIS discloses the effects of the project to deer populations and subsistence harvest. The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Subsistence section discloses that in combination with other past, present and reasonably foreseeable future actions, the action alternatives (if implemented through project-level decisions and actions) may result in a significant restriction of subsistence uses of deer, due to potential effects on abundance and distribution, and on competition. The Subsistence analysis and the Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species (MIS) and Other Wildlife, Affected Environment and Environmental Consequences for Deer analysis was completed in compliance with current Forest Plan Standard and Guidelines and direction. Please see response to SCS-35 for additional information on the application of the deer model.

**SCS-85** – Please see response to SCS-35 for information on the deer model analysis.

The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species (MIS) and Other Wildlife, Affected Environment for Deer defines high value habitat and prime habitat. High value habitat was based on the model. However, prime habitat was defined using high volume strata, elevation, and aspect and not the deer model. Please see response to BC-11 for information on other data used to assess the effects of alternatives on deer habitat.

**SCS-86** – Please see response to SCS-35 for information on the deer model. The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Subsistence section discloses that the model was not designed to reflect actual numbers of deer but to define habitat capability. However, these data provide the best available information and can be used to assess the differences between alternatives.

**SCS-87** – Please see response to SCS-35.



**SCS-88** – As you recognized, deer harvest was used to assess the effects to subsistence harvest in the DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Subsistence section. This information was updated and corrected to reflect deer harvest and to better define hunter demand.

**SCS-89** – Please see response to SCS-88. The subsistence analysis was updated to reflect some of your comments.

**SCS-90** – Please see response to SCS-35 for information on the application of the deer model.

**SCS-91** – Please see response to SCS-35 for information on the application of the deer model including why the deer model was not run with the assumption that all areas are at risk of deep snow.

**SCS-92** - Please see response to SCS-35 for information on the application of the deer model including why the deer model was not run to consider four consecutive severe winters.

**SCS-93** – Please see response to SCS-88 for updates made to the subsistence analysis and SCS-35 for information on the application of the deer model.

**SCS-94** - Please see response to SCS-35 for information on why 25 percent partial harvest was excluded from the deer model.

**SCS-95** - Please see response to SCS-35 and SCS-83 for information on why 25 percent partial harvest was excluded from the deer model.

**SCS-96** - Please see responses to BC-22 and BC-23 for information on single tree prescriptions. Please see response to SCS-35 and SCS-83 for information on why 25 percent partial harvest was excluded from the deer model.

**SCS-97** - Please see response to SCS-35 for information on the application of the deer model including why the deer model was not run using TimTyp or size-density instead of volume strata. Doerr et al. 2005 is a peer-reviewed document from the Journal of Wildlife Management. This document, along with Caouette and DeGayner (2005) from the Landscape and Urban Planning Journal, are considered the newest and best available science when discussing this topic.

**SCS-98** – Please see response to SCS-35 for information on the application of the deer model including why the deer model was not run using the size density model.

**SCS-99** - Please see response to SCS-35 for information on the use of the size density model.

**SCS-100** - Please see response to SCS-35 for information on the application of the deer model including why the deer multiplier was not changed for the deer model.

**SCS-101** - Please see response to SCS-35 for information on the application of the deer model including the shortcomings of the model.

**SCS-102** – Please see response to SCS-35 for information on the application of the deer model including why the model was run assuming that past harvest was volume class 5.

**SCS-103** – Please see response to SCS-35 for information on the application of the deer model and the analysis of high value habitat. The analysis was completed in compliance with current direction and meets Forest Plan Standards and Guidelines. The analysis defines the reductions in deer habitat for a range of alternatives so that the decision maker can make an informed decision.

**SCS-104** – We considered your recommendation to map unit boundaries with quartiles. Although this information was not displayed in the resource report, a map showing unit boundaries with quartiles was added to the project record.

**SCS-105** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species (MIS) and Other Wildlife, Affected Environment for Deer supports your statement that prime habitat was defined using volume strata. Please see response to SCS-35 for information on the use of volume strata. The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Habitat Connectivity and Old Growth Reserves analysis also considered the effects to larger trees (volume class 6 and 7) habitat.

**SCS-106** – Please see response to SCS-103.

**SCS-107** – The DEIS and FEIS, Chapter 3, and Wildlife and Subsistence Resource Report, Subsistence, Affected Environment and Environmental Consequences for Deer section address the effects of an increase of roads on deer.

**SCS-108** – The recreation economic information is not in the timber economic section, but it can be found in the Recreation section of Chapter 3. The determination was made to keep the economics sections with their particular resource because this economic information completed the resources section's discussions on existing and impacted environments.

The original paragraph in the DEIS related to outfitters and guides was incorrect, and new information has become available since the DEIS was written. We have clarified this paragraph in the FEIS in response to your comment (Chapter 3, Recreation, Environment and Effects, Affected Environment for Recreation Use and Tourism Trends).

**SCS-109** – The DEIS, Chapter 3 Recreation, Affected Environment for Recreation Opportunity Spectrum (ROS) section explains the Tongass Forest Plan's (1997) goals and objectives for managing the recreation resource in the three different LUDs within the project area. The definitions for Recreation Opportunity Spectrum (ROS) can be found in the Recreation Resource Report, Appendix A.

The term moderate change to the recreation resource comes from a comparison of the changes to the ROS acreage and setting indicators: Visual Quality, Access, Remoteness, Visitor Management, On-site Recreation Development, Social Encounters and Visitor Impacts. The actual change of the ROS designation in acreage of the project area is small, the largest being Alternative 2 which changed 8% of the land from Semi-primitive to Roaded Modified, a total of 3,369 acres of a 40,651 acre sale. This is an acceptable recreation resource change to Timber Production and Scenic Viewshed LUDs. This would be considered a low impact to recreation resource. But the other consideration was the amount of existing disturbance within the sale area which pushed the level of impacts to moderate.

**SCS-110** - Please see response to BC-6 and BC-7. Measures to minimize the probability of windthrow of buffers or unit edges have been considered and where risk indicates a need, addressed on individual unit basis in unit cards and prescriptions. Please see the FEIS, Chapter 3, Timber and Vegetation Section, Single Tree Selection and direct and indirect effects on windthrow risk.

**SCS-111** – Please see responses to BC-6 and BC-20. Given the variability and changes in weather, it is not practical to guarantee or predict that future large scale wind damage will or will

not occur in the project area under any of the proposed alternatives, including the no action alternative.

**SCS-112** – Please see responses to BC-22 and BC-23.

**SCS-113** – Yellow-cedar is also harvested using ground-based systems and is used locally. Current market demand projections assume approximately 50 percent of harvested yellow-cedar is processed locally (Lerum 2008). Please also see response to SCS-19.

**SCS-114** – Natural regeneration is expected to be abundant; all past harvest areas on the Hoonah Ranger District have been certified as naturally regenerated based on field surveys. Please also see response to BC-23.

**SCS-115** – Please see responses to BC-6, BC-22 and BC-23. None of the proposed activities are on high vulnerability karstlands nor near any rare wetlands or soils described in the EIS (the unique soils in this project area). Thus, these areas are not at a higher risk of windthrow than under natural conditions for these activities.

**SCS-116** – Please see responses to BC-6 and BC-18.

**SCS-117** – The DEIS and FEIS, Chapter 3, Direct and Indirect Effects on Forest Vegetation discuss silvicultural prescriptions and species and diameter classes proposed for harvest. Table 3SV-5 displays the acres of proposed harvest by volume strata. Please also see responses to BC-22, BC-23, and SCS-31.

**SCS-118** - The IDT and the Responsible Official evaluated the potential effects on subsistence uses and needs as required by ANILCA (see Chapter 3 DEIS, Subsistence). Chapter 3 of the DEIS and FEIS, Subsistence, Subsistence Findings, discloses that the alternatives for this project would likely result in a significant possibility of a significant restriction on subsistence deer resources and uses. The updated the analyses of community subsistence use in the Forest Plan Amendment concluded the same.

A formal subsistence hearing was held in Hoonah, Alaska but no one testified. A formal hearing was also scheduled in Angoon, Alaska but weather precluded the hearing officer from attending. A Forest Service representative, however, was present and one individual did show up for the hearing. The hearing officer later called this individual and his testimony was taken and recorded by phone. The transcript of this testimony is in the Iyouktug project record. The FEIS, Chapter 3, Subsistence section was updated to reflect the public hearings and the subsistence findings. Please also see responses to SCS-118, BC-4, EH-1, and JM-3.

The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Subsistence analysis was updated to disclose the information on deer habitat capability. Please see responses to SCS-88 and 89.

**SCS-119** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Threatened, Endangered, Petitioned, and Sensitive Wildlife Species, Goshawk section addresses the effects to goshawk nest sites and the measures taken to maintain a no harvest buffer around nest sites. The biologically preferred goshawk nest buffer was not incorporated into an alternative because it was up to the decision maker's discretion as to what buffer would be considered in the analysis.

**SCS-120** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Threatened, Endangered, Petitioned, and Sensitive Wildlife Species, Goshawk section, describe

the effects to foraging habitat as a result of changes to productive old growth forest. Although not specifically mentioned, winter habitat would include the same parameters as nesting and foraging habitat that was addressed in the analysis.

**SCS-121** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Threatened, Endangered, Petitioned, and Sensitive Wildlife Species, Goshawk section, describe the effects of harvest activities to the goshawk and its habitat. Please see response to SCS-42 for a clarification of harvest activities considered in this analysis.

**SCS-122** - The level of analysis presented in the FEIS is consistent with Forest Plan direction.

**SCS-123** – The Iyouktug Roads Analysis and other documents and information were used to propose the road management for the Iyouktug DEIS. The Roads Analysis is not a decision document. The Iyouktug Roads Analysis (Matter 2003) includes information and decisions from the 2002 Access and Travel Management Plan EA decision and past, current, and anticipated management on the Hoonah Ranger District. The 2001 EA presented alternatives for the management of roads on the Hoonah Ranger District and informed the public of those alternatives. This EA also considered a range of options for road maintenance and options for future road maintenance. Another ATM analysis is scheduled for 2009, and it will re-evaluate the 2002 decision. Roads and road management options for roads built, reconstructed, or with bridge replacements in the Iyouktug project area will be covered with the decision on this project. Please also see response to SCS-20.

**SCS-124** - The Forest Service Manual [FSM 1970.6] states, in part, that "the responsible line officer determines the scope, appropriate level, and complexity of economic and social analysis needed." The Iyouktug project is a timber sale project, and was proposed to respond to the goals and objectives identified by the Forest Plan for the timber resource and to help move the project area toward the desired condition identified in the Forest Plan for the lands within the Timber Production and Scenic Viewshed LUDs.

The Forest Service is not required to quantify, in monetary terms, all of the costs and benefits associated with non-market impacts, and in fact, under most planning and project conditions, all costs and benefits cannot be monetarily valued.

The analysis of the project's potential effects on these non-market values is reasonable and consistent with Forest Service Manual and Handbook guidance regarding social and economic analyses.

The financial efficiency analysis displayed in Table 3TR2 compares the estimated Forest Service direct expenditures with the estimated financial revenues of each project alternative. The Forest Service is not required to quantify the non-market benefits and costs associated with every timber sale. However, the Forest Service is required to "ensure that unquantified environmental amenities and values [are] given appropriate consideration in decision-making along with economic and technical considerations" [42 USC 4332(2)(B)]. As stated above, the Iyouktug Timber Sale EIS discusses the potential effects of the project on the non-market values, such as subsistence, wildlife, recreation, fisheries, water quality, soils, and wetlands as well as the impacts to the inventoried roadless areas.

**SCS-125** – A logging/transportation plan was developed prior to the Position Statement and used in the Iyouktug Roads Analysis. That plan was used as a basis for planning the Iyouktug Timber Sale EIS and further refined during on the ground investigation to access proposed units in the

sale area. As explained in Chapter 2, Alternative Development Process, as we designed this sale, we attempted to limit the amount of road building to improve economics and to reduce impacts of roads on resources.

**SCS-126** – Please see response to SCS-21.

**SCS-127** – Please see response to SCS-20 for information on closing and decommissioning roads. Although Appendix K of the Forest Plan states that roads should be minimized to the extent feasible, it does not exclude roads from OGRs. The Iyouktug Interagency Old Growth Reserve Review Team acknowledged that open roads will be maintained within the small OGRs within the project area. The interagency team felt that the habitat value of these areas was important enough to include them in the OGR even with open roads.

**SCS-128**- A portion of Road 8534 would be closed after the timber harvest through the 2002 ATM decision (USDA Forest Service 2002b). Please also see response to SCS-66. Road 85093 is not in the Project area.

**SCS-129** - Please see responses to SCS-20, SCS-123, and SCS-125. The past analyses of roads informed and drove the overall project design (Chapter 2, Alternative Development Process), while the issues drove the alternatives. We recognize the importance of limiting road construction and open roads while also designing a project that meets the Purpose and Need for the project. As stated in the Iyouktug Roads Analysis (Matter 2003), “Since opportunities do exist for future expanding resource and roading activities, the minimum road system for the IRAP2 area is not in place.”

**SCS-130** - The 2003 Iyouktug Roads Analysis is available by request from the project record (Matter 2003). While additional roads have been identified and analyzed in the DEIS, the Iyouktug Roads Analysis is a beginning point for the project.

**SCS-131** – In response to your comments, the IDT reviewed the conditions of several roads. The Roads Analysis Process included Road 85305 (Matter 2003, p. 23); it states "Assign road #85305 to the access road at the Suintaheen fish pass at MP 11.15 on #8530." A review of both the ATM decision (USDA Forest Service 2002b) and the Roads Analysis showed that NFS road 85305 was incorrectly identified in the DEIS for closure. Because no such decision was made, this closure was removed from consideration in all alternatives, including the no action alternative. The IDT analyzed this change in the FEIS (Chapter 2 and Chapter 3), and in the analysis in the project record.

In the decision for the Iyouktug project, the decision maker will decide which roads built, reconstructed, or with bridge replacements in the Iyouktug project area would be open or closed (and place into storage); further analysis related to the roads rule will occur during the upcoming Access Travel Management analysis process. Related to roads analysis, please also see responses to SCS-20, 123, 130, and 132.

**SCS-132** – The Iyouktug ROD will include a decision on road management objectives for roads constructed, reconstructed, or with bridge replacements in the Iyouktug project; this will determine which of these roads are open or closed by vehicle class (see DEIS, Appendix C, Road Cards). Engineering and motorized access by vehicle class of every road on the Hoonah Ranger District will also be analyzed in the ATM update planned for 2009.

**SCS-133** – The information on roads currently open in the Iyouktug area was provided by Chris Budke, an Iyouktug IDT member, based on in-the field knowledge of the roads and current road use. The Iyouktug Roads Analysis covers a larger area than the Iyouktug Timber Sale EIS, resulting in more miles of road being included in the Roads Analysis. Information on roads is available in the EIS as well as in the Project Record.

**SCS-134** – The 2002 ATM, Roads Analysis (Matter 2003), RCS, and annual road maintenance plans identify maintenance issues (Iyouktug project record). There are no known erosion problems affecting water quality on any of the open or closed roads in the Iyouktug project area. Any known items of concern on roads, such as bridges that need to be replaced and red and gray pipes have been identified and discussed in the DEIS and updated in the FEIS and in the project record. Additional information about current road conditions and maintenance needs has been added to the project record and the FEIS. Priorities for maintenance are tied to maintaining roads to Maintenance Level Standard. Please also see response to SCS-123. This information will be considered in the FEIS for this project.

**SCS-135** – In the decision for this project, the decision maker will decide which roads built, reconstructed, or with bridge replacements in the Iyouktug project area would be open or closed (and place into storage). Temporary road decommissioning will be part of the timber sale contract. National Forest System roads will be closed/put into storage or kept open as determined in the ROD. If a change was determined to be necessary for keeping roads open, a new NEPA analysis/decision would have to occur.

**SCS-136** – The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report) considered the effects of increased road use as part of the effect of harvest activities on wildlife. Please see response to SCS-42 the definition of harvest activities. The effects of roads are specifically addressed in the DEIS and FEIS Chapter 3, Environmental Consequences for American Marten and for Brown Bear sections. All new roads were considered as opened during harvest activities for all wildlife analysis. Please see response to SCS-168 for sediment. In terms of the transportation system, roads actively used in association with timber harvest activities will receive road maintenance commensurate with the use. The changes in the Iyouktug road system are not expected to impact long-term access or travel management on the existing Hoonah road system because roads proposed for continued maintenance are determined necessary for the protection, administration and utilization of the National Forest System lands and the use and development of its resources.

**SCS-137** – In the case of Iyouktug, we determined that the road closure activities of roads covered by the 2002 ATM Decision was not a connected action and should be analyzed as part of cumulative effects because it was a different decision than Iyouktug and by analyzing it this way it shows the impact of this ATM decision on the project area. Whether the closure of Road 8534 is considered ongoing or part of this action, the effects of keeping Road 8534 and other roads open was analyzed. As stated in Chapter 2 of the DEIS and FEIS, Alternatives Considered in Detail section, Road 8534 would be used and closed/stored after timber sale harvest (ATM decision, USDA Forest Service 2002b). The use of the road and the future closure/storage was analyzed in the DEIS and FEIS action alternatives. Our expectation of its future closure is justified. The Hoonah Ranger District has a good record of for placing roads into storage; approximately 10-20 miles of road have been placed into storage by Public Works Contract every year since the 2002 ATM decision (see the Iyouktug Project Record for road maintenance plan accomplishments for examples). A portion of the Forest's annual maintenance funding is

set aside to continue this activity on ATM identified ML1 roads (not needed for current administrative use). See also response to SCS-20

**SCS-138** – The harvest rotations/cutting cycle in the Iyouktug area are expected to be 75 years (for shovel units) and not less than 110 years for clearcut units (please also see response to BC-23). Whether timber is harvested on a short or long rotation is irrelevant as far as reconstructing roads go. If a road is needed for future harvest activities it will be designated as an NFS road. Please see response to SCS-20 and SCS-137.

**SCS-139** - Please see response to DEIS and FEIS Chapter 3 and see SCS-20. Also please note that the RMO and 2002 ATM identified 8534 as important for subsistence users out to the point it will be placed into storage post-sale.

**SCS-140** – A transportation map is included in the DEIS and FEIS as the first map in Appendices, Appendix C, Road Cards. A transportation map would be included in the ROD. Individual road cards display or describe known concerns such as bridge replacement locations, culvert locations, and red pipes (see DEIS Appendix C and response to OHMP-3).

**SCS-141** – Road miles for new and existing roads are based on current GIS data (electronic files including GIS comprise the Forest Transportation Atlas). New road locations were visited on the ground, recorded in road logs, and transferred to GIS using notes, orthophotos, and on-the-ground knowledge. GIS and INFRA are the most up to date information available and allow comparison within and across resources. Decommissioned temporary roads are no longer considered roads, but do remain in our analysis and on the current GIS roads layer along with Maintenance Level 1 roads that are placed in storage. See also the response to SCS-133.

**SCS-142** – Please see response to SCS-141. We will be revising the Hoonah Ranger District ATM plan in 2009 and will work on updating our road atlas, INFRA, GIS, and maps for the ATM effort.

**SCS-143** – The last segment of road 8534 is a ML 1 road and is in storage.

**SCS-144** - Please also see response to SCS-136. In the past several years, there has been adequate funding to maintain the roads in HRD as per the 2002 decision. The proposal for the new ATM will use the average annual road maintenance budget projections as sideboards for what roads can be maintained at what levels. It is expected to provide a forest transportation system that will be economically feasible given the reduced road maintenance budget. As stated in Transportation System in Chapter 3 of the DEIS and FEIS, the proposals in this EIS are based on, and compatible with, the past analysis, and the road management objectives from this decision will be included in the new ATM plan. The financial analysis of all roads and their maintenance will be included in that analysis.

**SCS-145** – The cost of long-term road maintenance is considered in this analysis by comparing, between the alternatives, the miles of road left open in the project area after the timber sale and 2002 ATM decision are implemented (see Chapter 3, Transportation System, Roads Analysis Process and Cumulative Effects of Alternatives). However, the wording in the FEIS (Chapter 3, Transportation System, Cumulative Effects of Alternatives) has been adjusted in an attempt to clarify the fact that, cumulatively, there would be less road open, and thus less maintenance needed after Alternatives 3, 4, and 5 were implemented, than for Alternative 2 (the Proposed Action) or Alternative 1 (No Action). Alternative 2 leaves more road open cumulatively because of the abundance of new open roads in Alternative 2; Alternative 1 leaves more road open

cumulatively because Road 8534 would not be closed due to the prior ATM decision. Please also see Chapter 2, Table 2-1, footnote 5 and the responses to SCS-123, 136 and 137.

**SCS-146** – Please see responses to SCS-136 and SCS-144.

**SCS-147** – In response to your comments, the IDT reviewed the condition of non-system roads (roads identified as unauthorized in the DEIS) and other roads. Chapter 3 of the FEIS now explains the condition of non-system road (called “unauthorized roads” throughout the Iyouktug analysis); approximately 6.6 miles of the 7 miles of non-system road are decommissioned to the standards in place at the time of harvest. Approximately 0.4 miles of the non-system road are open roads accessing existing rock quarries; these are the only unauthorized roads (by today’s standards and definitions) in the Iyouktug project area (Transportation section). As described in Chapter 2 of the FEIS because of the need for rock pits for this project, as well as for future road maintenance, all action alternatives now propose reclassifying 0.4 miles of existing, open, unauthorized roads that access rock pits to NFS roads. Using today’s road vocabulary, this reclassification is called construction.

The footnote in Table 3TR-1, displays that we recognized and correctly categorized the “re-use” of an old temporary road as new construction of a temporary road. It does not mean that the former temporary road was not decommissioned.

Each year the Hoonah Ranger District prepares a road maintenance plan for District road work and maintenance needs and to provide a way to report accomplishments. It includes costs, accomplishments, and deferred maintenance needs. Several years of road maintenance plans as well as an estimate of deferred maintenance needs and costs have been added to the Iyouktug Project Record to provide additional information. Please also see responses to SCS-137 and SCS-145.

**SCS-148** – Field reviews shows roads are maintained to standard and are mainly in good condition, with normal, annual road maintenance needs (small slumps or slide clearing, ditch cleaning, or removal of blowdown) dealt with regularly. Please see response to SCS-134 and SCS-137.

**SCS-149** – We have not received any notice of violation of water quality standards from the State of Alaska related to road maintenance needs in the project area. Timber sales are not required to bear the costs of culvert repair. Limited funds are allocated by Congress for this purpose, and will be appropriated according to priorities across the forest. Please also see response to SCS-20 and OHMP-3.

**SCS-150** - Please see response to SCS-145

**SCS-151** - For existing roads, activities such as blading, minor slump and slide removal, cleaning of drainage structures and brushing are considered maintenance items to make a road suitable for use . For the Iyouktug analysis, items like culvert installation or replacement, bridge replacement, subgrade repair and surfacing are considered reconstruction items.

**SCS-152** – Bridges are inspected for safety every 2 years. Existing bridges in the Project Area will no longer support commercial traffic or recreational traffic in the near future because they are at the end of their useful life.

**SCS-153** - “Temporary roads” describes roads used on a timber sale and then decommissioned after harvest. Temporary roads are authorized by the timber sale contract and then are required



to be decommissioned as part of that contract; they are constructed to the minimum necessary standards to satisfy environmental concerns and to get the specific job done. They are of minimum width and have a minimum amount of fill material placed on the surface. They are decommissioned after use. Roads that may be left open are NFS roads; the wording in the Transportation Specialist Report was corrected to reflect the correct terminology. Decommissioning is part of the timber sale contract to be accomplished by the Purchaser.

**SCS-154** – Activities are similar for road decommissioning and road storage, but there are minor differences between the two actions. Temporary road decommissioning involves removal of all culverts; whereas some culverts (for ditch relief) may be left in place on roads in storage (see definition of road decommissioning and road storage in the FEIS, Chapter 4, Glossary). Related to wetlands, temporary roads are temporary in use but the fills are permanent. The impacts of all roads on wetlands are described in the Wetland Resource Reports and Wetland section in Chapter 3 of the DEIS and FEIS. Under the Clean Water Act a temporary fill is not the same as a temporary or permanent forest road. Temporary roads are permanent fills under the Clean Water Act.

The terminology related to unauthorized and temporary roads, as used in the Iyouktug analysis, was clarified in the FEIS, Chapter 3, Transportation section. By adding the footnote in Table 3TR-1, we displayed that we recognized and correctly categorized the “re-use” of an old temporary road as new construction of a temporary road. We analyzed the effects of all roads for the Iyouktug project. Additional information regarding the condition of non-system roads has been added to the Iyouktug project record. Please also see response to SCS-147.

**SCS-155** – Temporary roads are used for short-term access; they would not be designated for ongoing use because they would be decommissioned after timber harvest. One of the reasons that temporary roads are decommissioned is to avoid future resource damage (see definition of road decommissioning in the DEIS and FEIS, Chapter 4, Glossary). There will be BMP implementation monitoring of road closures to assure that these roads are closed. We have a high compliance rate with BMPs, as demonstrated by our 2006 annual BMP monitoring report (USDA Forest Service 2007e).

**SCS-156** – The DEIS and FEIS, Chapter 3, Management Indicator Species (MIS) and Other Wildlife Species and Subsistence sections assessed the affects of all temporary roads during project activities. All temporary roads were considered open during project activities and closed and decommissioned once activities were completed.

**SCS-157** – Management within Timber LUDs, following Forest Plan Standards and Guidelines, allows for the construction, use, and maintenance of roads as an appropriate means for accomplishing timber harvest activities. We do not refute your claim that road construction or reconstruction have some impact on the environment and resources; however, we disagree to the severity the impact. See Chapter 3, Direct and Indirect Effects on Water Quality-Sediment and on Fish for further information on these expected impacts. See also EPA-1, EPA-2, SCS-136, SCS-148, SCS-149, and SCS-155.

Additionally, with the exception of the Reid & Dunne study these articles are about roads constructed of native surface and not shot rock used in road building practices in Alaska. Rock quality here is high as evidenced it must be drilled and blasted rather than ripped. Reid & Dunne cites the importance of high quality aggregate to reduce erosion; their study was also done during winter haul in 1984, current Timber Sale Contracts requires haul to be stopped when rutting of

road surface occurs. Surfaced roads to be stored or decommissioned act as a sediment trap and should be left in place with drainage structures removed.

**SCS-158** – The timber economics section speaks to the analysis of helicopter harvest (DEIS and FEIS, Chapter 3). Helicopters are considered during transportation planning. Also helicopter activities were considered during project design and described in the DEIS and FEIS (see Chapter 2, Alternative Development Process and Design Elements Common to All Action Alternatives, Timber Harvesting). As described in Chapter 2, all sites would be located in pre-existing developed sites or in areas that are proposed for development.

Please see response to SCS-42 for information on helicopter activities and wildlife. Forest Plan Standards and Guidelines for goshawks will be applied. There are no standards and guidelines pertaining to the management of bear dens. The majority of harvest activities are expected to occur during the summer months when bears are not in dens.

**SCS-159** – Bridges to be replaced in Alternative 1 will be replaced regardless of the proposed timber sale because these roads have been identified in the 2002 ATM decision to remain in use. As mentioned in the Stream Crossing and Bridges section (DEIS, Chapter 3, Transportation System) there is a possibility of using one or two bridges several times, installing and pulling the bridge as a road is constructed and then placed into storage or decommissioning reducing the costs by over \$20,000 per installation.

**SCS-160** – Please see Table 3WF-6 in the DEIS. This table displays cumulative (past, present and future) canopy removal by subwatershed. It lists one subwatershed (Middle Suntaheen) with cumulative canopy removal of 28% in one alternative, Alternative 2. Please see the analysis of direct and indirect effects on water quality-temperature regarding your concern on increased stream temperatures.

The application of BMPs during layout, implementation, and maintenance will maintain water quality to State of Alaska standards for all alternatives and limit instream impacts. This will avoid compromising spawning and rearing habitat.

**SCS-161** – The text explaining the relevance of Walters and Prefontaine (2005) has been updated in Chapter 3 of the FEIS and corresponding resource reports in the project record. The Prince of Wales (POW) study was used to demonstrate that stream temperatures within the Iyouktug watersheds should not be showing any increases due to past timber harvest due to the similarity of stand age between the past harvest in Iyouktug and those of the POW study. We agree that maintaining intact riparian stands play a primary role in maintaining stream temperatures. All significant stream channels (Class I-III) within proposed units under this proposed project will receive buffers as per the Stream Channel Protection Measures outlined in Appendix B of the DEIS. Class IV streams will be protected by following Best Management Practices also outlined in Appendix B of the DEIS.

Additional study of angular canopy density is not warranted and outside the scope of this analysis. Currently, RMAs adjacent to harvest units are in a natural undisturbed condition, comprised of old growth riparian forest. Stream course protection, additional RAW zones and partial harvest prescriptions are designed to maintain buffer windfirmness.

**SCS-162** – Windthrow was considered an important factor in this analysis and all action alternatives. Riparian buffers were designed to minimize windthrow through site-specific Reasonable Assurance of Windfirmness (RAW) zones adjacent to RMAs. The combination of

RMA and RAW zone buffers, as well as partial harvests, are intended to maintain the overall integrity of the current riparian vegetation.

According to the 2006 Annual Monitoring and Evaluation Report, monitoring results have shown that post harvest windthrow is present in 25% of buffers associated with harvest units harvested during the 6 years from 2000 through 2005 across the forest. The average amount of windthrow in the buffers is 2.3 percent. The amount of windthrow is expressed as the cumulative number of trees windthrown divided by the original number standing trees in a buffer. The cumulative amount of windthrow in the buffers is highly variable and ranges from 0 to 73 percent (USDA Forest Service, 2007). See also SCS-160 and SCS-161.

**SCS-163** – There is no research or information to indicate that current riparian buffers are inadequate in protecting stream temperatures. Furthermore, the effects of climate change on the natural resources of the Tongass are highly uncertain, especially over the long run, and likely to be small, especially over the next 10 to 15 years. While there is general agreement among scientists that the climate is warming, 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. There is a risk that climate change may trigger other changes (wind, windthrow, air and water temperature changes, etc.), however, there is considerable uncertainty concerning specific predictions of how the climate may change, and even more uncertainty regarding the effects of climate change on resources of the Tongass National Forest. The state of current knowledge and the uncertainty about specific effects of climate change, gives us no reason to believe that the Iyouktug project will exacerbate climate change or its effects. We think the Forest Plan provides for resiliency in the face of uncertain but anticipated change, and believe that knowing more information on climate change is not essential to making a reasoned decision about Iyouktug.

**SCS-164** – High stream temperatures in Southeast Alaska are likely to occur during warm, rainless weather and resulting low stream flow periods regardless of watershed harvest levels or extent of past riparian harvest. This confirms the importance of current riparian management practices of the Forest Plan. Shade provided by intact riparian forests moderates the effects of climate on stream temperature. Please see response to SCS-161 and SCS-163.

**SCS-165** – Your request for additional collection of stream flow and water temperature data in the project area is noted, however we feel that sufficient data was collected to complete our analysis.

**SCS-166** – Qualitative descriptions of effects labels are found in the Environmental Consequences for Watershed and Fish section in Chapter 3. Additionally, hydrology and fisheries technicians identified specific concerns while conducting field surveys of streams and fish habitat in the project area. These concerns included issues such as channel type, steep, unstable side-slopes (for fish/watershed), and slope gradient (soils/wetlands). Responses to these concerns, BMPs that will be applied, and mitigation measures can be seen in the unit cards for specific concerns; pinpointing locations and mitigation measure for specific sites, as well as maps for each unit with specific information on slope gradient (slopes greater than 72% shown on maps), stream classes, stream channel type and existing harvest unit with year harvested.

**SCS-167** – Please see the response to OHMP-3 and SCS-149 for information on red pipes. The ATM identified some of your concerns and some of these problems have been addressed. The slide and slump problems on road 8534 was repaired under Equipment Rental Contract during

the summer of 2007. Other issues will be addressed during the sale (if needed). The decision maker will consider the effects of past practices and cumulative watershed effects in his decision. Please also see Chapter 3, Direct and Indirect Effects on Water Quality-Sediment and on Fish for further information on these expected impacts. See also SCS-20, SCS-149, SCS-155, and SCS-157.

**SCS-168** – Thank you for directing our attention to a potentially misleading citation in the DEIS. We have clarified this section in the FEIS. The studies cited in Hicks et al. (1991) measured sediment increases associated with intensive logging, without use of BMPs, in two watersheds between 1957 and 1964. Activities during this seven-year period included clearcut harvest of 22% and 29% basin area (including riparian harvest) and construction of 23 and 12 miles of road. Sediment increases were partly attributed to landslides in steep clearcuts and use of a quarry that discharged sediment directly into the stream. The effects described represent a worst-case scenario of logging that is no longer practiced in the Tongass NF. Because the Iyouktug project would incorporate state-of-the-art BMPs in full compliance with current state and federal regulations, we do not anticipate measurable increases in sediment or any exceedences of state water quality standards for the growth and propagation of fish.

**SCS-169** – The Iyouktug Record of Decision explains how this project complies with the Clean Water Act. The project would not violate water quality standards. Please see responses to DEC-2, EPA-1, EPA-2, SCS-149, and SCS-168.

**SCS-170** – The 2006 Forest Plan Monitoring and Evaluation Report summarizes ‘grab’ sample turbidity compliance monitoring conducted during culvert installation and replacement. Turbidity data reported in FY 2006 demonstrates compliance with State water quality criteria. The elevated turbidity levels typically recovered to background levels within 48 hours. At the sites where this did not occur, additional mitigation was applied to decrease the turbidity levels. We routinely consult with ADEC on corrective actions when turbidity is elevated. Analysis of continuous turbidity data is underway in case study watersheds on Prince of Wales Island. Progress reports are summarized in the 2005 and 2006 Forest Plan Monitoring and Evaluation Report. Please see also EPA-2 and SCS-149.

**SCS-171** – We have not violated water quality standards for turbidity or sediment. The cited USFS reports (Paustian 1987 and the 2004 M&E report) do not conclude that water quality standards were violated. We have not received any notice of violation of water quality standards from the State of Alaska. Please see also EPA-2 and SCS-149.

**SCS-172** – The Forest Plan does not require sediment monitoring. We continue to work cooperatively with the State of Alaska to develop and apply water quality monitoring protocols.

**SCS-173** – Please see response to SCS-163.

**SCS-174** – As a federal agency operating under the silvicultural exemption from the 404 permitting process, we follow applicable laws and regulations including Executive Order 11990 and the Code of Federal regulations, which defines actions to be taken to meet the silvicultural exemption.

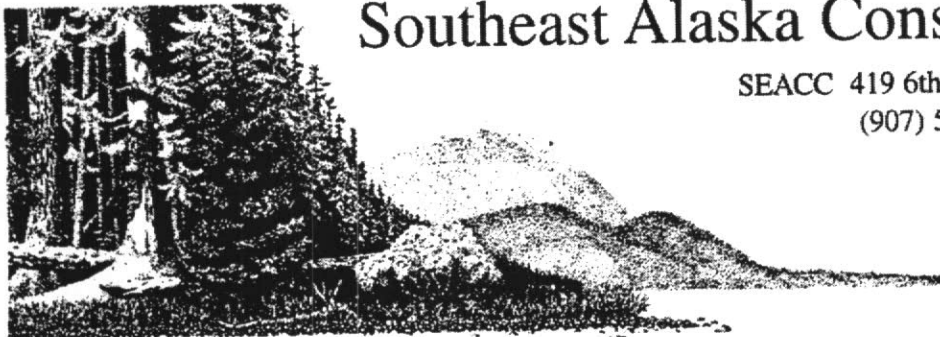
The intent of EO 11990 and subsequent regulations is to avoid new construction in wetlands to the extent practicable and when wetlands can not be avoided, to include all practicable measures to minimize harm to wetlands which may result from such use. In making this finding, the head of the agency may take into account economic, environmental, and other pertinent factors.

The project area is nearly half wetland but less than half of the roads are located on wetlands. This data is presented as an indicator that road construction is avoiding wetlands to the extent possible (at the project scale) as required by federal regulations. Please see DEIS and FEIS, Wetland Avoidance section. Further avoidance of wetlands would lead to more roads on steeper slopes and thus is not environmentally preferred to road construction on wetlands. Wetland avoidance at the road segment scale is discussed on the individual road cards (DEIS, Appendices B and C).

**SCS-175** – The graphics provided after the comment period were reviewed and considered by the IDT. The graphics are included in the Iyouktug project record.

# Southeast Alaska Conservation Council

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November 19, 2007

**via email to: [comments-alaska-tongass-hoonah@fs.fed.us](mailto:comments-alaska-tongass-hoonah@fs.fed.us)**

Hans von Rekowski  
 IDT Leader  
 Sitka Ranger District  
 204 Siginaka Way  
 Sitka, AK 99835

**Re: Comments on the Draft Environmental Impact Statement for the Iyoutug Timber Sales**

Dear Mr. von Rekowski:

The Southeast Alaska Conservation Council (SEACC) submits the following comments on the Draft Environmental Impact Statement (DEIS) published for public comment by the Forest Service on the proposed Iyoutug Timber Sales. The DEIS describes the no-action alternative and four action alternatives. The action alternatives propose logging between 16.8 million board feet (MMBF) of timber from 883 acres and 59.8 MMBF from 4,185 acres from the project area on Northeast Chichagof Island.

SEACC is a coalition of 15 volunteer citizen organizations based in 13 Southeast Alaskan communities. SEACC's membership includes commercial fishermen, Alaska Natives, small-scale timber operators and value-added wood product manufacturers, tourism and recreation business owners, hunters and guides, and Alaskans from many other walks of life. SEACC is dedicated to preserving the integrity of Southeast Alaska's unsurpassed natural environment while providing for the balanced, sustainable use of our region's resources. Even after years of industrial scale logging on public and private lands in Southeast Alaska, the region continues to possess magnificent old-growth forests, outstanding fish and wildlife habitat, vital customary and traditional use and subsistence areas, and excellent air and water quality. Southeast Alaska's rugged, wild landscape allows Alaskans to pursue a lifestyle no longer available to most Americans.

**I. Cumulative impacts of past and planned logging on adjacent, private lands**

SEACC-1

The 9th Circuit court decision that resulted in the revision of the 1997 Tongass Land Management Plan stated the Forest Service did not consider the cumulative impacts of past and reasonably foreseeable future non-federal logging in high volume old growth

ALASKA SOCIETY OF AMERICAN FOREST DWELLERS, Point Baker • CHICHAGOF CONSERVATION COUNCIL, Tenakee • CUSTOMARY & TRADITIONAL GATHERING COUNCIL OF KAKE • FRIENDS OF BERNERS BAY, Juneau • FRIENDS OF GLACIER BAY, Gustavus • JUNEAU AUDUBON SOCIETY • LOWER CHATHAM CONSERVATION SOCIETY, Port Alexander • LYNN CANAL CONSERVATION, Haines • NARROWS CONSERVATION COALITION, Petersburg • LISIANSKI INLET RESOURCE COUNCIL, Pelican • PRINCE OF WALES CONSERVATION LEAGUE, Craig • SITKA CONSERVATION SOCIETY • TAKU CONSERVATION SOCIETY, Juneau • WRANGELL RESOURCE COUNCIL • YAKUTAT RESOURCE CONSERVATION COUNCIL

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SEACC-1  
(cont.)

forest of the Tongass, in violation of NEPA. We do not believe the Draft EIS for the Tongass Land Management Plan Adjustment (2007) adequately addressed this court-mandated issue; neither does the Iyouktug DEIS. Of the 5,050 acres in the project area, approximately 3,000 acres were clearcut in the past 20 years under the Alaska Pulp Corporation long-term contract. The project area also includes 265 acres of privately-owned lands – of which 175 acres have been clearcut. DEIS at Table D-1. Immediately adjacent to, but outside of, the project area, thousands of acres of forest have been clearcut in the Spasski watershed. The project analysis must evaluate the cumulative effects of this project on the human environment, including the cumulative impact of extensive logging on public and private lands.

SEACC-2

The DEIS states that “[t]he project area is bordered on the northwest by private land, much of which has been previously harvested. (See DEIS at Figure 2-1). This area is not part of the project area. Depending on the resource, activities in these private lands have been considered in cumulative effects. (Resource Specialist Reports, Iyouktug Project Record).” DEIS at 1-2. The discussion of cumulative impacts from past logging on adjacent private lands is limited to the following from the DEIS: “[e]xtensive timber harvest has taken place in the Spasski Watershed, a high-value sport fishery and primary salmon producer in the project area. This harvest is on private land and has had unquantified but probable adverse effects to water quality and fish habitat due to extensive riparian harvest and landslide initiation. Because the boundary is outside project area watersheds, there is no cumulative effect to project area fish or water quality due to adjacent harvest.” DEIS at 3-163. Doesn’t the Alaska Departments of Natural Resources and Environmental Conservation have any information related to this timber development? Didn’t the Forest Service have any data related to this watershed before it was conveyed to Huna Totem? Why can’t the Forest Service compare that data with the watershed’s existing condition, which is easily discernable from review of photographs or aerial overflight? In particular, how can effects be dismissed if they are “unquantified” and therefore, unknown? We believe this information is essential for the Forest Service to evaluate reasonably foreseeable significant adverse impacts, particularly cumulative impacts, and make a reasoned choice among alternatives. We do not believe the overall cost of obtaining this information is exorbitant, and the DEIS fails to explain why the Forest Service hasn’t collected this information, evaluated the relevance of the data for assessing cumulative effects, summarized existing credible scientific information, or conducted any meaningful evaluation. Consequently, this information should be disclosed in the DEIS. 40 C.F.R. § 1502.22(a). By concluding that there are no cumulative effects because logging happened “outside project area watersheds,” the agency fails to take a hard look at cumulative impacts. By excluding the thousands of acres of clearcuts on private lands adjacent to the project area and within the customary and traditional territory of the Hoonah Tlingit, the agency fails to provide adequate information about the impacts of past and proposed logging within and adjacent to the project area on wildlife, fisheries, and human uses of these important resources. / Given the importance of data related to adverse effects

SEACC-3

from intensive timber development on adjacent private lands, and the lack of that information in the DEIS, we recommend the Forest Service issue a supplemental DEIS for public review. The missing information is very relevant to environmental concerns and bears directly on the cumulative effects of the proposed action when considered with

SEACC-3  
(cont.) | other past, present, and future actions on private lands adjacent to the project area. See 40 C.F.R. § 1502.9(c)(1)(ii). A supplemental DEIS would also further the purposes of NEPA by insuring that agency decision-makers and the public have available high quality, accurate environmental information to review anticipated effects of the proposed action before decision are made. See 40 C.F.R. § 1500.1(b).

SEACC-4 | To our knowledge, no landscape-level analysis has been performed for the Northeast Chichagof area. Given the level of past logging activities, we urge the Forest Service to consider doing such analysis and incorporating it into this project planning process before proceeding any further with this project. SEACC is in the process of taking a longer-term look at past and future uses of the Northeast Chichagof landscape with our neighbors in Hoonah and would appreciate the opportunity to collaborate with the Forest Service and other interested parties on such a landscape analysis.

SEACC-5 | Compensating for past and planned logging on adjacent lands could include modifying the small Old Growth Reserve boundaries and adjusting plans for precommercial thinning in the project area. We urge the agency to consider and incorporate these opportunities into this project planning process.

**II. Volume and sale size**

**A. Various small sales would meet local demand**

SEACC-6 | The local demand for timber, the heavy fragmentation of the landscape, and resulting decline in the deer population indicate that the volume being considered in the preferred alternative is excessive and unreasonable. The Draft EIS for the Tongass Land Management Plan Adjustment (2007) reports Icy Straits Lumber usage in 2004 and 2005 at 550 MBF and 500 MBF, respectively. See TLMP DEIS at 3-418, Table 3.22-5. This is lower than the reported use and demand in the Iyouktug DEIS. DEIS at 3-37.

SEACC-7 | The preferred alternative would result in timber sold through various small sales (“less than 3 MMBF/yr”), and one or more larger sales. DEIS at 2-10. As we stated in our scoping comments, SEACC is willing to work with local operators, the Hoonah Ranger District, the Hoonah Indian Association, and other concerned parties to develop a timber sale program that meets the current needs of local operators, without sacrificing important or rare habitat that is critical for wildlife, and customary and traditional uses within the project area. We believe this balance would be best achieved through truly small sales, not one or more larger sales. Of the action alternatives, only Alternative 5 offers truly small sales over a period of time. Such a sale program would help provide wood to Icy Straits and other local wood manufactures, minimize impacts to customary and traditional use of deer, and best assure balanced, sustainable multiple use of all renewable forest resources in the project area.



**B. The preferred alternative does not best meet Purpose and Need or adequately address Significant Issues**

SEACC-8

The DEIS states that “[a]lternative 3 was developed to minimize impacts to deer habitat and connectivity while providing for an economic timber supply.” DEIS at Summary vi. The document then states: “[a]lthough not reflected in the habitat capability results, Alternative 3 was designed to clearcut fewer acres and to maintain more connectivity and low elevation habitat for deer.” DEIS at 3-86.

SEACC-9

It is confusing that the DEIS refers to this alternative as minimizing impacts to deer habitat and connectivity, but is unable to measure this adequately in the analysis provided. Alternative 5, on the other hand, is designed to maximize the economic return of timber harvest and has the least impact on prime deer winter habitat of all the alternatives. It appears that Alternative 5 better meets the purpose and need of the project and, among the action alternatives considered, best accommodates two of the three significant issues raised.

**III. DEIS does not meet statutory requirements for subsistence**

SEACC-10

There is no question that deer hunting is a major activity in the Hoonah area. Among communities in Southeast Alaska, Hoonah ranks first among communities in per capita subsistence harvest at over 500 pounds of subsistence foods per capita per year. (See TLMP DEIS at Figure 3.17-2) Easily accessible from Hoonah, the project area is heavily used for deer hunting, with “residents from Hoonah, Haines and Juneau communities obtain[ing] approximately 75 percent of their average annual deer harvest from WAA 3551.” DEIS at 3-128. Given the importance of deer hunting, we are deeply concerned by the prediction of a decline the deer population. See DEIS at 3-21.

SEACC-11

During the Tongass Forest Plan revision process, Hoonah residents submitted a resolution that urged the Forest Service to “ensure that fish and wildlife and other resources never and nowhere reach a point where continued levels of harvest would jeopardize stock to unsustainable levels and result in use-priority restrictions.” (See attachment: Multi-Users Voice Resolution; a copy of this resolution containing signatures is on file with the Forest Service.)

SEACC-12

The Draft EIS states: “[c]urrent deer demand is approaching a level at which not all hunters may be successful.... Following a severe snow winter, demand for deer might not be met. In areas where hunter demand exceeds 20 percent of habitat capability, harvest of deer by hunters may be restricted directly through restrictions in seasons and harvest limits.” DEIS at 3-129. Hunter demand is currently 227 deer, representing 14.3 percent of habitat capability (based on HSI model). DEIS at 3-131. Already, this has exceeded the 10 percent carrying capacity threshold for deer. DEIS at 1-19.

SEACC-13

Unfortunately, it appears that the area has already reached the point where hunting restrictions are necessary. On November 6, 2007, the Alaska Department of Fish and Game issued an emergency closure of doe hunting in Game Management Unit 4, citing

SEACC-13 | substantial winter-related deer mortality. “Additional doe harvest beyond this closure date is excessive and may jeopardize the future productivity of the herd.” (See attachment: ADF&G Emergency Order No. 01-06-07 (November 6, 2007))

SEACC-14 | ANILCA requires the Forest Service to make certain determinations when a significant possibility of a significant restriction in subsistence uses will occur. We do not believe the analysis in the DEIS adequately meets the statutory requirements to minimize adverse impacts to subsistence uses and resources.

SEACC-15 | **IV. Decline in deer population raises questions about landscape capability**

Faced with the prediction that deer population will decline as a result of past, proposed, and future harvests, and recent actions by ADF&G to close doe hunting this season in the Hoonah area, questions are raised about the capability of the landscape to withstand proposed and future harvests. The low elevation, high volume POG that is important winter deer habitat is precisely the kind of habitat that has been logged in the past in the Iyoutug area. DEIS at 3-80 and 3-82. Nevertheless, the action alternatives considered propose logging from 0.9 MMBF to 3.1 MMBF of this habitat type. DEIS at Table 3MI-10.

SEACC-16 | We have serious reservations about the impact of any further reduction in high quality deer habitat. Following on the heels of the severe 2006 winter, efforts to understand the condition of available deer habitat and the impacts of further removal of critical deer winter habitat should go beyond the analysis contained in the DEIS and include active steps to restore and rehabilitate areas of former critical deer winter habitat.

SEACC-17 | In particular, we urge the planning team to incorporate further alternative models to improve its analysis and the public’s understanding of impacts to deer habitat capability. The DEIS relies on the deer habitat capability model to determine an estimate of the potential supply of deer available for subsistence use. DEIS at 3-80. NEPA requires the Forest Service disclose any shortcomings of the model used and also consider other reasonable analysis based on a corrected interpretation of the model. The shortcomings of the model are not discussed in the DEIS.

As discussed in our appeal of the Emerald Bay Timber Sale filed with the Forest Service on January 5, 2006, the agency’s use of the deer model has been seriously flawed for a variety of reasons. See SEACC, et al. Appeal of Record of Decision for the Emerald Bay Timber Sale, at 49-55. For example, the Forest Service applied an incorrect deer carrying capacity multiplier of 100 deer/sq. mile in an area with a Habitat Suitability Index of 1.0; this is the same multiplier used in Iyoutug DEIS. See DEIS at 3-81.

An additional flaw in the model used is that “high value deer winter habitat” refers to the top quartile of acres in the Habitat Suitability Index, or an HSI value of 0.42-1.0. This artificially inflates the number of acres considered “high value.”

SEACC-18 | We strongly support the planning team’s use of predictors other than HSI model. “Prime habitat,” defined as “HPOG (high volume strata) on south and west facing aspects below

SEACC-18  
(cont.) | 800 feet in elevation” is a more realistic measure of truly “high value” habitat. DEIS at 3-81. Given that only 53 percent (1,703 acres) of prime habitat remains in the project area, we strongly encourage the planning team to remove any units that include prime winter habitat. DEIS at 3-82. Because of the shortcomings of the HSI model, the Forest Service should include a map that shows “prime” winter habitat in addition to the map showing high value deer habitat.

SEACC-19 | We support the use of Quick-Cruise plots to assess the quality of deer winter habitat. On face value, an average plot score of 64 out of 100 seems low. DEIS at 3-82. However, the information available in the DEIS is insufficient for evaluating the relative value of deer habitat within the unit pool of the project area. Where were the plots located? Only in the unit pool? Outside of the unit pool? How does the unit pool compare with areas outside the unit pool? Answers to these kinds of questions are available in the planning record, but not the DEIS.

**V. Further steps needed to minimize impacts to subsistence deer hunting and improve habitat connectivity**

SEACC-20 | The larger landscape of Northeast Chichagof, including the Iyouktug project area, is highly fragmented both by previous logging and high elevation ridge lines. Due to this fragmentation, a concerted effort is needed to maintain viable wildlife connectivity. We appreciate that overall landscape connectivity was considered early on in the planning process.

SEACC-21 | Aside from a landscape-level analysis, one area where analysis and compensation for cumulative impacts on adjacent private lands could occur is in the modification of the small Old Growth Reserves.

SEACC-22 | Another area where cumulative impacts from adjacent private lands could be considered is in future plans to thin young growth in the project area and surrounding lands. The DEIS indicates that “site-specific prescriptions would be developed prior to implementation to guide these future treatments in previously harvested areas.” DEIS at 3-116. Table D-1 indicates that between 2007 and 2015, 2,000 acres will be precommercially thinned in the project area and 1,000 acres will be precommercially thinned in the Suntaheen Valley and Whitestone Harbor. If any additional old-growth timber is to be logged from this landscape, it should be linked with habitat restoration-oriented thinning to minimize adverse impacts to subsistence uses and resources.

SEACC-23 | We appreciate the effort to include a discussion of wildlife corridors and connectivity, and the time and resources dedicated to identifying corridors. In particular, we appreciate that the DEIS recognizes two kinds of connectivity – landscape connectivity and elevational migration connectivity. DEIS at 3-7. With the project area facing a “significant possibility of a significant restriction in subsistence deer resources and uses” (DEIS at 3-131) and the Forest Service’s duty to minimize adverse impacts to subsistence uses and resources, we believe an even more concerted effort is needed.

SEACC-23  
(cont.)

The area around the North Fork of Iyouktug creek was identified in the DEIS as a wild-life travel corridor. In addition, it appears to be among the few southwest-facing slopes with productive old growth in the project area (and therefore valuable winter deer habitat). We strongly urge the Forest Service to remove Units 116, 117, and 118 from the unit pool and not build the associated road, NFS road 853431. We are also concerned

SEACC-24

that the likelihood of blowdown in proposed helicopter units in this vicinity (125, 185, 184) will result in de-facto clearcuts, which would certainly impede connectivity, and that units proposed for clearcuts will further fragment this already fragmented area.

SEACC-25

Units 818 and 919 are identified as having the greatest impact to elevational connectivity. DEIS at 3-18. We urge the Forest Service to remove these units from the unit pool. For reasons of connectivity, as well as for the value of the habitat for deer winter use, we urge you to remove Unit 914 from the unit pool.

We also support Bob Christensen's comments and information provided on this subject.

**VI. Results of partial cutting in wind-prone areas are unknown**

SEACC-26

Three types of trees in Southeast have been identified as predisposed to wind damage: 1) old trees with higher limb & leaf-to-root ratio; 2) shallow-rooted trees on wet soils; and 3) stilt-rooted trees.<sup>1</sup> During the course of a field visit to the Hoonah area this fall, we observed these factors in the Iyouktug area in general and in Unit 103 in particular. The range of action alternatives proposes the following partial cut prescriptions in areas identified as having moderate to high wind risk: 50 percent removal in 202 to 315 acres, 40 percent removal in 794 to 1,714 acres, and 25 percent removal in 0 to 903 acres. DEIS at Table S-1.

While we agree that logging makes more sense in wind-generated stands, or windforests, than in other productive forest types, we have serious concerns about partial-cut prescriptions in areas of moderate to high wind risk. Clearcutting, in essence, mimics the natural effect of windthrow. Partial cutting may weaken the stand's resilience to wind events. Does the Reasonable Assurance of Windfirmness (RAW) analysis take into account the affect of partial cutting in determining wind risk? Does RAW analysis consider soil condition or site-specific productivity? Are there examples of areas in the Tongass with moderate to high wind risk that have been partially cut?

SEACC-27

Based on the information provided in the Draft EIS, a decision that would result in partial cuts ranging from 176 acres in Alternative 5 to 1,633 acres in Alternative 2 in areas with moderate to high wind risk would be highly experimental. Not knowing what results to expect from partial cuts in moderate to high wind risk areas calls into question the assertion that the reduction in prime deer habitat is overestimated. See DEIS at 3-82. If, in

<sup>1</sup> Harris, A.S. 1989. *Wind in the Forests of Southeast Alaska and Guides for Reducing Damage*. Gen Tech Rep. PNW-GTR-244. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

SEACC-27 | fact, partial cuts in wind-prone areas are more likely to result in blowdown, then the im-  
(cont.) | pact on habitat is virtually the same as clearcutting.

## VII. Yellow Cedar

### A. Analysis of stand composition is flawed

SEACC-28 | In our scoping comments, we asked that the Forest Service fully disclose and evaluate  
| how much logging is proposed for cedar stands in this project. More information needs  
SEACC-29 | to be provided for the public to understand where and how much cedar is present in the  
| project area. / What is the representation of cedar outside of the unit pools, but within the  
| project area?

### B. Success of proposed measures to maintain yellow cedar is unknown

SEACC-30 | We are concerned by the statement in the DEIS: “[y]ellow-cedar decline is not prevalent  
| in the Iyoutug project area. The Forest Service intends to maintain cedar in the Iyout-  
| tug landscape.” DEIS at 1-16. Since the ecological role and value of yellow cedar stands  
| are largely unstudied and since a half-million acres of yellow cedar is in decline in the  
| Tongass, this response appears dismissive and not based on a scientific understanding of  
| cedar regeneration.

SEACC-31 | If the general guidelines for single tree selection call for designating “up to specified per-  
| cent of the existing basal area for harvest emphasizing spruce 24 inches DBH or greater  
| and yellow-cedar” (DEIS Appendix B at 4), please explain how a representative mix of  
| species remains if cedar is being particularly designated for single-tree selection?

SEACC-32 | We have a number of questions about the proposed measures for maintaining yellow ce-  
| dar in the project. See DEIS at 2-14. While these measures may *reduce* the impact of  
| disproportionate logging of yellow cedar, does research support that leave trees will stay  
| upright in wind prone areas (see Section VI)? Or that regenerating cedar in stands where  
| it would be harvested will be successful?

SEACC-33 | The DEIS anticipates that “natural regeneration is expected to be abundant and include  
| the same species mix as the original stand.” DEIS at 3-111. Later, the DEIS adds that  
| “[i]nter-planting of yellow-cedar or spruce should be scheduled if necessary to increase  
| post-harvest composition or maintain pre-harvest composition of these species.” DEIS  
| Appendix B, at B-5. What monitoring data does the Forest Service have to support a con-  
| clusion that such a strategy will be effective? What research is behind the regeneration  
| rate of cedar in partially cut stands where less light is available? Any data that the Forest  
| Service has must be disclosed for public review and comment. Should the agency suc-  
| ceed in regenerating yellow cedar, it is a slow-growing species in comparison to western  
| hemlock or Sitka spruce. / Will the stand rotation be modified to reflect that 100 or 150-  
SEACC-34 | year rotation may not be sufficient to grow back yellow cedar?



SEACC-35

**VIII. Impact of "limited interstate commerce" on Alaskan jobs**

SEACC has a long history of support for getting the most jobs per board feet cut on the Tongass and opposition to the export of unprocessed logs from the Tongass. Seeing the Forest Service's projections of jobs lost due to the new "limited interstate commerce" policy underlines why SEACC is opposed to this policy. Given the new policy that allows the loss of up to half of the potential local jobs associated with this project, what assurance do we have that the volume cut in this sale will actually support local jobs?

SEACC-36

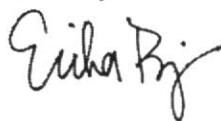
**IX. An integrated, collaborate management approach**

In closing, for future proposed activities in the Northeast Chichagof area, and in this proposed action if possible, we hope to be able to work collaboratively with the Forest Service and other interested parties. Through the Tongass Futures Roundtable, a diverse group of stakeholders has come together to work through a proposed timber sale on Wrangell Island. On the Thorne Bay district, conservation groups and district employees are working collaboratively on stream restoration projects. We think the time is ripe to begin genuinely practicing the collaborative stewardship process directed in the 1997 TLMP Record of Decision (ROD): "[f]orest supervisors and District Rangers to increase their efforts in collaborative stewardship within the communities of Southeast Alaska. Collaborative stewardship means bringing people together to share in the decision making in implementing Forest Plan direction." TLMP ROD (1997) at 42.

We welcome the opportunity to pursue collaborative management on this and future projects in the Hoonah Ranger District.

Thank you for your consideration of these comments and the extensive fieldwork and planning efforts that contributed to this document.

Sincerely,



Erika Bjorum  
Grassroots Organizer

**Responses to SEACC – Erika Bjorum, Southeast Alaska Conservation Council**

**SEACC-1** – Please see responses to SCS-5 and BC-25.

**SEACC-2** – Please see response to BC-25. Since none of the proposed harvest units or other timber sale activities affect or would have any influence on the Spasski watershed, or have an affect on the sport fishery in the Spasski drainage, cumulative impacts would be minimal to non-existent on this resource with activities occurring in the Iyouktug drainage. With regards to fisheries, even if the previous timber harvesting in the Spasski drainage affected this resource, activities in Iyouktug would have no influence on the Spasski watershed. Forest Plan Standards and guidelines will be adhered to in Iyouktug with regards to fisheries and watershed resources and will not adversely affect the watershed or fisheries resource.

**SEACC-3** - Please see responses to BC-25 and SEACC-2. Since cumulative effects were analyzed, no supplemental EIS is necessary.

**SEACC-4** – While landscape analyses are desirable and valuable resources in timber sale and other project planning, they are not required. Please also see responses to BC-25 and SEACC-45. Please keep the Hoonah District Ranger informed of the progress on your Northeast Chichagof analysis.

**SEACC-5** – Please see responses to BC-15 and 26 for information on the development of the proposed Old Growth Reserves. The interagency team assessed landscape connectivity when reviewing the location of the small OGRs. Please see response to BC-8 for information on thinning.

**SEACC-6** – Please see responses to BC-3 and JM-5.

**SEACC-7** – Please see responses to BC-4, EH-1, and JM-3.

**SEACC-8** – The DEIS and FEIS Chapters 2 and 3 supports your statement that Alternative 3 was designed to minimize impacts to deer. The DEIS and FEIS, Chapter 3, Habitat Connectivity and Old Growth, Environmental Consequences on Connectivity section states that it is important to not only consider the change in habitat (productive old growth forest) but also the location of the of the habitat being changed. Whereas the reduction of POG habitat is quantifiable, factors including the location, elevation and observed habitat use of a proposed unit were considered in the connectivity analysis but were not easily quantified. As an example, consider the harvest of Units 189 and 819. These units are proposed in all of the action alternatives (including Alternative 5) except for Alternative 3. These units were excluded from Alternative 3 because the highest amount of deer use was observed in Unit 189 and heavily used trails were observed in Unit 819. Although Alternative 3 shows a higher level of reduction in POG forest than Alternative 5, the overall impact to specific areas of quality deer habitat are reduced by dropping these units.

**SEACC-9** – Thank you for your support of Alternative 5. Please see response to SEACC-8 for information on how connectivity was addressed for Alternative 5.

**SEACC-10** – The impacts on deer population are analyzed and reported in the DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Subsistence section.

**SEACC-11** - Thank you for the information that you provided. This information would have been taken into consideration during the analysis of the Forest Plan Amendment.

**SEACC-12** – Your statement is supported in the DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Subsistence section. The Subsistence analysis was updated to reflect response to comments (see response to SCS-88 and 89). Although the 10 percent carrying capacity threshold is used as a guide to assess the level of effects, the Forest Plan does not include a threshold for deer carrying capacity.

**SEACC-13** - Please see response to SCS-13 to see how the analysis was updated to reflect the recent doe hunting closures.

**SEACC-14** – This project is consistent with Section 810 (a)(3) of ANILCA.

**SEACC-15** –The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species (MIS) and Other Wildlife, Sitka Black-tailed Deer section address the effects of the proposed project on deer and deer habitat. This analysis was updated to reflect the recent doe hunting closure (see response to SCS-13) and information from response to comments (see response to SCS-88 and 89).

**SEACC-16** – Please see response to BC-5 for information on the range of alternatives designed to address deer habitat and connectivity.

**SEACC-17** – Please see response to SCS-35 for information on the use of the deer model.

**SEACC-18** – We appreciate your support for the other factors considered in the deer analysis and for your recommendation to drop units that occur in prime deer winter habitat. Prime deer winter habitat occurs inside and outside proposed harvest units. Based on the response to comments, a map of prime deer winter habitat was added to the Wildlife and Subsistence Resource Report.

**SEACC-19** – Thank you for your support in using the quick cruise plots. The Wildlife and Subsistence Resource Report, Management Indicator Species (MIS) and Other Wildlife, Sitka Black-tailed Deer section discloses the locations of the quick cruise plots. The map and additional information is not located in the DEIS because this document provides only a summary of the total analysis (see Chapter 1 of the DEIS and FEIS, Availability of the Project Record section).

**SEACC-20** - Your recommendation and support for connectivity as a significant issue has been noted. Population viability is addressed at the Forest level. Please see response to SCS-16 and 35 for information on maintaining population viability.

**SEACC-21** - Please see responses to BC-15, BC-26 and SCS-35 for information on the OGRs.

**SEACC-22** – Please see response to BC-8. Table D-1 displays acres of ongoing and future precommercial thinning. Table D-1 in Appendix D of the FEIS has been updated to clarify acres of precommercial thinning and timeframes.

**SEACC-23** – Thank you for referencing specific units in your comments, your support of analyzing connectivity and for your recommendation to further reduce the effects to connectivity. Please see response to BC-5 for information on the range of alternatives designed to address connectivity. Please see response to BC-9 for information on Units 116, 117, and 118, units in the North Fork of Iyouktug Creek.



**SEACC-24** – Thank you for referencing specific units in your comments. Please see responses to BC-6, BC-9, BC-18, BC-19, BC-20 and BC-21.

**SEACC-25** – Your recommendation to drop Units 818, 819 and 914 to maintain connectivity was noted. Unit 819 was dropped from Alternative 3. Unit 914 was dropped from Alternative 5. Please see response to BC-5 for information on the range of alternatives designed to address deer habitat and connectivity.

**SEACC-26** – The type/morphology of individual trees is important. However, there are several landscape and topographic (abiotic) features such as aspect, elevation, and wind direction that are more important in determining wind risk (Ott 1995, Nowacki and Kramer 1998, Harris 1989). Unit 103 has a moderate to high wind risk, but does not have evidence of catastrophic windthrow as found in other parts of the Iyouktug project area.

Your comment references Table S-1 in the DEIS, however the acres that you reference in your comment are for all wind risk categories not just moderate to high as your comment indicates. Please refer to Table 2-3 for proposed harvest in moderate-high and high wind risk areas. Wind risk rating for each alternative by prescription is located in the Iyouktug Timber Sales Project Record, IY 5f 358.

Please also see responses to BC-6 and BC-18.

RAW zones take into account harvest method, terrain, topography, soils and other resource concerns. The Hanus Bay study site included in the Alternative to Clearcutting (ATC) Study (McClellan 2007) is in an area known as having high wind risk potential. Please see response to BC-6 for more information on how this has been addressed in the DEIS and FEIS and information regarding ATC windthrow monitoring five years post harvest.

**SEACC-27** - Please see response to BC-6 for information on partial harvest. The DEIS (p. 3-82) and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species (MIS) and Other Wildlife, Affected Environment for Deer, High Value and Prime Deer Winter Habitat section does not support that the reduction in prime habitat was overestimated. However, the Environmental Consequences for Deer section does assume that the effects to habitat capability may be overestimated (see response to SCS-85 for more information). Please see response to BC-6, 10 and 19 for information on how the effects of windthrow were considered.

**SEACC-28** – Please see responses to BC-22 and BC-23.

**SEACC-29** – Yellow-cedar representation within the project area as a whole is estimated based on FIA data (Wilson 2002). Please see FEIS, Chapter 3, Silviculture and Vegetation, Direct and Indirect Effects on Species Composition and Long-term Productivity and the Silviculture Resource report have been updated to clarify this.

**SEACC-30** – Please see response BC-22 and BC-23. Please also see the FEIS Chapter 3, Silviculture and Vegetation, Forest Health and Natural Disturbance, Yellow-cedar decline.

**SEACC-31** - Please see responses to BC-22 and BC-23.

**SEACC-32** - Please see responses to BC-6, BC-22 and BC-23.

**SEACC-33** - Please see responses to BC-22, BC-23, and ISES-2.

**SEACC-34** - Please see responses to BC-22 and BC-23.

**SEACC-35** - As displayed in the DEIS and FEIS, Issue #3 (Timber Economics), under Environmental Consequences on Timber Economics, Projected Employment and Income, not all jobs are considered to be affected by the interstate shipping. If the maximum volume permitted under the interstate shipping policy was shipped out of Alaska, one-half of the sawmill jobs would occur out of state; logging jobs would not be affected by interstate shipping.

Allowing limited interstate shipments will allow timber to be appraised using higher lower 48 market values. That would substantially improve the likelihood that timber will achieve a positive appraisal, and continue to be offered for sale from the Tongass. Unless the Tongass can offer a reliable supply of timber with a positive appraisal, the few remaining locally owned mills in Southeast Alaska will find it very difficult to stay in business. Closure of the remaining mills, even on a temporary basis, would run counter to the objective of supporting local jobs, economies, and wood processing capacity in Southeast Alaska. Please also see response to comment JM-4.

**SEACC-36** - District Rangers held two meetings and one field visit with local interest groups on the Iyouktug project (DEIS and FEIS, Chapter 1, Public Involvement). The site-specific comments and questions that came out of these meetings were helpful in developing alternatives and design measures for this project and in clarifying the analysis. There are several venues for public involvement in project and forest planning including the Tongass Futures Roundtable. On the Tongass National Forest, we encourage the public, in general, to present management ideas, proposals, and options to us for consideration.



Steve Lewis or Rachel  
Myron  
<tenakeetwo@yahoo.co  
m>

To: comments-alaska-tongass-hoonah@fs.fed.us  
cc:  
Subject: iyouktug

11/18/2007 01:24 PM

PO Box 53  
Tenakee Springs, AK 99841

Gentlefolk:

SL-1 As a resident of Tenakee who hunts deer and researches humpback whales, I am concerned about the proposed volume of the Iyouktug Timber Sale that abuts False Bay. I think that the proposed volume of 59.8MMBF is greatly in excess of what can be used by local mills---unless the sale is extended to supply these folks for the next 2 decades. / Otherwise the volume harvested will go to distant mills and require local mills to search ever harder for any timber that won't seriously impact the deer populations around Hoonah. /  
SL-2 Recent heavy snows have already seriously impacted deer populations and clearcuts are known to exacerbate this problem since the  
SL-3 old-growth canopy so critical for maintaining accessible winter forage during snowy winters is lost when forest is clearcut.

SL-4 It is unclear what the impact to productivity of the waters around False Bay will be with further heavy upland harvest, but the potential exists to damage an area heavily used by humpback whales foraging in the summer and fall.

SL-5 Furthermore, this sale appears to target a species that is rapidly disappearing from the Tongass. Yellow cedar is declining throughout the forest and regeneration is virtually non-existent. It seems very unwise to target this species, at least until we understand what is causing the decline of existing stands and how to reestablish harvested stands.

SL-6 To summarize, the proposed Iyouktug sale is too large for the small mill owners in Hoonah to use effectively. It targets yellow cedar, a species that is declining for unknown reasons and failing to reestablish itself after harvest. / It also will have large effects on the habitat needed by Sitka black-tailed deer, habitat that has  
SL-7 already been heavily impacted (nearly 50% harvested) during the Alaska Pulp Corporation's harvest. / It will also impact uplands that  
SL-8 may be important in maintaining the productivity of False Bay, an area heavily used by feeding humpback whales.

SL-9 I support providing timber for the small mills in Hoonah, but the current scale of the Iyouktug Sale fails to do this in a rational way. The sale need to be scaled way way back to meet these mills needs while avoiding damage to other resources critical to maintaining a healthy and dynamic terrestrial and marine ecosystem.

Thank you for your consideration of these issues.

Sincerely,

Steve Lewis

---

Be a better sports nut! Let your teams follow you

**Responses to SL – Steve Lewis**

**SL-1** - Please see responses to BC-4 and EH-1.

**SL-2** – We recognize the need for local timber, which was one reason for including local sawmills and timber operators in the Purpose and Need for this project (Chapter 1, DEIS and FEIS). Please also see response to BC-4 and EH-1.

**SL-3** - The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species (MIS) and Other Wildlife, Sitka Black-tailed Deer section address the effects of the recent heavy snows. These sections were updated to include recent information about deer mortalities that resulted from the 2006-2007 winter.

**SL-4** – In our Essential Fish Habitat analysis and consultation with National Marine Fisheries Service (DEIS, Chapter 3 Environment and Effects, Watershed and Fish, Essential Fish Habitat section), we did not find that waters in, and thus productivity of False Bay would be damaged. The analysis on potential adverse effects on marine EFH can be found in the DEIS, Chapter 3 Environment and Effects, Watershed and Fish, Essential Fish Habitat section. Our analysis concluded that by following Forest Plan Standards and Guidelines and leaving buffers on all Class I, II, and III streams as well as the 1,000 ft beach buffer will protect water quality and aquatic habitat in areas where there is upland harvest (DEIS, Chapter 3, Watershed and Fish, Essential Fish Habitat). Effects to the humpback whale are address in the DEIS and FEIS Chapter 3, Threatened, Endangered, Petitioned, and Sensitive Wildlife Species.

**SL-5** - Please see response BC-22 and BC-23. Please also see the FEIS Chapter 3, Silviculture and Vegetation, Forest Health and Natural Disturbance, Yellow-cedar decline.

**SL-6** - Please see responses to BC-4 and EH-1.

**SL-7** – Please see the response to SL-3. The deer analysis considered the effects of past harvest and supports your statement that deer habitat will be affected by the action alternatives.

**SL-8** – Please see the response to SL-4.

**SL-9** – Please see responses to SL-2, BC-4 and EH-1.



November 19, 2007

Mr. Hans Von Rekowski  
IDT Leader  
Sitka Ranger District  
204 Siginaka Way  
Sitka, AK 99835

Re: Iyouktug Timber Sale DEIS

Dear Mr. Rekowski:

TU-1 I am commenting on behalf of the Alaska Program of Trout Unlimited and would like to voice our opposition to several components of the Iyouktug Timber Sale DEIS and the proposed action noted therein.

Although we see merit in efforts by the Forest Service to provide stable long-term timber supplies to local operators, an almost 60 mmbf harvest level as proposed in Alternative 2, takes this concept too far given the significant amount of critical fish, bear and deer habitat and Inventoried roadless Areas which would be impacted. This is especially the case given the amount of timber harvest which has already taken place in the sale area.

TU-2 Fish

A panel convened to assess the levels of risk to fish habitat from timber harvest and related activities associated with management alternatives in the 1997 Tongass Land Management Plan revision expressed 5 primary issues of concern (P22B6Klap, 1997). These concerns bear directly on proposed actions within the Iyouktug DEIS, primarily those associated with the three Inventoried Roadless Areas it contains:

1. Roads may have negative effects on fish habitat. These effects could come from sedimentation when roads were constructed on slopes that are too steep. Stream crossing structures, especially culverts, may block movement of juvenile fish and result in a long-term reduction of available fish habitat. In addition, the panel expressed concern about an increased risk of overharvests of fish, especially steelhead, cutthroat trout, and sockeye

- TU-2 (cont.) | salmon, because fishermen would have improved access from roads.
- TU-3 | Panel evaluators identified Prince of Wales, Kupreanof, Kuiu, and Chichagof islands as currently having road densities sufficient to be of concern to maintaining adequate fish habitat. The panel stated in conclusion, "A reduction of road development in any alternative reduces risks to fish habitat." (Emphasis mine).
- TU-4 | 2. The amount of timber harvested under any alternative was the second highest risk to fish habitat. This risk increased as the number of acres harvested increased.
- TU-5 | 3. Allocation of reserves free of timber harvest reduces the risk to fish stocks. The panel recommended that the most effective protection of fish habitat would be reserves that included entire watersheds rather than only parts of watersheds.
- TU-6 | 4. Results of watershed analysis may affect management decisions. The panel recommended that a watershed analysis be conducted before decisions are made on how management activities would be applied on the ground.
- TU-7 | 5. Timber harvest activities in the upper reaches of watersheds where fish do not occur may affect habitat. Protection of these areas would help maintain and protect fish habitat farther downstream. Timber harvest in these areas is especially important in affecting the rate and amount of wood and sediment delivery.
- TU-8 | Bear  
Roads and timber harvest have a similar negative impact on brown bears and here again, Northeast Chichagof has been identified as an area of particular concern. In "Brown Bears of Unit 4- A Status Report and Issues Paper" (Paul, 1998), the Alaska Department of Fish and Game states, "Human-caused mortality is the dominant cause of mortality in adult brown bears. Based on our sample of radio-collared bears a higher portion of mortality was attributed to defense of life and property and illegal kills on Chichagof Island than on Admiralty Island. Road access and development activities were highly correlated with bear mortalities on the Northeast Chichagof road system." (Emphasis mine).

Deer

TU-9

The Iyouktug Timber Sale DEIS states, "Connectivity along riparian areas and between habitats at different elevations has been reduced by past clear cutting." The DEIS also makes note of various studies showing the importance of old-growth and connectivity to deer and their winter survival, yet the DEIS appears to conclude that, "Effects (of Alternative 2 and 4) are considered moderate because activities are expected to reduce the number of deer but sufficient habitat would remain functional to maintain the viability of the species."

TU-10

Given the timing of the DEIS release it is clear this conclusion was reached before statistics on deer mortality during the winter of 2006 were made public. ADFG now estimates that roughly 85% of the Chichagof deer herd was lost last winter (ADFG- personal communication) and has recently closed the Hoonah area to the taking of does. These conclusions and actions were derived at a time when approximately 60 mmbf of trees the Forest Service intends to offer for sale were standing and providing utility to deer. Removing that amount of timber from the equation without due regard for recent findings could prove catastrophic to the deer that remain.

TU-11

Conclusion

The foregoing information on the impacts to fish, bear and deer associated with road density and timber harvest, especially that which has taken place on Northeast Chichagof, indicate that timber harvest levels and road building as proposed Alternative 5, is simply the best way to both provide timber to local operators and conserve and protect the valuable fish, bear, and deer resources in the Iyouktug Sale Area. We urge the Forest Service to adopt this alternative.

Sincerely,

Mark Kaelke  
Southeast Alaska/Tongass Project Director  
419 Sixth Street, Ste. 200  
Juneau, AK 99801

**Responses to TU – Mark Kaelke, Trout Unlimited**

**TU-1** – The IDT and the Responsible Official considered many alternatives in detail (DEIS and FEIS, Chapter 2, Alternatives 1 through 5) as well as alternatives which were eliminated from detailed analysis for the reasons described in Chapter 2, Alternatives Considered but Eliminated from Detailed Study section. As identified in the Introduction of Chapter 2, Alternative 3 is the preferred alternative. Please also see response to BC-4 and EH-1. The effects to bear foraging habitat was addressed in the DEIS and FEIS, Chapter 3, Management Indicator Species (MIS) and Other Wildlife, Affected Environment and Environmental Consequences for Brown Bear.

**TU-2** – The effect of roads on sedimentation and fish habitat are described in Chapter 3 of the DEIS and FEIS, Watershed and Fish, Environmental Consequences, Direct and Indirect Effects on Water Quality-Sediment and on Fish. The effects on potential to over harvest fish from roads was updated in the FEIS, Environmental Consequences section, based on your comment. Many of the standards and guidelines in the Forest Plan were based, to a large extent, on the recommendations of the Anadromous Fisheries Habitat Assessment (AFHA). AFHA is considered the most comprehensive scientific review available for the Tongass. The 1997 ROD noted that the standards and guidelines and other direction included in the Forest Plan meet or exceed all of the recommendations by AFHA.

**TU-3** - The effects of roads on fish habitat are disclosed in Chapter 3 of the DEIS and FEIS. The potential impacts of the Iyouktug project on fishing have been considered and added to Chapter 3 of the FEIS, Watershed and Fish section.

**TU-4** – The potential for timber harvest to affect fish habitat is discussed in Chapter 3 of the DEIS and FEIS.

**TU-5** - Your comments regarding allocating reserves free of timber harvest that would include entire watersheds rather than only parts of watersheds were considered. We agree with the panel's recommendation that reserving entire watersheds would effectively protect fish habitat, however, in the Essential Fish Habitat Potential Adverse Effects on Freshwater EFH section analysis (DEIS and FEIS, Chapter 3 Environment and Effects, Watershed and Fish) we did not find fish stocks to be at risk. The Forest Service analyzed cumulative effects at a scale appropriate for each resource. The analysis determined that Forest Plan standards and guidelines and non-development LUDs maintain fish and wildlife and their habitat (DEIS and FEIS, Chapter 1, Purpose and Need, Issues and Essential Fish Habitat, Chapter 3, Watershed and Fish). Furthermore, the 2008 Forest Plan Amendment has designated Old Growth Reserves which encompass entire watersheds to the north and south, adjacent to the project area.

**TU-6** – The Forest Plan does not require Watershed Analysis unless riparian standards and guidelines are modified or public water supply is involved. Neither applies to this project. Nonetheless, a detailed, field-based assessment was completed and is directly relevant to the effects analysis. It is summarized in the DEIS and FEIS Watershed section

**TU-7** –Protecting the upper reaches of watersheds for downstream fish habitat is important regarding the amount of wood and sediment delivery to downstream fish habitat. AHMU class, channel types and process groups are used to assign appropriate buffers (see Table B-1, Appendix B of the DEIS, page 3) not only for Class I and II fish streams, but on high gradient Class III streams that flow into fish habitat and have sufficient flow or sediment and debris



transport to directly influence downstream water quality or fish habitat capability (Aquatic Habitat Management Handbook, FSH 2090.21). Streams in the Iyouktug Timber Sales units were field verified by hydrology and fisheries technicians. Stream class, channel type and process group were determined in the field and specific recommendations for protection are documented in the unit cards.

**TU-8** – Thank you for providing information on brown bears and mortalities. The DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species and Other Wildlife, Environmental Consequences for Brown Bear section address the effects of human caused mortalities and roads to bears and their habitat.

**TU-9** – Your statement is supported in the DEIS and FEIS, Chapter 3 (and the Wildlife and Subsistence Resource Report), Management Indicator Species (MIS) and Other Wildlife, Environmental Consequences for Deer section.

**TU-10** – The analysis was updated to reflect recent information about deer mortalities and the doe hunting closures that resulted from the 2006-2007 winter. Please see response to SCS-13 for more information.

**TU-11** – Please see responses above regarding specific concerns on fish, bear and deer on Northeast Chichagof. The Decision Maker will consider your preference for Alternative 5.



United States Department of the Interior



OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
1689 C Street, Room 119  
Anchorage, Alaska 99501-5126

9043.1  
ER07/810  
PEP/ANC

November 16, 2007

Mr. Forrest Cole, Forest Supervisor  
Tongass National Forest  
648 Mission Street  
Ketchikan, Alaska 99901

Dear Mr. Cole:

The U.S. Department of the Interior has reviewed the Draft Environmental Impact Statement (EIS) for the Iyouktug Timber Sales. The Draft EIS evaluates five alternatives which provide various combinations of resource outputs and spatial locations of harvest units on the Hoonah Ranger District. We believe the following comments need to be taken into account in the Final EIS. These comments are submitted in accordance with the Fish and Wildlife Coordination Act, the Alaska National Interest Land Conservation Act, the National Environmental Policy Act, and the Council on Environmental Quality guidance for providing technical expertise on water, biological, and geological resources.

The 1997 Tongass National Forest Land and Resource Management Plan addressed the goal of maintaining viable and well-distributed fish and wildlife populations across the Tongass through implementation of the Tongass Conservation Strategy, a landscape conservation approach with special emphasis on old growth reserves, various no-harvest buffers, and canopy retention in some timber harvest areas. We continue to support the Conservation Strategy as an effective way to accomplish this important conservation goal. We appreciate the long history of the U.S. Forest Service and the Fish and Wildlife Service working together to develop and implement conservation measures to address this goal.

If you have questions concerning our comments, or if we may be of further assistance with regard to trust resource information, please contact Mr. Bruce Halstead, Juneau Fish and Wildlife Field Office Supervisor, at (907) 780-1161. Questions regarding our comments on water quality may be directed to Lloyd Woosley, Chief of the U.S. Geological Survey Environmental Affairs Program, at (703) 648-5028 or at [lwoosley@usgs.gov](mailto:lwoosley@usgs.gov).

Sincerely,

For: Pamela Bergmann  
Regional Environmental Officer – Alaska

## ATTACHMENT

GENERAL COMMENTS**Small Old Growth Reserves**

USBI-1 | We recommend implementation of the most biologically effective locations for Small Old Growth Reserves (OGRs) in Value Comparison Units (VCUs) 2080 and 2090, and maintaining connectivity between these and other components of the Conservation Strategy. We believe it is important that the Small OGRs as shown on the maps for action alternatives 2-5 be adopted in the Agency Preferred Alternative in Final Environmental Impact Statement (Final EIS) and the Record of Decision (ROD). Adoption of these biologically-preferred OGR locations will help reduce risks to vulnerable trust resources, primarily migratory birds, and other old-growth-dependent rare and endemic species, thereby minimizing the risk that protection under the Endangered Species Act would be required.

**Queen Charlotte Goshawk**

USDI-2 | Goshawks were observed in Units 108, 1711, 173, 175, 818, 901, 904, east of 980 and north of 982. Pluck posts were located in Units 125, 130, 923 and 942 and in the OGR. Goshawk nest sites were located in Units 107 and 901 (Draft EIS page 3-136). Current forest plan standards and guidelines (USFS 1997b, pp. 4-90 to 4-91) require maintenance of an area of not less than 100 acres of productive old growth forest generally centered over the nest tree or probable nest tree. Research on Queen Charlotte goshawks in British Columbia has documented post-fledging areas of up to 230 hectares (568 acres) (McClaren et al. 2005). We recommend that 500 acres of old forest habitat be retained around all known nest stands.

USAI-3 | Effective management of goshawk nesting habitat depends on the knowledge of nest locations. We recommend that the ROD require implementation of a goshawk inventory and monitoring program consistent with the guidance found in the U.S. Forest Service's (USFS) recent publication on this topic (Woodbridge and Hargis 2006).

**Subsistence**

USAI-4 | The Iyouktug area is within documented community and subsistence use areas for Hoonah, Gustavus, and Angoon. These communities are classified as rural and receive subsistence priorities under the Alaska National Interest Lands Conservation Act (Draft EIS page 3-128). This part of Chichagof Island has been impacted by historic timber harvest at low elevations and road construction activities (Draft EIS Summary, p. iv). Deer use old growth forest corridors to move between low elevation winter habitat and high elevation summer habitat. The proposed harvest and associated road construction would reduce habitat connectivity for Sitka black-tailed deer and potentially reduce the current and future subsistence harvest levels by removing additional low elevation forest and travel corridors connecting low and high elevation habitat. Table 2-2 of the Draft EIS states that deer habitat connectivity in the productive old growth below 800 feet would be reduced by 6.1 percent, using the preferred alternative.

US01-4  
(cont.) To help minimize or prevent restrictions on subsistence, we recommend that the USFS maximize protection of important deer winter range and migratory routes through modification of harvest unit configuration, harvest prescriptions, and road management. Kirchhoff and Thomson (1998, p. 13), for example, recommended light selection logging that removes no more than 3 adjacent trees per harvested patch, to create a fine-grained interspersion of gaps and cover, on deer winter ranges. We recommend such an approach to provide multiple-use management of these productive lands.

### Cumulative Effects

US01-5 There is a potential for cumulative impacts upon trust resources and their habitat. The Draft EIS states that there are 265 acres of land under Huna Totem Corporation ownership (timber rights purchased by Sealaska Corporation) in the northwestern corner of the Iyouktug project area (Draft EIS page 1-9 and Figure 1-2). About 100 acres of this private land has been harvested and some (acreage unspecified) is scheduled for harvest within the next 2 to 3 years (Draft EIS page 1-9). The 40,651-acre project area also includes approximately 5,050 acres encumbered by Huna Totem Corporation. The Huna Totem Corporation has not reached full entitlement under the Alaska Native Claims Settlement Act. We recommend that in the Final EIS, the risk levels of VCUs reflect the cumulative effects of harvesting both throughout the timber sale area and on adjacent, non-Tongass National Forest lands, since forest-dependent wildlife respond to the availability of habitat across the landscape.

### SPECIFIC COMMENTS

US01-6 Draft EIS, page 3-74: There are an estimated 66 bald eagles nest sites in the project area. Although bald eagles were observed in the project area, nests were not identified in the units proposed for harvest. Bald eagles, their eggs, and their nests are protected throughout the United States by the Bald and Golden Eagle Protection Act, and by the Migratory Bird Treaty Act. Eagles can be sensitive to habitat alterations and disruptive activities near their nests, leading, in some cases, to nest abandonment, mortality of eggs or young, or destruction of a nest. To help land stewards and others avoid causing such impacts, the U.S. Fish and Wildlife Service has developed guidelines for management of nest sites. We recommend that the Forest Service implement these guidelines in the Iyouktug Timber Sales. The National Bald Eagle Management Guidelines can be downloaded at:

<http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf>

US01-7 Draft EIS, page 3-135: Forest owls, specifically western screech owls, barred owls, and northern saw-whet owls should be included in the Final EIS list of nesting raptors to be surveyed in the project area.

US01-8 Draft EIS, p. 3-135: The Tongass Land and Resources Management Plan Final EIS identified the marbled murrelet as a species of special management concern (USFS 1997a, page 3-351). We recommend that the Iyouktug Timber Sales Final EIS evaluate potential impacts to this

USDI-8  
(cont.) species, which nests in old growth forests throughout the Tongass National Forest. A recent review of the marbled murrelet's status by the U.S. Geological Survey (Piatt et al. 2007) documents apparent population declines for the species throughout Southeast Alaska, and discusses factors affecting the bird. We recommend that you review this document (available for download at <http://pubs.usgs.gov/of/2006/1387/>) as you consider potential impacts to the bird from the alternatives under consideration for the Iyouktug Timber Sales.

USDI-9 Draft EIS, page 3-152, first paragraph: The paragraph explains that loss of shade can affect stream temperature, and then describes a study on Prince of Wales Island that showed that there was no relation between forest harvesting and high stream temperatures after 15 years. However, as is stated near the bottom of page 3-154, recovery can take 10-30 years; therefore, temperature effects may occur in the first few years after forest harvesting, which would not have been detected in the studies on Prince of Wales Island. Consideration of potential short- to medium-term effects from proposed forest harvesting, such as the effects of the loss of shading on fish habitat, is warranted. We believe the Final EIS should state, pending such an assessment, that the 15-year study is inconclusive on whether any shorter-term changes in stream temperatures may occur due to a reduction in shading which might be related to forest harvesting.

## REFERENCES

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- USFS. 1997a. Tongass Land Management Plan Revision, Final Environmental Impact Statement. USDA Forest Service, Tongass National Forest, R10-MB-338dd (Record of Decision, Final Environmental Impact Statement—Part 1 and Part 2, Map Packet, Appendix—Volume 1, Volume 2, Volume 3, Volume 4, and Errata). Alaska Region, Juneau, Alaska.
- USFS. 1997b. Tongass National Forest Land and Resource Management Plan. R10-MB-338dd. USDA Forest Service, Alaska Region. 1997.
- Woodbridge, B., and C. D. Hargis. 2006. Northern goshawk inventory and monitoring technical guide. USDA Forest Service, Washington Office, Gen. Tech. Rep WO-71. 84 pp.

**Responses to USDI – Doug Mutter (for Pamela Bergmann), United States Department of the Interior, Office of Environmental Policy and Compliance**

**USDI-1** – Your recommendation to implement the interagency proposed Old Growth Reserves (OGRs) and to maintain connectivity is supported in the DEIS and FEIS. The Interagency proposed OGRs were proposed for all of the action alternatives. Connectivity was addressed and the action alternatives meet Forest Plan Standards and Guidelines. The Forest Plan Amendment adopted the interagency recommendation for OGRs for the Iyouktug project area.

**USDI-2** – Although we considered your recommendation to maintain 500 acres of forest habitat around the goshawk nest sites to maintain the post-fledging area, this exceeds what is required in the Forest Plan. The goshawk nests are currently buffered to meet Forest Plan Standards and Guidelines. The goshawk buffers maintain a minimum of 84 percent (122 acres) of the average post-fledging area (146 acres) as defined in the reference that you provided..

**USDI-3** – Your recommendation to inventory and monitor goshawk nest sites is supported in the DEIS and FEIS, Chapter 2, Monitoring, Project-specific Monitoring section. This section states that goshawk nests will be surveyed to assess activity and location before harvest activities occur. A discussion of the survey method is in the Wildlife Resource Report.

**USDI-4** – Your recommendation to modify harvest methods to maintain important deer winter range and corridors has been noted. Please see response to BC-5 for information on the range of alternatives developed to address the issues. Alternative 3 was developed to minimize impacts to deer habitat and connectivity by dropping units or portions of units in lower elevation winter habitat.

**USDI-5** – Chapter 1 of the DEIS and FEIS address and support the information you cite on encumbered lands. Please see response to BC-25 for information on how the cumulative effects analysis was completed.

**USDI-6** – Thank you for providing information on the National Bald Eagle Management Guidelines. Although there are no bald eagle nests currently identified within the areas of proposed activities, if active nests are identified in areas of proposed activities, the Bald Eagle MOU between the Forest Service and the Fish and Wildlife Service will be followed.

**USDI-7** – Your recommendation that forest owls be considered in the analysis was considered. Although the owls were not addressed as a specific issue in the analysis, the habitat for this species was addressed. The analysis addressed the effects to productive old growth forest (refer to the DEIS and FEIS, Habitat Connectivity and Old Growth Reserve section) and habitat for the goshawk (refer to the DEIS and FEIS, Threatened, Endangered, Petitioned, and sensitive Wildlife Species section), marten, migratory birds' and endemic species (refer to the DEIS and FEIS, Management Indicator Species (MIS) and Other Wildlife Species section) that use similar habitats to the owl or provide prey for this species. The Forest Plan Standards and Guidelines for Raptor Nest Protection will be applied to active owl nest sites.

**USDI-8** – Thank you for providing information on the marbled murrelet. Although the marbled murrelet was not addressed as a specific issue in the analysis, the habitat for this species was addressed. Murrelets generally occur in near shorewaters (usually within 3 miles of the shoreline) and prefer forested habitat for nesting. Therefore, the analysis addressed the effects murrelet habitat including to productive old growth forest (refer to the DEIS and FEIS, Habitat

Connectivity and Old Growth Reserve section) and habitat for the goshawk, osprey, trumpeter swan, Vancouver Canada goose (refer to the DEIS and FEIS, Threatened, Endangered, Petitioned, and sensitive Wildlife Species section) and migratory birds' that use similar habitats to the murrelet (refer to the DEIS and FEIS, Management Indicator Species (MIS) and Other Wildlife Species section). Proposed activities will not occur within 1 mile of the shoreline and the DEIS and FEIS (and the Wildlife and Subsistence Resource Report), defines the effects to productive old growth forest. If any murrelet nests are identified during project activities, the Forest Plan Standards and Guidelines for the Marbled Murrelet will be applied.

**USDI-9** – Please see responses to SCS-160 and 161.



**Responses to Comments****Appendix B****Wanda J. Culp P.O. Box 51, Hoonah, Alaska 99829****907-945-3352**

November 12, 2007

Alaska Congressional Delegation and  
Other Members of Congress  
Washington, D.C.

RECEIVED NOV 16 2007

**RE: Iyouktug Timber Sale on N.E Chichagof Island, Sealaska Corporation's Lands  
Bill, and Title VIII Protections on ANCSA private lands.**

To All This Concerns, - *Hoonah Ranger*

WC-1 The Alaska Native cultures need protection from the huge impacts of logging, mining and oil/gas development across Alaska. The Alaska Federation of Natives is working towards creating a law that will extend federal customary and traditional use protections to our own lands under the Alaska Native Claims Settlement Act (ANCSA) now under State of Alaska jurisdiction. This effort needs the serious attention and positive action of the U.S. Congress.

I live in the Tlingit village of Hoonah, Alaska and am a Sealaska Corporation and Huna Totem Corporation Shareholder. Hoonah is literally surrounded by private Tlingit-owned land where the Alaska State Troopers and local "public safety" city police have joined forces in reducing our hunting and fishing rights on our own land through confiscation of equipment and issuance of court citations that usually end up in fines and probation.

It is past time that our ANCSA corporations face the village issues and join in a positive and just resolve. The steel gates that have barred us from the best hunting, fishing and gathering sites - while those well off enough go around those gates on their 4-wheelers to "sport" hunt and fish - need to be opened to us as the initial land owner interest holders. State of Alaska law considers all Alaskans to be "subsistence" users while Hoonah customary and traditional users are entrapped into State court with no due process. This makes a sham out of the ANCSA settlement and ANILCA Title VIII so-called protections.

The federal law, ANILCA Title VIII that protects customary and traditional use and cultural existence pertains only to public federal lands, not to the state privately-owned ANCSA lands. There is 15,000 miles of coastline and 45,000 miles of rivers and streams in S.E. Alaska's Tongass National Forest managed by the SOA/ U.S. Forest Service with checkerboard federal-state dual-management that is harming not only the human element but the wildlife and pre-established ecosystems within our very midst. Our traditional way of life has been successfully squeezed out of the picture by federal, state and private land managers on all those miles of rivers, streams and coast lines.

A half-century of federally subsidized logging and road-building has destroyed roughly a million acres of S.E. Alaska's richest and irreplaceable old growth. The Tongass is the only national forest nationwide where commercial logging is allowed in roadless areas. The current logging level targeted by the USFS is more than five times the average annual logging over the past 15 years. And, this logging is heavily subsidized by taxpayers, approx. \$40 million annually and about \$1 billion since 1982.



## Appendix B

## Responses to Comments

WC-1  
(cont.) Sealaska currently owns 290,000 acres of S.E. Alaska of promised the 375,000 from ANCSA, 67,110 of those acres surround Hoonah (21,636 being Huna Totem land). As with federal public lands, ANCSA state lands have been aggressively logged in the past 25 years, with much less environmental consideration than required federally. Much needs to be done to mitigate the destruction left behind all around Hoonah's traditional use area. Corporate land managers and planners must begin looking at sites identified as sacred or historic under ANCSA as important to our living culture for continued use.

All land managers and planners must consider the cumulative effects of their past actions and policies on both federal (U.S. Forest Service) and state lands (Sealaska and Huna Totem Native Corporations) around Hoonah, for instance. It is time to scrap the steam-rolling agendas moved by overly aggressive industries that move in and move out with no thought to what is left behind socially or economically. Federal agencies must smash their old "industry first" priority template and begin recognizing the significance of a healthy ecology to all living things into the future.

Alaska Native cultures are ecologically friendly and considerate of all living things. Because it is our nature not to waste anything we harvest, we are not a threat to any other user groups within our midst. We seek a healthy balance in the use of our natural resources, a balance that should be built into any and all management plans.

Thank you for hearing me out with your capable ears.

Very Sincerely Yours, Wanda J. Culp *Wanda*

Attached map of Hoonah vicinity

Cc: SE Alaska Conservation Council

Sealaska Corporation

Huna Totem Corporation

USFS, Hoonah Ranger, re: Iyouktug harvest plan on N. Chichagof Island

**Responses to WC – Wanda Culp**

**WC-1** – Many of the points raised in your comments on the Iyouktug Timber Sale project are addressed at the forest planning level. Forest plans are programmatic in nature; they do not authorize activities such as timber harvest or road building that affect the environment, but the Tongass Forest Plan does provide critical protection for the habitat that supports hunting, fishing and other traditional uses with management direction. The goals and objectives in the Forest Plan ensure the sustainability of the Tongass National Forest and the ecological, social and economic values derived from the forest. The land use designations provide expectations and limits on how and where activities can be conducted. The standards and guidelines in the Forest Plan regulate how projects, such as timber harvest and road building, can occur with resource protection. It is under all this higher-level management direction that the Iyouktug project is planned. Where laws, such as ANCSA and ANILCA, apply to the Iyouktug project, they are discussed in the Iyouktug DEIS and FEIS (see Chapter 1, Non-National Forest System Lands, and Applicable Laws and Executive Orders, and Chapter 3, Subsistence section, and Findings and Disclosures).

The 2008 Tongass Forest Plan has several new goals added to maintain viable plant communities and populations and a mixture of habitats capable of supporting the full range of naturally occurring plants. It also includes a new goal to consult with Tribes to protect and maintain sacred sites across the Forest. The fish and riparian standards and guidelines and comprehensive wildlife conservation strategy in the Tongass Forest Plan ensure the maintenance of viable populations of animals. The system of large, medium and small old-growth reserves protects much of the existing productive old-growth habitat on the Tongass. Together, the old-growth habitat reserves and standards and guidelines protect 91% of the existing productive old-growth habitat on the Tongass. All of this is part of the cumulative effects analysis that was done at the broader forest-wide scale, under which the project effects analysis for Iyouktug now takes place. Relative to the Iyouktug Timber Sales, the IDT analyzed cumulative effects; analysis was done at a scale appropriate for each resource (please see response to BC-25 for more information).

Work with the Hoonah Indian Association resulted in an area of concern being dropped from the Iyouktug project area (FEIS, Chapter 3, Heritage, pg. 3-65). Subsistence and traditional and cultural uses of the area were important considerations, especially the habitat connectivity and Old Growth for the Sitka black-tailed deer, which was one of the driving issues in the analysis that resulted in Alternative 3 being developed to reduce the impacts to deer habitat and connectivity as much as possible.

Concerns about protecting roadless areas was another driving issue in the Iyouktug analysis that resulted in Alternative 4 being developed to have no further impacts on the roadless areas. Using issues to develop different alternatives helps show the trade-offs of the decision that will be made. These are among the many factors the Forest Supervisor will consider when he decides how to best balance the needs and uses of the natural resources within the Iyouktug project area, under the broader considerations already made in the Tongass Forest Plan.

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