Appendix L

Public Comments and Forest Service Responses

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Appendix L

Introduction

Following this general introduction and list of abbreviations, Appendix L is presented in three parts. Parts A and B contain a summary of all substantive comments received during the three public comment periods for the Tongass Forest Plan Revision, and provide Forest Service responses to those comments. All substantive comments, written and oral, made on the 1990 Draft Environmental Impact Statement (DEIS), the 1991 Supplement to the DEIS, and the 1996 Revised Supplement have been summarized and responded to. Part A includes comments categorized by resource and/or issue, and comments about the planning process and monitoring. Part B includes comments about specific locations around the Tongass, categorized by geographic area. Further breakdowns are used within most subject areas to help organize the comments for the reader interested in a particular topic or place.

Part C is a reproduction of comments from agencies and elected officials. These comments have all been summarized and included in Parts A and B, and are not responded to again in Part C.

Forest Service responses are provided for each summarized comment. Identical or very similar comments from more than one agency, organization, group, and/or individual are usually combined into one summarized comment. Comments from most organizations, agencies and interest groups made during the 1990 and 1991 comment periods are referenced (see list of abbreviations below). Most comments from 1996 are not referenced in this way, nor are comments from individuals. Summarized comments from the 1996 comment period are generally prefaced by "(1996)" where they differ substantively from previous comments. Complete lists of all commenters for each comment period, those giving testimony at the hearings and those providing written input, are contained in the planning record.

All public comment periods were announced in the Federal Register, by news release, in local newspapers, and through newsletters. Documents were mailed to persons initially requesting them, and were also available at Forest Service offices and libraries throughout Southeast Alaska. Informational meetings and open houses on the Forest Plan revision were held in most Southeast Alaska communities during each comment period, followed by hearings in the same communities. Written or oral input on the 1990 DEIS came from over 3,000 individuals, organizations, interest groups and agencies. On the 1991 Supplement, over 7,000 responses were received, and on the 1996 Revised Supplement, over 21,000 responses. Newsletters and planning record documents contain breakdowns of the types of input received and where it came from.

The following abbreviations are used for agencies, groups, organizations and other entities whose comments are identified by source. Most comments with no source noted are from individuals. A comment with a source doesn't necessarily mean that only that source made the comment: many summarized comments are combinations of comments from more than one respondent, and from more than one comment period.

Abbreviations Used to Identify Agency, Group and Organization Comments

AACA	Alaska Air Carriers Association
ABG	State of Alaska Board of Game
AD	Alaska Discovery
AFA	Alaska Forest Association
AFS	American Fisheries Society
AFJ	Alaskans For Juneau
AFSE	Association of Forest Service Employees for Environmental Ethics
AIFRB	American Institute of Fishery Research Biologists
AJF	Alliance for Juneau's Future
ALS	Alaska Legal Services Corporation
AMA	Alaska Miners Association
AMC	American Mining Congress
AMR	American Rivers

ANBK	Alaska Native Brotherhood, Klawock
APC	Alaska Pulp Corporation
ATA	Alaska Trollers Association
AVA	Alaska Visitors Association
BC	British Columbia Ministry of Mines and Energy
CBJ	The City and Borough of Juneau
C-C	City of Craig
C-K	City of Kake
C-KP	City of Kupreanof
C-P	City of Petersburg
C-TB	City of Thorne Bay
C-TS	City of Tenakee Springs
C-Y	City of Yakutat
CHEC	Cascade Holistic Economic Consultants (for SEACC)
EPA	U.S. Environmental Protection Agency
FBB	Friends of Berners Bay
FBRA	Funter Bay Residents Association
GCA	Gustavus Community Association
GOLD	Goldbelt Corporation
GP	Greenpeace
HC	Haida Corporation
HCC	Haines Chamber of Commerce
HTC	Huna Tribal Council
JAS	Juneau Audubon Society
JCC	Juneau Chamber of Commerce
JCV	Juneau Convention and Visitors Bureau
JCVO	Juneau Charter Vessel Operators Association
JSP	Juneau Area State Parks Advisory Board
KCA	Klawock Cooperative Association
KCC	Ketchikan Chamber of Commerce
KGB	Ketchikan Gateway Borough
KPC	Ketchikan Pulp Corporation
KTC	Kake Tribal Corporation
KTE	Klawock Tribal Elders
MCCA	Meyers Chuck Community Association
NAS	National Audubon Society
NC	The Nature Conservancy
NCC	Narrows Conservation Coalition
NMFS	National Marine Fisheries Service
NOLS	National Outdoor Leadership School
NWF	National Wildlife Federation
NWMA	Northwest Mining Association
PBCC	Point Baker Community Council
PFC	Petersburg Fish and Game Advisory Board
PLF	Pacific Legal Foundation
PWC	Prince of Wales Conservation League
RDC	Resource Development Council for Alaska
RF&G	Southeast Regional Fish & Game Council
SASA	Southeast Alaska Seiners Association
SC-J	Sierra Club, Juneau Group
SCLD	Sierra Club Legal Defense Fund
SCS	Sitka Conservation Society
SEA	Sealaska Corporation
SEACC	Southeast Alaska Conservation Council
SNSC	Southeast Native Subsistence Commission
SSAB	Sumner Strait Fish & Game Advisory Board

SSP	Sitka Area State Parks Advisory Board
STATE	State of Alaska
STC	Southeast Alaska Tourism Council
SWE	Spirit Walker Expeditions
TAKU	Taku Conservation Society
TCS	Tongass Conservation Society
TRBA	Tourism and Recreation Business Association
TRS	Territorial Sportsmen
TSAB	Tenakee Springs Fish & Game Advisory Board
USDI	U.S. Department of the Interior, Alaska Region
USGS	U.S. Geological Survey
WLD	Wilderness Society
WLS	Wildlife Society, Alaska Region
WRC	Wrangell Resource Council

Other Abbreviations Used in the Summaries

ADF&G	Alaska Department of Fish and Game
ASQ	Allowable Sale Quantity
DEIS	Draft Environmental Impact Statement (for the Forest Plan Revision)
FEIS	Final Environmental Impact Statement (for the Forest Plan Revision)
LTF	Log transfer facility
LUD	Land Use Designation (as used in Current (1979) Tongass Plan and Revision)
MA	Management Area (as used in the Current (1979) Tongass Plan)
MMBF	Million board feet
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
PNV	Present Net Value
RPA	Resources Planning Act
RSDEIS	Revised Supplement to the DEIS (for the Forest Plan Revision)
Rx	Prescription, Management Prescription (as used in 1990 DEIS)
S&G's	Forest-wide Standards and Guidelines
SDEIS	Supplement to the DEIS (for the Forest Plan Revision)
Supplement	Supplement to the DEIS (for the Forest Plan Revision)
TTRA	Tongass Timber Reform Act
VCU	Value Comparison Unit (as used in the Current Tongass Plan)
WAA	Wildlife Analysis Area (as used by ADF&G)

A. Resource and Issue Comments

Air, Soil and Water

(See also Fish and Timber sections.)

Air Quality

Comment: Air pollution (from timber processing activities) is a cost to the human environment associated with the proposed action and must be discussed. (SEACC) Air pollution (both of the forest and of communities) from timber industry facilities (including the Sitka mill), and the "net emission of greenhouse gases," is connected to the timber program, wouldn't exist without it, and must be addressed. (C-TS, SCS) This is an indirect effect of the timber program and must be addressed. The effects to air quality from "massive clearcuts" have not been addressed. (1996) The plan should address and quantify the pollution directly attributable to processing timber from the Tongass National Forest. The plan should address NOx and SO2 damage to terrestrial ecosystems and National Forest lands, and the introduction of persistent, bioaccumulative chemicals into the Southeast Alaska environment.

Response: The State of Alaska's Department of Environmental Conservation and the U.S. Environmental Protection Agency are the two agencies with primary responsibility (including enforcement) for air quality management off of National Forest lands. This is clarified in the EIS, Chapter 3 section on air. Air quality is managed by airsheds. Airsheds are classified by their degree of protection from future air quality degradation. The entire Tongass National Forest is classed as Class II airshed, and, at this time, the Alaska Department of Environmental Conservation has not reclassified any of the airsheds to Class I.

Although most mills would probably not be in place without timber harvest in southeast Alaska (including Federal, State and private sources of timber), any potential indirect effects of timber harvest on air pollution from point sources are within the thresholds set by State and Federal law and regulation.

In terms of global warming, because of the small land area involved, and the high degree of reforestation following logging, effects of land use practices in the temperate rain forest zone of Southeast Alaska are expected to have little effect on global atmospheric carbon.

It is not clear to what the following comment refers: "The effects to air quality from 'massive clearcuts' have not been addressed." As discussed in Chapter 3, the expected air quality effects from forest management activities are temporary and limited in nature, resulting from dust and vehicular emissions from logging operations, public travel on Forest roads, and smoke from a very limited prescribed fire program. The vast spaces of southeast Alaska and the winds blowing off the Gulf of Alaska dilute any sources of air pollution, and the weather conditions, including the large amounts of moisture and conditions which prohibit wildfires, are such that, to our knowledge, there is no significant direct effects from 'massive clearcuts' on air quality.

Comment: Limiting the air quality discussion to logging and road building is incorrect; the two pulp mill point sources are a result of logging on the Tongass and have to be addressed. Recent lichen studies in and around the Sitka pulp mill provide a clear indication that biodiversity and vegetative health are being affected. The Plan or EIS must consider these impacts, the question of whether research should continue must be answered, and standards and guidelines must be developed to guide the research and planning for ways to improve the air quality. (GP)

Response: The Plan recognizes that there is an information need associated with air quality and lichen studies (Appendix B of the Forest Plan). These items include: 1) determining air quality conditions on National Forest Lands, 2) assessing and documenting the potential effects, if any, of air pollution on forest

resources, 3) assessing the use of lichens as indictors of forest health and air quality conditions, and 4) developing seasonal surface and aloft airflow (wind) maps.

Standards and guidelines are used in the Forest Plan to guide management of the National Forest. They are not used to guide research. As described in the previous response, standards and guidelines are used for planning for ways to maintain air quality on the National Forest.

Comment Since personal use firewood is made available, the indirect effect of the health impacts of wood smoke should be discussed. (EPA)

Response: A section identifying the presence of indirect effects of firewood availability on air quality has been added to Air in Chapter 3 of the FEIS. Most firewood is burned off of the National Forest. As is the case with the pulp mills, the State of Alaska's Department of Environmental Conservation and the U.S. Environmental Protection Agency are the two agencies with primary responsibility (including enforcement) for air management off of National Forest lands.

Comment: The "limited prescribed fire program" referred to must be quantified (for example, in tons of particulates per year), and the proximity to communities and recreation areas addressed. (EPA)

Response: The EIS and Plan makes no quantified prediction of the number of acres of prescribed fire during the life of the plan, other than to say the annual acreage treated is low in comparison to the number of acres harvest annually. The Tongass relies on natural reseeding for the reforestation of most harvested areas; fuel reduction is rarely necessary. Prescribed burning may be used on an occasional basis for fuel reduction purposes and in some instances to improve wildlife habitat. Therefore, since the number of acres that will be burned is extremely small, no quantification of tons of particulates per year were estimated. Individual project plans will evaluate identified environmental consequences of prescribed fire. With only a small amount of prescribed burning, it is estimated that there will be essentially no measurable affect on public health or welfare.

Soils

Comment: (1996) Soil and water standards and guidelines do not identify objectives to be achieved with their use.

Response: The soil and water objectives are on page 4-84 of the Forest Plan under S&W112 I.A.2 and I.A.4. The objective for water is to "Maintain water quality and quantity to protect the state-designated beneficial uses." The objective for soils is to "Apply soil conservation practices to meet regional Soil Quality Standards (SQS) on all land disturbing activities as a process to prevent detrimental soil disturbance."

Comment: (1996) Follow the 1995 recommendation of the Pacific Northwest Research Station that Kaikli, Karheen, Kitkum and Maybeso soils be withdrawn from the timber base until more information available on timber growth on these soils.

Response: We have committed to fund, and the Pacific Northwest Research Station has initiated, a three-year study to project growth response after timber harvest on these soils. This study is identified in the Information Needs section of the Forest Plan and is discussed in the Water section of the FEIS. The results of this study will be used to evaluate whether these soils should remain in or be withdrawn from the timber base. In the meantime, we will minimize timber harvest on these soils until the study is completed.

Comment: (1996) Forest regeneration on wetland soils has not been proven.

Response: Restocking surveys generally indicate that wetland soils have been adequately restocked within five years after timber harvest. However, there are some unanswered questions regarding growth response beyond five years after timber harvest on certain wetland soils (see the previous comment and response above).

Comment: (1996) The soil base in Southeast Alaska is so thin and the root base is so shallow that you cannot do selective harvesting without experiencing massive blow-down.

Response: We agree that selective harvesting on shallow soils in wind-prone areas may result in extensive blow-down. Silvicultural prescriptions (including harvest methods) may vary from stand to stand and will be determined at the project level based on analysis of site-specific factors such as soils, wind-throw potential and desired future condition of the stand.

Comment: Waste disposal (from timber processing activities) is a cost to the human environment associated with the proposed action and must be discussed. (SEACC) This is an indirect effect of the timber program and must be addressed.

Response: The State of Alaska's Department of Environmental Conservation and the U.S. Environmental Protection Agency are the two agencies with primary responsibility (including enforcement) for waste management off of National Forest lands. The disposal of waste in navigable waters is subject to the Corps of Engineers (Clean Water Act) 404 permitting requirements. Any disposal of wastes must be in conformance with their regulations and may require a public NEPA process separate from the Forest Plan. Waste disposal on the National Forest, it's quantity, physical properties, and treatment is difficult to quantify at the programmatic level of planning. Waste disposal where appropriate will be a subject of NEPA discussion at the project level.

Comment: Landslide probabilities may be underestimated, since past harvest was probably done on gentler slopes than the average proposed harvest will be. The mitigation discussed on page 3-275 (number 2.) may therefore be invalid. (TCS)

Response: The possible increase over historic levels of road construction and timber harvest done on moderate to steep slopes is discussed in the FEIS and was one of several factors used to predict the future rate of landslides. Several other factors were felt to probably result in fewer landslides in the future, with the net result being a frequency of occurrence less than, or about the same as, historic levels. The factor or "mitigation" referred to is one of the several factors, and taken in the context of the overall discussion is still a valid estimate of what would affect the rates of future landslide occurrence.

Wetlands

Comment: The Forest-wide standards and guidelines do not provide specific and measurable standards for the management of wetland communities throughout the Forest. How will "least available and most biologically productive wetlands" be identified? (WLS)

Response: Wetlands direction is included in the Forest-wide standards and guidelines of the Forest Plan and wetland analysis and evaluation is also a Best Management Practice (see Appendix C for the Forest Plan). Both of these sections of the Plan include guidelines for the management of wetlands. (Note: standards are generally specific and measurable, while guidelines are typically more general in nature). The process for identifying the least available and most biologically productive wetlands is established on a

project basis. A wetland that is common in one area of the Forest may be rare in another. Likewise, a wetland that is considered biologically productive in one site may not be in another site.

Comment: The objectives are contradictory. Maintaining or improving natural and beneficial values and functions of wetlands (Objective B) precludes any loss of, adverse impacts to, or alteration of wetlands (allowed in objectives A and C). (WLS)

Response: The standards and guidelines have been reworded in the final Forest Plan in order to remove some of the perceived contradiction between objectives. One objective is to "Minimize the loss of high value wetlands ...., rather than "Minimize the loss of wetland acreage ...." Another now contains a qualifier to consider the functions and values of wetlands as well as other non-wetland ecosystems in the project area. We believe this will resolve any perceived contradiction. The third objective now reads "Seek to maintain or improve the natural and beneficial values and functions of wetlands." This does not necessarily mean do nothing in wetlands, or even imply no loss of wetlands. For instance, activities may occur in wetlands without adversely affecting wetlands water quality, flow and circulation patterns, or chemical and biological characteristics.

Comment: Change the reference in the Wetlands standards and guidelines (Plan, page 4-97) to the 1987 "Wetlands Manual." There is no 1991 manual, and Congress has prohibited the use of the 1989 manual. (PLF)

Response: The change has been made.

Comment: (1996) The proposed wetlands Standards and Guidelines should be revised to make management direction consistent with the statutory and regulatory requirements under Section 404 of the Clean Water Act.

Response: Rather than interpreting the meaning of the language in Section 404(f) of the Act, we have changed the direction to read: "Consult with the COE early in the planning process to determine whether a 404 permit is required."

Comment: It is suggested that a map of the wetlands be included to accompany the discussion of the "no net loss of wetlands" policy. (USDI)

Response: Maps displaying wetlands can be produced from the Revision Database, and are used when planning specific projects. A forest-wide map of wetlands to accompany the referenced discussion in the EIS, while possible, would be exceedingly complex and does not seem necessary or particularly useful in this context.

Comment: It is suggested that a "development scenario" be formulated to identify the infrastructure (sort yards and other non-road facilities) requiring the filling of wetlands, for the life of the Plan. (USDI)

Response: The Forest Plan is a programmatic document allocating broad land use designations to large areas of land, and does not make specific project proposals. Schedules of projects for different resources for the next one-to-two decades are a part of the Forest Plan, but the actual location or developments associated with those projects is not known at this time. Infrastructure needs and locations will be decided for each project through project-level planning and environmental analysis; there is no way to know at this time which of these, if any, may "require the filling of wetlands." The Wetlands Standards and Guidelines, and the Corps of Engineers permitting process, address these types of activities. In addition, one objective is to avoid new construction in wetlands wherever practicable alternatives exist.

Comment: Concern with the loss of wetlands (in light of the President's "no net loss" of wetlands policy).

Response: The President's "no net loss" policy is discussed in the Water section of Chapter 3 of the FEIS. The Forest-wide Wetland Standards and Guidelines, as revised in the final Forest Plan, emphasize minimizing loss of high value wetlands (normally the least abundant and most biologically productive) and the consideration of function and value of wetlands.

Comment: The identification of wetlands doesn't conform to federal standards, therefore the analysis of effects and mitigations are "inadequate and inappropriate." (NWF)

Response: Our delineation of wetlands conforms to the standards provided in the Army Corps of Engineers "Wetlands Delineation Manual," and is further refined by criteria established for the Tongass National Forest. The mitigations discussed for wetlands are the Best Management Practices, developed for the protection of water quality.

Comment: In determining whether there are any practical alternatives for avoiding construction in wetlands, the habitat value of the wetland must also be considered. "The value of the wetland may outweigh the value of the timber or project being considered." An alternative should not be eliminated simply because it costs more than another. (USDI)

Response: We agree. This is in reference to the third objective of the Forest-wide Standards and Guidelines for Wetlands, which stated: "Avoid alteration or new construction on wetlands, wherever there is a practicable alternative. [Practicable means available and capable of being done after taking into consideration costs, existing technology, and logistics ... .]" Implicit in this statement is the assumption that, in most cases, any alternative to the one initially proposed (in this case, to construct in wetlands) would be to some degree more expensive. Therefore, the question isn't whether an alternative costs more, but how much more, and what are the consequences related to the value of the wetland versus the incremental cost increase. To further clarify the standard and guideline, in light of the suggestion, the objective has been modified and now states: "Avoid alteration of, or new construction on, wetlands wherever there is a practicable, environmentally-preferred alternative, considering the functions and values of wetlands as well as other non-wetland ecosystems in the project area."

Water Quality

Comment: The method used to determine the degree of water quality impacts from land-disturbing activities is too simplistic. Total acres of harvest and road building are inadequate, and don't account for other significant factors such as geology, soils, slopes and channel types. Impacts on water quality of timber harvest in excess of 400 MMBF are not adequately assessed. (STATE)

Response: For the purposes of comparing the potential effects on water quality of different forest plan alternatives over an extended period of time, focusing on the major ground-altering activities that could increase the risk of adverse effects to water quality was the most reasonable approach. All alternatives (including those with ASQ's greater than 400 MMBF) will be applying the same Forest-wide Standards and Guidelines, including Best Management Practices, to all activities, which are designed to meet all State and federal water quality requirements. The State of Alaska also recognizes that Best Management Practices are a fundamental part of the strategy for protecting nonpoint sources of pollution, as described and referenced in the Forest Service Alaska Regional Water Quality Management Plan. The Forest Service Alaska Regional Water Quality Management Plan has been agreed to by the Forest Service and the Alaska Department of Environmental Conservation in a Memorandum of Agreement dated April 6, 1992. Therefore, little or no adverse effects would normally be anticipated, and the best measure of potential effects is the greater risk associated with more ground-disturbing activities, the risk being that the standards

and guidelines may not always work as planned. We agree that this risk will vary with geology, soils, slope and channel types, but analysis of those factors can only be done for specific projects where the actual location of activities are considered. Some of these factors have been taken into account already: for instance, certain soils on steep slopes (the "very high-hazard" soils) are excluded from the determination of tentatively suitable forest lands and therefore are not part of the allowable sale quantity calculation; and the Riparian Forest-wide standards and guidelines include consideration of channel type in allowing or excluding timber harvest and specific harvest systems. Implementation of the Forest Plan will include monitoring the effectiveness of the standards and guidelines, and if unacceptable effects do occur, the standards and guidelines may be adjusted through amendments to the Plan.

Comment: An improved risk analysis of impacts to water quality from land-disturbing activities is needed. There may be significant differences between alternatives with respect to the risk of cumulative impacts, and a complex risk analysis should be provided to identify these. Specifically:

- reliable information and baseline data is needed. A database of existing data, and results from studies in the Pacific Northwest and British Columbia, would be useful
- some kind of "risk-rating system" needs to be used at the project level to assess the probability of significant impacts by stream and watershed
- a systematic method for assessing the risk of sedimentation should be used. (STATE)

Response: Please see response to previous comment. In terms of assessing cumulative effects at the project level, we agree that better and more refined models, and better baseline data, would be useful. Appendix B ("Information Needs") of the revised Forest Plan acknowledges both these needs, and efforts are already underway to develop a better model for estimating cumulative watershed effects. We anticipate continued on-going efforts with other federal agencies and the State of Alaska on these needs.

Comment: Future and increased entry into areas with moderate-to-steep slopes for roading and timber harvest will likely mean more water quality impacts. This situation poses a future threat to water quality, and may mean that timber harvest units in marginal areas will need to be deleted to meet the Clean Water Act and Forest Plan standards and guidelines. (STATE)

Response: The likelihood of increased future entries in moderate-to-steep areas is discussed in the FEIS. Environmental analysis at the project level, and continued monitoring, will help determine the parameters for locating harvest units in "marginal areas." The maintenance of water quality to meet State and federal standards will always be the primary consideration utilizing Best Management Practices.

Comment: The basis for the use of "35 percent disturbance in third-order drainages" for assessing cumulative watershed effects (CWE) must be discussed. (EPA) What is the basis for the "35 percent" factor in discussing watershed effects? (SEACC)

Response: The references are to the Soil and Water Forest-wide Standard and Guideline for minimizing cumulative watershed effects. The 35 percent factor was based on a study at Staney Creek by Bartos (1989). The standard and guideline has been changed and this factor is no longer being used.

Comment: (1996) The proposed Watershed Restoration Standards and Guidelines should be revised to delete "as funding allows" and add "Consult and coordinate with other agencies and landowners when implementing and updating the Alaska Regional Watershed Restoration Strategy." There should also be an implementation schedule for watershed restoration projects in Chapter 2 of the revised plan.

Response: The suggested changes have been made (see page 4-86 and Appendix L of the Forest Plan).

Comment: The type of CWE analysis used is not specified. (EPA) The analysis of cumulative watershed effects needs to be improved, perhaps patterned after studies in British Columbia. (ATA)

Response: Cumulative watershed effects are discussed for sedimentation and wetlands. In each case, the type of analysis is discussed, and the measures and time periods displayed. This is a forest-wide comparative analysis only, intended to give a relative indication of potential cumulative water quality effects for the alternatives. See previous responses regarding use of cumulative watershed effects models.

Comment: (1996) The alternative analysis does not consider the significant cumulative impacts of failure to comply with Best Management Practices (BMPs) and Standards and Guidelines. Violations of these criteria have occurred in the past, as can be seen by evaluation of old timber contract non-compliance documentation. The results are a reduction in the effectiveness of the BMPs and Standards and Guidelines. Some examples of noncompliance incidents include: 1) failure to provide stream protection measures; 2) unauthorized harvest of Class III stream buffers; 3) incursions into LUD II estuarine areas to allow yarding of an adjacent harvest area; 4) breaching of buffer strips; and 5) failure to clean up debris from protected Class III streams. Quantification of impacts of failure to comply with BMPs should be presented and evaluated in the FEIS.

Response: All alternatives include the same BMPs as described in the Soil and Water Conservation Handbook. Annual Monitoring and Evaluation Reports for the Tongass National Forest indicate that BMP implementation has generally improved over the last five years. This is discussed in the Water Section of the FEIS. We agree that there have been some incidents where some BMPs were not fully implemented, but BMP implementation monitoring results suggest that this is the exception, not the norm. As for the effectiveness of the BMPs, we evaluated the results of BMP effectiveness monitoring to date as reported in the annual reports. Many of these effectiveness studies are still ongoing, and thus, it is premature to draw any broad conclusions about the overall effectiveness of BMPs at this time. However, it is worth noting that the BMP Handbook was recently revised to make it consistent with the Alaska Department of Environmental Conservation's Nonpoint Source Pollution Control Strategy.

Comment: In order to minimize adverse water quality impacts from future timber harvest activities, best management practices (BMP's) must be fully implemented, and monitored for effectiveness. The FEIS should include a comprehensive discussion of how the "BMP iterative process" will be implemented forest-wide. The State will assist the Forest in implementing BMP's. (STATE)

Response: We agree. Best Management Practices are included in discussing soil and water in the FEIS, and the use of BMP's is explained in Appendix C ("Best Management Practices") of the revised Forest Plan. The Monitoring Plan (Forest Plan, Chapter 6) includes monitoring for the implementation and effectiveness of Best Management Practices. Forest Service Handbook 2509.22, referred to in all of these locations in the text, includes the details of each Best Management Practice and a discussion of the appropriate use of Best Management Practices. The State of Alaska also recognizes that Best Management Practices are a fundamental portion of the strategy for protecting nonpoint sources of pollution, as described and referenced in the Forest Service Alaska Regional Water Quality Management Plan. The Forest Service Alaska Regional Water Quality Management Plan has been agreed to by the Forest Service and the Alaska Department of Environmental Conservation in a Memorandum of Agreement dated April 6, 1992. We look forward to continuing to work with the State in implementing BMP's.

Comment: Insufficient research and monitoring has been done to conclusively determine the effectiveness of best management practices related to road building. This is in violation of 36 CFR 219.12(k) and 219.27(a)(10). (SEACC)

Response: We agree that there is insufficient data at this time to "conclusively" determine the effectiveness of Best Management Practices (BMP's). However, stricter implementation and monitoring of BMP's is being done, as well as additional research. The Water section of the FEIS Chapter 3 discusses the

results of recent annual monitoring of BMP's. Best Management Practices are developed as the means for ensuring water quality meeting all federal and State standards. Monitoring of their effectiveness is part of the Forest Plan Monitoring Plan. We do not see how this is in violation of either CFR section cited. 219.12(k) specifies requirements for monitoring and evaluation, which are covered by the Monitoring Plan just mentioned. 219.27(a)(10) is the requirement that roads be designed "to standards appropriate to the planned uses, considering safety, costs of transportation, and effects upon lands and resources." Not only do numerous BMP's apply specifically to roads and road construction, but the Transportation Forest-wide Standards and Guidelines have safety, cost and effects on resources as their primary focus.

Comment: The water quality impacts of minerals development must be carefully considered in project-specific NEPA documents. (STATE)

Response: We agree. The Forest-wide Standards and Guidelines for Soil and Water include several requirements for the planning of resource activities that provide for analysis of water quality effects. These would apply to all minerals developments, including those done under the Minerals LUD. The Minerals LUD contains additional requirements for "Watershed Resource Planning."

Comment: There is no discussion of compliance with State water quality standards or with the Clean Water Act, Section 313. The Supplement admits that roading and logging will likely increase sedimentation. This would violate State water quality standards, which permit no increase over natural conditions. To comply with the Clean Water Act, research is needed that will establish compliance with State standards and the results discussed in the EIS. Proposals must be altered, or variances obtained, if State standards are to be violated. (SEACC)

Response: Compliance with the Clean Water Act and State water quality standards is achieved through the use of Best Management Practices (BMP's). These have been discussed in previous responses in this section. These BMP's have been determined to be consistent with State water quality regulations, and their proper use should assure that all State standards are met. The State of Alaska also recognizes that BMP's are a fundamental part of the strategy for protecting nonpoint sources of pollution, as described and referenced in the Forest Service Alaska Regional Water Quality Management Plan. The Forest Service Alaska Regional Water Quality Management Plan has been agreed to by the Forest Service and the Alaska Department of Environmental Conservation in a Memorandum of Agreement dated April 6, 1992.

BMP's will be monitored for effectiveness, and adjustments will be made if it is determined that State water quality requirements are not being met. Each specific project is also evaluated for its potential water quality effects during site-specific environmental analysis. Such analysis would determine if projects should be altered to avoid unacceptable water quality effects.

Comment: Water pollution (from timber processing activities) is a cost to the human environment associated with the proposed action and must be discussed. (SEACC) Water pollution from timber industry facilities (including the Sitka mill) is connected to the timber program, wouldn't exist without it, and must be addressed. (C-TS, SCS) This is an indirect effect of the timber program and must be addressed. (1996) Logging or discharges from the Ketchikan Pulp mill negatively affect water quality. There is concern about the effects of logging on the watershed which serves as the source of drinking water for the community of Ketchikan.

Response: The State of Alaska's Department of Environmental Conservation and the U.S. Environmental Protection Agency are the two agencies with primary responsibility (including enforcement) for water quality management in State and Federal waters off of National Forest lands. These two agencies have actively regulated the water pollution discharges from the mills at Ketchikan and Sitka (now closed), including the recent issuance of violation notices, in order to ensure compliance with State water quality standards and the requirements of the Clean Water Act. Although many mills would probably not be in place without

timber harvest in southeast Alaska (including Federal, State and private sources of timber), any potential indirect effects of timber harvest on water pollution from the mills are within the thresholds set by State and Federal law and regulation.

As for Ketchikan's drinking water source, this watershed will be managed under the Municipal Watershed Land Use Designation (see Chapter 3 of the Forest Plan). This LUD emphasizes compliance with state drinking water regulations and state water quality standards for water supply. Forest land within this LUD is classified as unsuitable for timber production and no timber harvest is scheduled. This should mitigate concerns about the effects of logging on Ketchikan's source of drinking water.

Comment: Plans for dealing with toxic and hazardous substances at logging camps are needed: there does not appear to be any monitoring or enforcement of this.

Response: There is Forest Service Manual direction regarding toxic waste.

Comment: The discussion of domestic water supply needs to include all sources of drinking water (Plan, pages 3-79 to 3-85, and Supplement, page 3-426). (EPA)

Response: The Enacted Municipal Watershed Land Use Designation management prescription was a land allocation only intended to address those watersheds designated by law. However, for the revised Forest Plan, its use (without "Enacted" in the title) is expanded to include the 11 watersheds for Southeast Alaska's 9 incorporated cities. Standards and guidelines for other sources of drinking water are included in the Soil and Water Forest-wide Standards and Guidelines in Chapter 4 of the Forest Plan. These refer specifically to state-designated beneficial uses of water and the use of Best Management Practices to protect these uses. Since the State of Alaska's regulations apply the drinking water standard to all streams on the Tongass as the beneficial use of water, all sources of drinking water will meet State standards.

Comment: (1996) The Water standard and guidelines for nonmunicipal water supplies should be revised to ensure consistency with the source water protection provisions of the newly reauthorized Safe Drinking Water Act.

Response: The source water protection provisions of the Act apply to states. If the State of Alaska develops a source water protection program in the future, we will evaluate whether the Forest Plan needs to be amended at that time.

Biodiversity and Old Growth

(See also Timber and Wildlife sections.)

Biological Diversity

Comment: Biodiversity is the basis of the health of the forest ecosystem. An overriding goal of the Plan should be to affect biodiversity as little as possible while allowing use of the forest, rather than making it subservient to timber production. (GP) The protection of biodiversity should be a major concern: "biodiversity is the most unique and irreplaceable nonrenewable resource in the Tongass."

Response: We agree that biodiversity is one of the most important resources of the Tongass National Forest, and a key element of healthy ecosystems. The "Biodiversity" section of Chapter 3 of the EIS discusses this in depth. We have defined, evaluated and tracked biodiversity primarily by using different old-growth forest components as indicators. In all alternatives, the majority of the Forest will remain in an undisturbed or essentially natural condition over time, through allocations in the Wilderness and Natural Setting LUD groups, and by application of the Riparian, and Beach and Estuary Fringe, Forest-wide standards and guidelines. However, in some portions of the Forest, other resource goals are emphasized more than natural diversity, and natural diversity (already diminished in some of these areas) will not be retained, but will be replaced by a mixture of timber stands in different stages of second growth management, interspersed with old growth blocks and riparian areas.

Comment: In order to insure biodiversity and ecosystem integrity, more watersheds need to be taken out of the timber base. Ecosystems have a right to exist for themselves, not just for some human value. A global perspective is needed.

Response: Please see previous response. The analysis in “Biodiversity” in Chapter 3 (EIS) shows which of the 21 biogeographic provinces are likely to be most affected by future management activities. As ecological management evolves for the Forest, we will have more knowledge of how to define and maintain "ecosystem integrity," and of the attributes important to each ecosystem.

Comment: (1996) The biodiversity section in Chapter 3 of the RSDEIS does not explicitly inform the public about key elements of biodiversity. This section should address issues such as species vulnerability, habitat fragmentation and its effects on indicator species, species extinctions, total number of plant and vertebrate species, ecological processes, plant associations, and vegetative conditions as described in Samson 1982, and Onne et al. 1989. Neither does this section provide the public with information on how diversity will be affected by the nine alternatives. Though the 1991 Supplemental DEIS provides some of this information (pages 3-9 through 3-30 of the Supplemental DEIS), this same type of information, but in more current detail, should be included 'in the FEIS.

Response: One reason for changing the analysis of biodiversity between the 1991 SDEIS and 1996 (RSDEIS and FEIS) was to focus on those factors most important, measurable, and subject to change from management activities. Many of the elements mentioned in this comment, or used in 1991, did not do this, whether from lack of relevance or absence of data. We feel the current analysis of biodiversity, including the old-growth panel assessment results, provides better and quite adequate information for evaluating the biodiversity effects of the alternatives.

Comment: The analysis of diversity effects is not good enough. A quantified analysis of diversity effects by alternative is needed, and a strategy for conserving biodiversity. An index to measure changes in biodiversity is needed. This should include the effects of private land development on biodiversity.

Response: Biodiversity has been described and analyzed by several old-growth forest elements quantitatively by alternative for each of 21 biogeographic provinces (see previous responses). Several of these elements (such as productive old growth, higher-volume old growth, and interior old-growth) provide good indexes of change over time, and can be compared with past (1954) and current conditions. Private land development and the resulting changes to forested acres cannot be quantified in the same way, but have been considered in the analysis.

Comment: (1996) The RSDEIS assumes that the biodiversity panel's conclusions adequately cover all terrestrial and aquatic vertebrates, invertebrates, and vascular and non-vascular plants. This is a serious flaw. The scale of information used to evaluate biodiversity was inappropriate for evaluating many localized populations of flora and fauna. With the exception of certain tree species, this section made no reference to plants. The ESA and NFMA provide for jurisdiction over all biota, not just the vertebrates and trees evaluated in this document. The FEIS should include comprehensive discussions on invertebrates and flora other than trees.

Response: Please refer to the Fish, Wildlife, Threatened, Endangered and Sensitive Species, and Transportation sections of FEIS Chapter 3 for discussions and analysis of flora and fauna thought to be potentially affected by Forest Plan alternatives.

Comment: Data to support the proposed standards and guidelines for biodiversity is lacking. The latest techniques in landscape ecology should be incorporated, so that quantitative assessments of fragmentation and other biodiversity problems can be made. Otherwise, the naturally-fragmented landscape will become more fragmented through continued logging.

Response: We have acknowledged that more fragmentation will occur as logging continues (“Biodiversity” and “Wildlife” sections of EIS Chapter 3). Specific standards and guidelines for Biodiversity are no longer being used; the Riparian and Beach Fringe and Estuary standards and guidelines, and allocation of the Old-growth Habitat LUD, are some ways that fragmentation will be minimized. As our knowledge of ecological processes and attributes important to the Tongass improves, other approaches and methodologies will likely be developed and incorporated.

Comment: Information and research necessary to make decisions that could reduce biodiversity in the future is lacking; therefore, stop all "green sales" in old growth (and otherwise reduce the harvest below the level of the 1980's) until you have such information.

Response: Please see the previous response. The analyses of biological diversity and species viability focus on different elements and habitat types, and the degree to which they may be altered or reduced. Forest Plan monitoring will also evaluate this on an ongoing basis. Continuing research will help provide information to refine or change management approaches in the future.

Comment: The consequences section of Biodiversity should:

- include percentages by ecotype rather than just forest-wide
- display the distribution of each ecotype around the forest
- discuss the tables in-depth rather than just presenting the raw data. (GP)

Response: We are unclear of your use of the term "ecotype." The standard definition of this term relates to an animal subspecies which is genetically different from other populations of that species, and may occupy a different area or habitat. This does not seem to be the way you are using the term. The consequences portion of "Biodiversity" looks at different old-growth forest diversity elements which are displayed and discussed by the 21 biogeographic provinces. Discussions include the results of the old-growth forest panel assessment.

Comment: The biodiversity standards and guidelines do not provide specific and measurable standards for the management of all species and plant communities throughout the Forest. (WLS) The biodiversity standards are too vague. (SEACC) Objectives are needed for the Biodiversity standards and guidelines.

Response: The main focus of the Biodiversity standards and guidelines was to provide guidelines for considering biodiversity needs at the project level. Further consideration has shown these guidelines to be either redundant to other Forest-wide standards and guidelines, or not really applicable to project planning. "Specific and measurable" standards or guidelines are contained in the Beach and Estuary Fringe, Karst and Caves, Riparian, Threatened, Endangered and Sensitive species, and other wildlife standards and guidelines.

Comment: The treatment of biological diversity is legally inadequate, for the following reasons:

- there is no recognition, or study of, plant and animal community diversity as required by NFMA
- there is no comparison of changes to old growth to "even-aged tree farms" with natural processes. The comparison to windthrow that is made lacks any information on the extent of this natural process
- the analysis that is presented is based on an outdated and inaccurate database and is thus seriously flawed
- there are no quantitative or qualitative linkages made between biodiversity and minimum viable populations
- meaningful, measurable standards and guidelines are absent. (SCLD)

Response: We disagree with these assertions; here are some reasons (listed in the same order as the above points - see also most previous responses in this section):

- plant and animal community diversity is discussed throughout the "Biodiversity" section of Chapter 3 of the EIS. Included are discussions of the main biological features of each biogeographic province, plant associations and vegetative conditions (and plant associations of forest old-growth types), and the landscape, community and structural concepts related to wildlife species and their habitats.
- the comparison of old growth to second growth (or "even-aged tree farms") is simple and clearly presented in the "Biodiversity" and "Wildlife" sections of Chapter 3 of the EIS. Essentially, many important characteristics of old-growth habitats are lost under second growth management. This is an assumption made in discussing environmental consequences for all these sections.
- the use of the current database, and existing timber inventory, was revised for the RSDEIS (and FEIS). The breakdown of productive old growth into volume “classes” is now more accurate and statistically defensible. We acknowledge the limitations of this data for use at the project level, but explain its validity for comparing Forest Plan alternatives and making Forest-wide projections and estimates.
- the relationship of viable populations to biodiversity is discussed in the "Biodiversity" and “Wildlife” sections of Chapter 3 of the EIS. Many qualitative and quantitative connections are made and analyzed, such as the distribution and fragmentation of old-growth forests.
- please see previous response.

Comment: The Supplement and Plan fail to address the conservation, management or ecology of Alaska yellow cedar and western red cedar, contrary to the NFMA requirement for protecting plant diversity. The Supplement and Plan fail to address the ecology and management of the Pacific yew. The Tongass is the northern limit of the yew and thus the ecological context of this species is significant. (SEACC)

Response: NFMA contains no specific direction to address “the conservation, management or ecology” of anything. Direction for the management of cedar and yew has been included in the Timber Forest-wide standards and guidelines (TIM111-2 and TIM112). These provide for the identification and consideration of these species, and for the protection of Pacific yew during project planning and implementation. The Dog

Island Research Natural Area was established in 1976 to represent the known northern limit of Pacific yew in the Tongass. It is located south of Annette Island, near the southern boundary of the Tongass.

Comment: (1996) Descriptions on Pages 3-7 and 14 of the provinces and the landscape positions do not include intertidal and shallow subtidal habitats potentially impacted by shore-based activities. These habitats are important to fish, shellfish, marine mammals, waterfowl, shorebirds, sport fish, commercial fish, and a variety of species used for subsistence. A description of these important habitats and how they would be affected should be included in the FEIS. The Environmental Consequences discussion on page 3-22 does not include consideration of marine environments. While the limitation of Forest Service authority over the marine environment is recognized, FS timber sales would have direct, indirect, and cumulative effects on marine resources due to shore-based activities associated with timber operations. The environmental consequences to the marine environment and biodiversity should be included in the FEIS.

Response: Please see the Fish, Threatened, Endangered and Sensitive Species, and Transportation sections of FEIS Chapter 3 for discussions of potential effects to fish, marine mammals, and intertidal/subtidal marine habitats.

Comment: It is misleading to say that "no adverse effects are anticipated on these species [sensitive plants] with any of the alternatives." Surveys of all sites prior to any activities are needed, plus better inventories. (NC)

Response: This statement from the DEIS has been replaced with a fuller analysis of sensitive plant species. Although intensive survey information is still lacking, an extensive survey has been conducted of potential sensitive species. The Forest-wide standards and guidelines for Threatened, Endangered and Sensitive Species (Forest Plan, Chapter 4) contain direction for conserving sensitive plant habitats and conducting sensitive and rare plant inventories during project planning.

Comment: (1996) The RSDEIS states that green tree patches would promote species diversity of fungi, lichens, plants, and arthropods. However, after harvest, such patches would become all "edge", which would quickly change the microclimate and the composition of the stands and may not promote long-term species diversity.

Response: Obviously areas of “edge” will not promote long-term diversity of “interior” species, but they would promote the growth of fungi and etc. that prefer such areas, and in fact will not grow in more interior conditions.

Comment: (1996) The RSDEIS states, "Connectivity does not necessarily mean that old-growth areas need to be physically joined in space, since many associated animal species can move (or be carried) across areas that are not in old-growth ecosystem conditions." The FEIS should include a reference of scientific documentation to support this statement.

Response: The scientific literature on birds and their movements is quite extensive.

Old Growth: General

Comment: Old growth is "vital for ecosystems and biodiversity," not just as habitat for old-growth dependent species. Old growth has many values: as wildlife habitat, for recreation and scenic quality, for diversity of species and age classes, and for helping maintain the carbon/oxygen balance. (1996) The discussion of old-growth forest in the FEIS should describe more fully the importance and variety of old growth and its relationship to habitat diversity, and species viability. Productive old-growth forest is highly

variable in terms of vegetative composition and structure, as is its functional value to numerous fish and wildlife species.

Response: We agree with these comments. Many of the values of old-growth forests are discussed in detail in the “Biodiversity” section of Chapter 3 of the FEIS. The analysis of biological diversity uses old growth as one of the key indicators of diversity, and as mentioned, old-growth habitat is central to the analysis of effects to wildlife, and wildlife species viability (see "Wildlife," Chapter 3, FEIS).

Comment: Old-growth, or "ancient," forests aren't renewable. The unique characteristics and/or values of old growth cannot be reproduced by short-rotation, second-growth forests. For instance, "the ecosystem that replaces the original forest is inferior in diversity of plant life." The EIS needs a discussion of the differences in characteristics between old growth and second growth, of the "radical change" that will occur. (1996) Biodiversity would suffer if old-growth trees were harvested. It would not be possible to replace a "virgin forest" with second growth. The science proving this possible is flawed and industry driven. The Preferred Alternative does not do enough to protect old-growth.

Response: The differences between old-growth and second-growth habitats and forests are discussed in the "Biodiversity" and "Wildlife" sections of Chapter 3 of the FEIS. The idea that second-growth habitat is fundamentally different from old-growth habitat is central to the analysis of wildlife effects and species viability, the assumption being that once old-growth habitat is altered (for instance, by logging or road building), it loses value as habitat for old-growth associated species. See also previous response.

Comment: Old trees are commercially decadent and worthless if left to die and rot. That would be a waste of a valuable resource. Old-growth can be replaced, with careful management. The effects analysis on either the need or rational for setting aside special areas for a "renewable resource" is not proven.

Response: Please see previous response.

Comment: Use a rotation that will allow *old growth* to replicate (i.e., several hundred years): a 90-125 years rotation is a sham. (1996) Harvesting in a short rotation period (100 years) would occur in young stands in which timber volume and value production are substantially less than their potential, preventing harvested areas from ever reaching old-growth stage again. In effect, a significant portion of the most productive old forest habitat would be permanently removed from the landscape.

Response: In most areas being managed for timber harvest (primarily the Timber Production, Modified Landscape and Scenic Viewshed LUD's), the primary goal is a sustained yield of wood products, with eventual conversion of most suitable timber lands to second-growth management. Thus in the areas harvested, old-growth forests are not intended to be "replicated," and a shorter rotation (averaging about 100 years under timber production, longer under the other two LUD’s) is appropriate. Even in these LUD’s substantial areas of old-growth will remain intact. In general, where old-growth forests are the long-term goal, these areas are not managed for timber harvest. The amount retained as old-growth forest over time is discussed in other responses in this section, and see the "Biodiversity" section of Chapter 3 in the FEIS. (The FEIS also considered alternatives using longer rotations. These were not able to meet the timber or socioeconomic objectives.)

Comment: The Old Growth LUD should be applied to areas with substantial amounts of high-volume old growth. This does not appear to be the case: very little land within the Old Growth LUD is tentatively suitable. (SEACC) Identify and preserve outstanding old growth stands and areas; allow Forest Service employees and the public to nominate these. (TCS) (1996) Increased efforts must be made to maintain remaining large blocks of contiguous high volume old-growth. These blocks would provide for biological

and ecological flow of plant and animal species and minimize or mitigate the adverse effects of increased fragmentation, including establishment of threshold harvest levels per Value Comparison Unit. Harvest in VCUs should not result in further fragmentation of contiguous blocks of old-growth habitat. This issue should be addressed in the FEIS.

Response: In the final revised Forest Plan, old-growth forest outside Wilderness and other "Natural Setting" land use designations is maintained within a system of large, medium, and small habitat conservation areas Forest-wide (roughly 1.13 million acres in the old-growth habitat LUD) and Forest Plan standards and guidelines. Large amounts of high-volume and other productive old growth are included in these LUD's, and also within areas that will not be harvested with application of standards and guidelines such as Riparian and Beach and Estuary. In reference to the last comment, many outstanding old growth areas have been identified and retained as old-growth habitat (e.g., Honker Divide), Research Natural Areas (Kadin Island), Special Interest Areas (Karst Areas), etc.

Comment: The old growth definition is too broad: six criteria are needed, including multiple canopy layers, variation in tree sizes and spacing, and the accumulation of dead standing and fallen trees. (WLS)

Response: The old growth definition was changed between DEIS and Supplement to incorporate the kinds of criteria listed in this comment (see Supplement, pages 3-158 and 3-159), and further refined for the RSDEIS and FEIS. The definition now includes such attributes as tree size and spacing, canopy layers and structure, snags, down material, and forbs (see "Biodiversity" in Chapter 3 of the FEIS).

Comment: (1996) The FEIS should include a discussion of the influence of old-growth timber reclassification on management of the largest, oldest tree stands and the habitat they provide.

Response: Other than that the reclassification better identifies the average volumes of old-growth stands for Forest-wide analysis, we are unclear as to what "influence" you may be referring to.

Comment: (1996) On page 3-21 of the RSDEIS, forest stands having old-growth characteristics are a minimum age of 250 years (Alaback 1994). Page 3-207 states. "...productive old-growth (that is, conifer stands greater than 200 years in age and having a volume of 8,000 board feet per acre or higher) provide all of the highly important habitats, and the preponderance of the moderately-important habitats for all the MIS." Yet. the RSDEIS uses 150 years to describe old-growth. This discrepancy should be corrected and reanalyzed, or explained in the FEIS. On page 3-135 the RSDEIS states that old-growth forest conditions are normally not reached until a stand is 160 years old or older. However, on page 3-12 in the Biodiversity section it states "The development of old-growth characteristics begins at approximately 250 year." The FEIS should resolve this discrepancy.

Response: These "discrepancies" are largely the result of different contexts and definitions. As explained on p. 3-12 (3-17 of the FEIS), 150 years was the age used in the existing timber inventory to distinguish "young growth" and "old growth" for timber planning purposes. The figure of 250 years is an age more generally accepted as necessary for the development of all the features of an old-growth ecosystem. This is partly a result of geographic variations, which is recognized in the statement "until a stand is 160 years old or older". The page 3-207 number was an error, and should have read "250".

Comment: (1996) In the Old-Growth Block Categories on page 3-18, it is unclear how the sizes of the old-growth block categories listed on this page were determined and how they would relate to wildlife habitat protection. An explanation should be given as to the significance of the sizes, how they were derived, and the purposes of the different categories. It is also unclear when Category 3 and 4 blocks would be identified.

Response: These aspects of the old-growth block inventory are discussed in “Productive Old Growth Forest Block Inventory” (USDA Forest Service, 1995). The inventory was somewhat of an experiment and it is not at present intended for any specific planning use.

Comment: Areas of productive old growth represent the most important habitat types for fish and wildlife. The harvest of large areas of old growth habitats, as proposed, could have serious adverse effects on a wide variety of users of this habitat. Therefore, it is suggested that the productive old growth outside of Wilderness and other legislatively-protected areas be managed "for old growth and the fish, wildlife and habitats associated with old growth." (USDI)

Response: The importance of old-growth habitat is acknowledged and evaluated throughout Chapter 3 of the EIS (see previous responses in this section). The effects from timber harvest to the fish and wildlife resources of the Tongass are disclosed in Chapter 3. Reductions in old-growth habitat for old-growth associated wildlife species are anticipated and discussed. For the revised Forest Plan, the choice has been made to emphasize resource values other than old-growth habitat in some areas, while in other areas, old-growth habitat (or more generally wildlife habitat) is the emphasis. These latter areas include a system of old-growth habitat reserves, most riparian habitats and beach fringe and estuary habitats, and many of the areas allocated to Wilderness and Natural Setting land use designations. See also the "Wildlife” section of Chapter 3 in the FEIS.

Comment: (1996) Given today's knowledge, the "matrix management" scheme of small area uneven-aged tree management that mimics the natural disturbance regime is the best silvicultural strategy for retaining suitable old-growth forest components. The use of even-age (clear-cut) prescription should be minimized.

Response: Basically three silvicultural options, clearcut (even-aged), two-aged, and uneven-aged management, were used in developing the alternatives and addressing in various ways wildlife and other habitat concerns. Systems of old-growth habitat reserves were also used to retain old-growth forest, especially where the matrix was to be managed for other purposes. The objective of most alternatives was not to retain old-growth characteristics on every acre.

Comment: (1996) The RSDEIS states. "The panel did not endorse alternative silviculture as better than reserves and do not have high confidence in either, since these are only working hypotheses." However, they gave alternatives which include alternative silviculture or reserves a lower risk rating of short-term adverse effects to biodiversity (page 3-24) than those alternatives without them. Alternatives with 1) longer rotations; 2) old-growth reserves; 3) two-aged timber harvest systems; and 4) expanded beach and riparian areas were rated a lower risk than those that did not. This is a discrepancy that should be resolved in the FEIS.

Response: It is not clear what discrepancy you are perceiving. The fact that the panel “did not have high confidence” in the two approaches is reflected in their risk ratings, which indicate *some* risk for all alternatives. But it is also clear that they had more confidence in those approaches than the more traditional short rotation, even-aged management, no reserve approaches (also as reflected in their ratings).

Comment: (1996) The discussion of management that mimics natural disturbances as an alternative to even-aged management is deficient. The old-growth forest subsection needs discussion on the concept of disturbance ecology and the effects of disturbance regimes on stand development and structure. The natural disturbance regimes as characterized in the referenced research provide an ecological basis for nature-oriented forestry. The opportunity exists to translate and integrate disturbance ecology into practice, to mimic natural processes under which the Tongass Forest evolved through selective harvesting. The FS should develop and implement a forest management strategy that is based on natural disturbance regimes.

Response: The discussion of natural disturbance regimes of old-growth forests should provide sufficient detail relative to the many other biodiversity factors evaluated. Research in alternatives to clearcutting is ongoing. Many smaller clearcuts create openings similar to those caused by natural disturbance (such as wind).

Comment: Due to map scale, many areas allocated to the Old Growth LUD are not all old growth, but can contain unforested areas. The percentage that is actually old growth in each of these areas should be displayed in the FEIS. (USDI) A map showing the extent of old growth is needed.

Response: The criteria for identifying areas to include in the Old-growth Habitat LUD (the large and medium habitat conservation areas) are displayed in the RSDEIS, Proposed Revised Forest Plan, Chapter 3, p. 88. At least 50 percent of each area must be productive old-growth forest, and at least 50 percent of that must be higher volume (>25,000 board feet per acre). A map displaying the various timber volume classes is included in the map packet for the FEIS.

Comment: Old growth acres should be tracked and displayed by landscape position, because of the importance of old growth for wildlife, recreation and subsistence. (SEACC) A new inventory with better location information for old growth is needed.

Response: Old growth is displayed, by five landscape locations (beach and estuary fringe, riparian, uplands less than 800 feet in elevation, uplands between 800 and 1,500 feet in elevation, and subalpine/alpine), and for each of the 21 ecological provinces (see “Biodiversity” in Chapter 3 of the FEIS). The current timber inventory has been combined with soils information to better identify the old-growth resource; an inventory of old-growth forest “blocks” is also now available (see “Biodiversity”).

Comment: The percentages of old growth "remaining" should include all the landbase that was available (i.e., National Forest) in 1954. Many of the Native selection lands that were once National Forest have had intensive old growth logging, and that should be reflected in your statistics.

Response: Native Corporation and State lands are not included in the overall statistics, since the main intent is to provide an analysis and comparison of Forest Plan alternatives. In many cases detailed timber information, including past harvest and current status, is not available for these lands.

Comment: (1996) The RSDEIS should have included the estimated total acreage and percentages of old-growth harvest proposed in each alternative. This information should be included in the FEIS.

Response: The RSDEIS included estimated harvest as a percentage by biogeographic province, as does the FEIS. We have added a table to the Wildlife section to display the total harvest acreage by alternative.

Comment: Relative to all of North America, there is only five percent of the original old growth remaining. You need to evaluate future old growth losses against this percentage, not just the percentage for the Tongass National Forest.

Response: We do not know the source of the "five percent" figure, nor what total acreage that would represent. While it would be possible to evaluate Tongass old growth in relation to the rest of North America, the meaning or relevance of such an evaluation is unclear. The environmental analysis for a Forest Plan should focus on direct and indirect effects to the planning area vicinity, which for the Tongass is generally limited to Southeast Alaska. Somehow equating Tongass timber harvest to the rest of North America would only serve to obscure or mask those effects.

Comment: The amount of old growth projected to remain by alternative is "more than sufficient." The amount of old-growth habitat remaining (76 percent in SDEIS Alternative D) is "more than adequate to maintain fisheries, wildlife habitat, and old-growth areas." (RDC)

Response: In terms of "fisheries, wildlife habitat, and old-growth areas," it is important to look at several "amounts," not just total old growth remaining. Total productive old growth remaining, the higher-volume component remaining, and the location across the Tongass (such as by Biogeographic Province), are all important to consider. (See the “Biodiversity” and “Wildlife” sections of Chapter 3 of the FEIS.) See the Record of Decision for further rationale on the selection of the Revised Forest Plan.

Comment: Estimating cumulative effects on old growth is not possible, since the maps give no indication of where logging will actually occur. A partial mitigation of such effects would occur with purchase of private lands with remaining old growth and assigning these land to the Old Growth LUD. (GP)

Response: We have estimated cumulative effects on old-growth habitat within a forest-wide context, and by Biogeographic Province. At these levels, it is possible to estimate changes without knowing the exact location of timber harvest units. Cumulative effects at the project level will be estimated with such information available. Since the great majority of old growth harvest of private lands has already occurred (see page 3-579 of the Supplement), acquiring private land for the purpose indicated would not provide much in the way of mitigation. It is also quite unlikely that Congress would fund private land acquisitions for such a purpose.

Comment: The world-wide effects of the loss of old growth, including global warming, the greenhouse effect, and changes in climatic patterns, haven't been adequately addressed or taken into account. How can we continue to cut our old growth and tell Brazil (and/or other countries) not to cut theirs?

Response: Information and studies on global warming, the greenhouse effect, and related climatic patterns have not reached a level of acceptance, accuracy or scientific validity that would allow us to predict or estimate global effects from activities occurring in the Tongass National Forest. Even if methodologies were available to make such predictions, it is unlikely that the relatively small acreage involved in the Tongass would show any measurable effect on a world-wide basis. Research in this area is continuing, however. It should also be noted that timber harvest in the Tongass is done for the sustained yield of forest products, with the essential change being conversion of one type of forest (old growth) to another (second growth). Timber cutting in many of the tropical countries is being done largely to convert forested land to agricultural or ranch lands. The end result of these two cases is considerably different.

Comment: Address the effects of continued old growth harvest on global warming and relative to the predicted increase in precipitation (especially snow) for Southeast Alaska in the near future. Since your predictions are based on the assumption of a constant climate, they are inaccurate. (AFSE)

Response: Please see response to previous comment. Also, we have seen no generally accepted or scientifically validated studies predicting the short-term increases mentioned in this comment. Our predictions are not based on the assumption of a "constant climate," whatever that means. Much of the data used to make short- or long-term predictions has been gathered over varying time periods, but periods which have seen considerable fluctuations in climate (precipitation, temperature, etc.).

Comment: The "spiritual/religious" significance of old growth, such as its use in ritual, arts and crafts, and ceremony, should be addressed. Spiritual and religious "connections" include both actual materials and intangible realities.

Response: Although not directly addressed in terms of old growth, the cultural and religious importance of forest resources is dealt with in several ways. The Forest-wide Standards and Guidelines for Heritage Resources (see Forest Plan, Chapter 4) provide detailed direction for identifying, recognizing and protecting resources and uses covered by both the National Historic Preservation Act and the American Indian Religious Freedom Act. This includes the direction to: "Coordinate the management, access, and use of forest products to perpetuate Alaska Native culture and art forms." One specific example of this is the North Hamilton River Red Cedar Cultural and Botanical Area, which is being designated to set aside an old-growth stand rich in red cedar for use by Native Alaskans for woodcarving and other cultural uses. The Subsistence Standards and Guidelines also recognize traditional handicrafts and other non-consumptive fish and wildlife uses. The recreational, scenic and other "intangible" values of old growth give special local significance to many places within the Tongass (see "Recreation" section of Chapter 3 of the FEIS), and many of these have been given "Natural Setting" allocations to recognize these and other values. (See Responses to Area-specific Comments.) See also "Heritage Resources" and "Subsistence" in Chapter 3 of the FEIS.

Comment: Comments on the Old Growth LUD (Old-growth Habitat) management prescription:

- with the emphasis on maintaining natural diversity, salvage logging does not seem appropriate in this LUD. If salvaged, an area should no longer be considered old growth and should be replaced by an area of comparable size and value
- the wildlife enhancement standard of two-acre openings should only apply to second growth stands, not to old growth. It is unclear if this is the case. (WLS)

Response: One purpose of the Old-growth Habitat LUD is to return areas of natural or human-made second growth to an old growth condition, either by letting them evolve naturally, or by management of the second growth to promote old-growth stand characteristics and accelerate the process. To quote from the LUD (Forest Plan, Chapter 3): "Salvage of dead or down material is limited to catastrophic windthrow (generally exceeding 100 acres). ... Stands once salvaged will be managed to achieve old-growth habitat characteristics." The activities listed for wildlife enhancement refer to second-growth management. The “two-acre opening” standard is no longer included.

Comment: The old growth standards and guidelines do not provide specific and measurable standards for the management of old growth communities throughout the Forest. (WLS) The old growth standards and guidelines provide no guidance as to the intended scale of the old growth network, degree of fragmentation, or how long protection is intended to last. (GP) The old growth standards and guidelines are too vague, and will likely result in too much fragmentation and loss of habitat.

Response: Forest-wide Standards and Guidelines for Old-growth Forest were not included in the RSDEIS (Proposed Revised Forest Plan) and are not included in the final Forest Plan. Other Standards and Guidelines specific to old-growth habitat types that may be managed at the project level (Beach Fringe, Riparian) are felt to give adequate guidance for considering old-growth forest values when designing and analyzing specific projects. Used in conjunction with the Fish and Wildlife standards and guidelines, they will help provide for the recognition and management of old-growth habitat and communities on a broader scale, the final Forest Plan, as do several alternatives in the FEIS, provides a forest-wide network of old-growth resources, with different sizes and spacings, through the allocation of the Old-growth Habitat LUD. These topics are addressed in the "Biodiversity" and "Wildlife" sections of Chapter 3 of the FEIS.

Comment: Better standards for maintaining well-distributed old growth are needed, and should include:

- recognition of the differences between mainland and island old growth (as wildlife habitat),
- a mechanism to set aside a percentage of all habitat types in all areas, until we know for sure what is needed.

Response: Please see the previous response. Our analysis has included the use of ecological provinces, which take into account differences between mainland and island habitats, including old growth. The analyses of biological diversity and species viability focus on different habitat types, and the degree to which they may be altered or reduced. Forest Plan monitoring will also evaluate this on an ongoing basis.

Comment: The value of old growth forests has been acknowledged by many, even [former] Forest Service Chief Robertson. No where in America is there such a large expanse of intact "primary" forest as in the Tongass. The Forest Service should be leading the effort to preserve the Tongass' remaining old growth, as a classroom and recreation area, and for its wildlife habitat, as the "highest and best use of this land." (AFSE)

Response: Old-growth forest values have been acknowledged, discussed and evaluated throughout the EIS, and have played an important and integral part in the choices made about future management of the Tongass National Forest. (See previous responses in this section, and the Record of Decision.) In many cases and in many areas, the "non-consumptive" values of old-growth forests are emphasized, maintained and protected (for instance, within areas allocated to the Wilderness and Natural Setting LUD's, in the system of old-growth reserves represented by the Old-growth Habitat LUD, and in riparian areas and beach fringe throughout the Forest). In other areas, the consumptive uses of old-growth forests (the production of wood products) are emphasized or allowed. There is no one best answer to what is the "highest and best use of this land."

Comment: The harvest or cutting of "prime" or high-volume old growth should either be stopped completely, or at least not done disproportionately to other volume classes. Reduce the rate at which high-volume old growth is cut. (1996) Past silvicultural practices disproportionately harvested the highest volume forest, which is the most valuable habitat for old-growth associated species. Current baseline figures indicate that two of the Forest's three management areas have approximately half the high volume old-growth timber already harvested. Areas identified for harvest under the preferred alternative include remaining high volume stands.

Response: Timber harvest under the long-term contract will be done in a manner that assures proportional timber harvest of the higher volume classes in accordance with the Tongass Timber Reform Act. (See discussion in the "Timber" section of Chapter 3 of the EIS.) Harvest from the independent sale program, or occurring after expiration of the long-term contract, does not have this requirement. In the long-term, until harvesting shifts primarily to second growth, high-volume old growth may continue to be harvested “disproportionately” in those areas that allow timber harvest to be considered, due to its significantly higher economic value compared to the lower volume classes. However, even in LUD’s allowing timber harvest, large areas of high volume old-growth will remain from application of standards and guidelines such as riparian and beach and estuary fringe.

Comment: Rare, high-volume old growth (class 6 & 7) needs to be differentiated in all tables, displays and maps. Identify and locate on a map the class 7 areas. Differentiate between the old growth types (high-volume and others). (USDI) Classes 6 and 7 shouldn't be averaged; all productive old growth shouldn't be averaged. Class 7, high-volume old growth (that producing greater than 50,000 bf/year) is extremely important, especially as deer winter habitat. (C-TS) Volume classes 6 and 7 should be displayed and analyzed separately, since each has different ecological importance. (GP) Track volume class 7 separately from class 6. (WLS)

Response: Volume classes 6 and 7 old growth (or, comparably, strata classes C and D old growth) were distinguished and displayed separately in the "Old-growth Forests" section of Chapter 3 (of the SDEIS). This was a change from the DEIS. Projected changes over time (environmental consequences) were also differentiated. However, for the RSDEIS and FEIS, a more accurate breakdown of existing inventory information is used, and classes 6 and 7 are no longer distinguished. The new category termed “higher

volume" old-growth forest roughly corresponds to these two classes. Harvest of this category over time is displayed in the "Biodiversity" section of Chapter 3 of the EIS.

Comment: The definition of old growth should be changed to include only volume classes 6 and 7. (SEACC)

Response: The definition of old growth used is discussed under "Biodiversity" in Chapter 3 of the EIS. It includes several criteria, such as numbers, ages and sizes of trees, canopy characteristics, and the presence of snags, down material and forbs. We see no reason to limit the definition to the higher volume classes (nor do most generally-accepted ways of defining old growth).

Comment: Use volume class 7 as a management indicator and don't log it: "The primary old-growth issue on the Tongass is the amount and distribution of the highly productive types that provide important habitats for wildlife."

Response: We agree that the higher volume classes of old growth have important and perhaps unique values; these are discussed in Chapter 3 of the EIS (see previous responses in this section). However, we know of no information indicating that volume class 7, by itself, provides critical habitat or other values to the extent that it would be meaningful to use it as a management indicator, and/or not log any more of it.

Comment: The impacts to old growth are understated. The lumping of volume class, landscape types and other characteristics tends to overstate the amount of high-volume old growth and therefore understate the effects. An analysis and display of the effects of alternatives "on the distribution and availability of volume class 7 (stratum D)" high-volume old growth habitat is needed. (RF&G, SEACC)

Response: The higher-volume component of old growth, and the potential harvest thereof by alternative by ecological province, are displayed and disclosed in the "Biodiversity" section of Chapter 3 of the EIS. (See also several other responses within this section.)

Comment: The "old growth" map shows very little volume class 6 and 7 land existing in northern portions of the Forest (Baranof and Chichagof Islands and Point Couverdon). Due to their importance to wildlife, no more logging of these classes should occur in this area. (GP)

Response: These portions of the Forest (Baranof and Chichagof Islands, and West Lynn Canal which includes Point Couverdon) are made up of Biogeographic Provinces 3, 4, 5, 6 and 8 (west side). Together these contain approximately 880,000 acres of productive old growth of which 302,00 acres (or about one-third) is higher volume old growth ("Biodiversity" section of Chapter 3 of the EIS, Table 3-8). Varying amounts of this are estimated to be harvested by alternative.

Comment: Continued future high-grading will essentially liquidate volume class 7 old growth, a violation of the NFMA diversity provision. (SEACC)

Response: The National Forest Management Act refers broadly to "guidelines for land management plans" which (in part) "provide for diversity of plant and animal communities" and "preserve the diversity of tree species" (NFMA, Sec. 6, (g)(3)(B)), both in the context of overall multiple-use objectives. This language does not appear to be applicable to such a fine breakdown as specific old growth volume classes. The "Biodiversity" section of Chapter 3 of the EIS estimates the future harvest of "higher-volume" old growth. Forest-wide, in 100 years, 57 to 82 percent of the higher-volume old growth occurring in 1954 will remain unharvested. We do not expect volume class 7 old-growth to be liquidated, particularly given the expansive

areas of productive old-growth in which commercial timber harvest will not be allowed under Forest Plan direction.

Fish/Riparian

Objectives and Allocations

Comment: Fish outputs and/or objectives should be expressed in terms of "harvestable populations," to be meaningful to the average fish or subsistence user.

Response: Populations of fish tend to fluctuate widely due to a number of factors, including harvest, climate, and species interactions. The capability of the habitat to produce fish may also change but generally stays within a natural range of variation. Since the National Forests are primarily the nursery for early life of salmonid species, i.e. they provide the habitat for the spawning and/or fresh water rearing of fish, the main concern, and the one which Forest management can influence is the lands capability to provide fish habitat. The Fish/Riparian Panel assessed the impacts of management actions on habitat for Alternatives 1-9. Additional analysis is provided in Chapter 3 of the FEIS.

Comment: You do not appear to know how much of a drainage can be cut and not affect stream flow, sedimentation, temperature changes, or fry and egg survival. Until you do, be conservative and protect whole drainage's.

Response: We do not know exactly how much timber harvesting and road building any specific drainage, or watershed, can sustain before watershed function and stream channel processes are altered beyond the natural range of variability. We have therefore developed more conservative strategies for the management of the Tongass National Forest than our past strategies. These strategies are designed to provide fish habitat and riparian area protection in all watersheds.

Some watersheds scheduled for entry may appear to have conditions which would require smaller buffers to maintain the same level of protection as the buffers prescribed in the riparian standards and guidelines. A watershed analysis is required to be completed to provide the detailed watershed information necessary to reduce the buffer widths.

Our watershed specialists considered some of the best available information in recommending that no more than 20% of a watershed be harvested within 30 years. Additionally, our riparian protection guidelines require what we consider to be a conservative approach to watershed protection. These guidelines may only be altered if better information becomes available through a watershed analysis. Any change to the riparian protection guidelines must continue to meet the objectives for fish habitat and the specific objectives to the type of stream (or stream process group).

Comment: The plan needs specific objectives for fish habitat management and enhancement. These must be tied to ensuring long-term productivity of fish resources and habitats. (TRS)

Response: The plan adopts the fish habitat objectives developed during the Anadromous Fish Habitat Assessment. The plan also describes stream channel type objectives. These objectives are developed to provide for natural riparian ecosystems and stream processes. We believe that meeting both the fish habitat objectives and the channel type objectives will allow us to achieve the fish habitat management goal of "Maintain and restore the natural range and frequency of aquatic habitat and conditions across the Tongass National Forest to sustain the diversity and Production of fish and other freshwater organisms (Forest-wide Standards and Guidelines for Fish, IV, A)."

Comment: Work with local and regional fish and game advisories to identify important sport fishing areas. (RF&G)

Response: The TLMP Revision team has worked with the Alaska Department of Fish and Game (ADF&G) to identify important sport fishing areas. These areas were originally identified as the “red and gold pin systems” which are listed in the Aquatic Habitat Management Unit Handbook. More recent work by ADF&G has provide a new list of important sport fishing areas, as well as freshwater areas important for the commercial fishery. Important sportfishing areas were determined by ADF&G based on angler responses to the ADF&G mail surveys. These surveys essentially told ADF&G where people fish. The new list of important areas for fish will be considered in site-specific project development, and during watershed analysis.

Comment: It is unclear what "site-specific objectives of individual stream sections for fish habitat" are (Plan, page 4-20). The discussion of past management effects on fish habitat (SDEIS, page 3-83) implies that specific areas could have significant effects as long as a small forest-wide effect is obtained. We would expect that areas with reduced habitat quality would have planned enhancement until their conditions improve. Site-specific fish habitat watershed objectives should be included. (EPA)

Response: The reference to “site-specific objectives of individual stream sections for fish habitat” has been removed from the final Forest Plan. The Forest Plan now requires that stream process group objectives be met.

Comment: Page 3-101 states that "road construction and use are often the greatest potential sediment source ... ." Since "information on suspended sediment as a result of management activities is limited, especially for timber harvest and road construction," limiting road percentages in sub-watersheds should be considered as a mitigation measure. What percent of watersheds currently have roads; what percent will under the alternatives? (EPA)

Response: Mitigation measures, as described in the Fish, Riparian, Soil and Water and Transportation sections of Chapter 4 of the Forest Plan, are designed to reduce the potential affects of road construction on sediment production and impacts to fish and stream habitat. Implementation of these standards and guidelines occurs at the site-specific project level of planning, at which time additional requirements to meet objectives may be imposed. In a Forest-wide, programmatic document, it would not be possible to adequately address all the conditions that could be incorporated into a decision on numbers and locations of roads, such as need for the road, size of the watershed, soil type, age of other roads, history of landslides (slope failures) both natural and human-accelerated, maintenance level, service level, design criteria, weather (rainfall, snow), duration of use, type of use, etc. Therefore, attempting to set specific road mitigation requirements would be very difficult, and probably almost meaningless.

The documents do not show how many roads are in different watersheds, nor predict how many roads would be in an individual watershed. In order to show these numbers, a definition of watershed is required. There are thousands of first order watersheds, fewer second order watersheds, etc. on the Tongass. Using VCU’s, which are generally very large watersheds or combinations of smaller watersheds, as a surrogate for watersheds, the percent of VCU’s currently having roads is 28%. The percent of VCU’s having roads, by alternative, after 10 decades of implementation is: Alt. 1 - 28%, Alt. 2 - 49%, Alt. 3 - 48%, Alt. 4 - 30%, Alt. 5 - 49%, Alt. 6 - 49%, Alt. 7 - 59%, Alt. 9 - 52%, Alt. 10 - 48% and Alt. 11 - 45%.

Comment: The economic value of the sport fish resources can be better maintained if ADF&G's Class I drainages with the highest sport fishing values are managed so that the localized areas in which intensive sport fishing occurs have these values maintained to the maximum extent possible. (STATE)

Response: We agree that sport fishing areas are very important but we also believe subsistence fishing areas are also important. Other areas of high value are areas which are highly productive of fish for commercial harvesting, habitat for unique or sensitive fishes, areas which provide habitat for keystone fish populations such as important brown bear feeding areas. The list goes on. Because so many watersheds are so important for so many different reasons, some of which may not have even been discovered yet, we developed guidelines for maintaining the aquatic productivity and diversity across the Tongass National Forest. For example, no harvest minimum stream buffers range in projected widths from 120 to 130 feet along streams which are important for anadromous fish spawning and rearing (i.e. flood plain channels and moderate gradient mixed control channels). Other Class I streams and Class II streams which flow directly into Class I streams have minimum 100 foot buffers as directed by the Tongass Timber Reform Act. Riparian areas beyond the no harvest strips also receive added protection. Areas beyond the no harvest buffers are to be managed for windfirmness of the no harvest buffer. Additionally, one-thousand foot no harvest buffers are put on estuaries, and fish passage is required on all streams.

Comment: (1996) The RSDEIS states that watershed reserves are identified to maintain a spatial distribution of watersheds in which no timber harvest would occur. However, these watersheds have not been identified in this document. The FEIS should fully discuss this strategy and map the locations of proposed watershed reserves. It should also explain the criteria by which they were selected and how they relate to the old-growth habitat reserves. The FEIS should explain how the watershed reserve strategy would comply with the National Forest Management Act requirement of maintaining viable, well-distributed habitat across the forest.

Response: The watershed reserve strategy has been revised to include the recommended watersheds reserves. A detailed explanation of the watershed reserve strategy process is available in the report “A Conceptual Fish/Watershed Reserve Proposal” by Kessler et. al (1995). This document is part of the planning record.

We believe that managing habitat to maintain viable, well-distributed populations across the forest includes more than implementation of the watershed reserve strategy. Of greater importance are the Standards and Guidelines found in the Fish, Riparian and Soil and Water sections of the Forest Plan Chapter 4. The Standards and Guidelines which are designed to maintain the natural range and frequency of aquatic habitats across the Tongass National Forest are a primary means through which NFMA requirements are met.

Comment: (1996) The National Park Service (NPS) has expressed concern about the potential for resource development occurring on the Tongass National Forest to affect resident fish and wildlife populations and habitat quality in the contiguous lands and waters that are administered by NPS. For example, Glacier Bay National Park and Preserve and the Tongass National Forest share a common boundary on the northern part of the Chilkat Peninsula. On the west flank of the southernmost finger of the Chilkat Peninsula, there are areas of the forest proposed for logging within the Scenic Viewshed LUD. The fisheries within or contiguous to Park waters may be affected by logging. To provide a greater level of protection for these fisheries, the FS should provide Option I riparian protection for all Class I streams in this area.

Response: The final Forest Plan provides direction for a greater level of protection of fish habitat, during timber harvest activities, than that described by the RSDEIS Draft Forest Plan. The best scientific information we have available to guide us in protecting fish habitat and riparian areas is the Anadromous Fish Habitat Assessment. The final Forest Plan gives clear direction to implement protection measures which are consistent with the recommendations from the Anadromous Fish Habitat Assessment. The preferred alternative includes fish and riparian standards and guidelines (Option 2a) which have been modified from the Draft Revised Forest Plan riparian protection standards and guidelines (Option 2). The modification of Option 2 provides clearer direction and better protection of riparian ecosystems and fish habitat.

Comment: Mariculture should be recognized as a forest use in the same way logging and mining are; work with the Alaskan Shellfish Grower's Association in the decision-making process as land is designated for intensive use.

Response: The majority of mariculture use is in salt water and along the margins of islands. These areas, up to the level of the mean high tide, are under State jurisdiction, and are often covered by the planning and requirements of local Coastal Management Plans. Connections to shore (shore-ties, water lines, etc.) and occasional buildings and other facilities, will often come under the jurisdiction of the Forest Service. Standards and guidelines to be applied in these instances are located in the lands section, LAND122, IV, (aquatic farming permits), and the beach and estuary fringe section, of Chapter 4 in the Forest Plan.

Modeling and Effects Analysis

Comment: The modeling of effects on fish/fisheries needs improvement. The results ("no effect" on fish) are not believable. The model of fish effects is "erroneous and not at all substantiated by the information presented." (SEACC, RF&G) Fish effects are understated. (SEACC) It is not believable that alternatives with 64 percent more roads and 50 percent more timber harvest will have the same amount of salmon production. (GP) The basis for the statement that none of the alternatives will affect fish habitat needs amplification, particularly in relation to the need for effectiveness monitoring. (EPA)

Response: The modeling referenced in the comment is not used in the final EIS nor Forest Plan. The fish and riparian panel who reviewed the proposed alternatives and assigned likelihood scores for risk to fish and riparian resources for each alternative agrees in principle with this comment. This group of fish and watershed scientists believed all management activities which disturbed the land (such as road construction and timber harvest) created some risk to riparian and aquatic dependent resources. The likelihood scores did not identify absolute risk but rather put the proposed alternatives in relative order of risk (that is risk of negative effects on riparian and aquatic dependent resources). It was believed that as acres of timber harvest and miles of road increased, risk to fish also increased. We believe Alternative 11, with the improved fish, soil and water, and riparian standards and guidelines, presents the least risk to fish and other riparian and aquatic dependent resources of all the alternatives which allow for multiple resource management, including timber harvest.

Comment: The long-term (vs. short-term) effects of logging on fisheries are not clearly addressed, or do not appear to be clearly known. The cumulative effects on commercial and sport fishing have not been addressed or discussed.

Response: The long-term effects of logging on fisheries cannot be clearly known but we did use professional judgment, based on our understanding of how watersheds function, stream channel processes occur and fish habitats are affected to develop sound fish and riparian protection measures. The Forest Plan Chapter 3 discussion of fish environmental consequences presents the conclusions drawn by the riparian/fish panel. The panel said that impacts in the short term (less than 10 years) may occur but that the likelihood of negative impact is probably related to the probability of a major storm event occurring and triggering increases in sediment movement. Even if a major storm event occurs there exists a time lag before impacts to salmon populations can be measured because of the life history of most salmonids which includes up to several years maturing in the ocean. The risk of significant negative impacts to fish due to earth disturbing management activities increases in the long-term largely because of increases in the likelihood of major storm events occurring. Additionally, through time, the miles of roads and the percent of the watershed in young age classes increases which also increases the chances that negative impacts to fish may occur.

Comment: The effects on fish habitat are understated because:

- while the effects of second-growth forest on reducing stream flows have been acknowledged, the analysis has not been carried far enough. Since timber harvest will not be evenly distributed, reductions in stream flow will be concentrated in some drainage's, and the effects on rearing habitat in these areas will be considerable.
- the Bartos study has been misused. His finding that measurably greater stream-flows occurred after 35 percent of an area had been harvested didn't imply only after 35 percent. Thus mitigation based on a 35 percent standard may not be valid or effective.

Response: The final Forest Plan and FEIS considers additional information, beyond that discussed in the SDEIS, to protect watershed stream-flow function. Our watershed specialists considered the best available information in recommending that no more than 20% of a watershed be harvested within 30 years. Additionally, our riparian protection guidelines require what we consider to be a conservative approach to watershed protection. These guidelines may only be altered if better information becomes available through a watershed analysis. Any change to the riparian protection guidelines must continue to meet the objectives for fish habitat and the specific objectives to the type of stream (or stream process group.

Comment: (1996) Past logging practices have caused impacts to streamside habitat, affecting fish populations. The Allowable Sale Quantity in the Preferred Alternative threatens the long-term sustainability of fish.

Response: The AFHA report and the Fish/Riparian Panel both support the general principle that as timber harvest and the associated road construction increase, risks to fish and aquatic riparian habitat dependent resources increase. The Forest Plan recognizes that past logging practices have impacted streamside habitat. We have designed riparian protection guidelines to protect watershed function and stream channel processes during various levels of timber harvest activity. Provisions are also made to conduct watershed analysis to gather watershed specific information and manage according to the characteristics of the specific watershed.

When we take into consideration the direction developed to protect riparian ecosystems, we believe the Allowable Sale Quantity displayed in the final Forest Plan preferred alternative presents a low risk of negatively affecting fish populations.

Comment: (1996) Logging is not the primary cause of decline in fisheries populations--they may in fact be attributable to over-fishing. Prove that a stream on the Tongass has declining fish stocks due to timber harvest. Fish habitat is not declining. Fish populations are as high or higher than ever.

Response: The Plan recognizes that wide fluctuations in fish populations may occur due solely to ocean conditions which influence primary and secondary productivity. Fish harvest management and hatchery production also influence fish populations. Management of the Tongass National Forest has little or no opportunity to effect any of these mentioned variables. However, Tongass National Forest managers are responsible for managing freshwater habitats and the activities which effect these habitats.

Past logging practices (prior to implementation of stream protection required by the Tongass Timber Reform Act) have been demonstrated to have negative effects on the quality and quantity of fish habitat (Woodsmith, 1996). The implementation of 100 foot buffers on class I streams and class II streams flowing directly into class I streams took effect in 1994. Insufficient time has passed to fully evaluate the effectiveness of the 100 foot buffers in protecting streams.

The Anadromous Fish Habitat Assessment recognizes that "Current procedures and their application have improved the way fish habitats on the Tongass are managed, compared to past protective procedures." The Assessment goes on to state "Current direction for anadromous fish habitat protection on the Tongass National Forest is less than fully effective, and additional protection is needed to make timber harvest more

compatible with maintaining high-quality fish habitat and long-term conservation of anadromous fish stocks." The Assessment broadens the scope of consideration for fish habitat protection beyond the immediate fish bearing streams to the function of the watershed and how stream channel processes effect downstream fish habitat. The preferred alternative incorporates both the protection measures designed for the immediate fish bearing waters as well as the protection measures needed to insure watershed function and stream processes occur within the natural range of variability.

Comment: (1996) Additional watershed studies should be performed in order to provide information on all salmon streams of high value.

Response: Although not prioritized by fish values, one of the top Information Needs listed in Appendix B of the Forest Plan is to "Identify and measure the interactions between aquatic/riparian habitat and perturbations in the upland areas and the response of anadromous and resident salmonids". This information need includes studying the differences between fish habitats in managed and unmanaged watersheds. Also included is evaluating the interactions between the geomorphic processes in channels and watersheds and fish habitat.

Comment: Cumulative effects need to consider temperature and sediment as well as large woody debris. (EPA) Long-term effects of siltation and stream temperature changes haven't been taken into account.

Response: Cumulative effects analysis for projects is required by National Environmental Policy Act (NEPA) and by the Regional Best Management Practices. The Forest Plan Soil and Water standards and guidelines give direction to "minimize cumulative watershed effects which could adversely affect soil and water resources and change stream channel equilibrium…". Direction is also given to address cumulative effects as one of seven core topics in the watershed analysis process.

Even though we agree that temperature, sediment and large woody debris should be addressed during the cumulative analysis, the determination to so should be part of the watershed analysis and the NEPA process issues identification rather than a requirement by a programmatic level planning document such as the Forest Plan (the Forest Plan lacks the site-specific information to determine issues at the project level). We are of this opinion because each watershed has it's own unique function which is determined by such factors as it's geology (including soil parent material), morphology, aspect, micro-climate, and disturbance regimen.

Cumulative effects were part of the consideration made during the Fish/Riparian Panel evaluation of the alternatives. The two parameters considered by the Panelists, which specifically relate to siltation, are residual pool depth and stream bed grain size distribution. The panel did not consider effects of management on temperature.

Comment: The two-step planning process will not meet cumulative effects requirements unless a more detailed, site-specific analysis of fish effects is presented. (SEACC, RF&G)

Response: At the first step (or programmatic step) of the planning process; effects of management activities were determined by an evaluation process using a panel of fish and watershed experts. This step does not attempt to quantify the effects on fish but rather considers the risks of each associated management alternative relative to the other alternatives developed. The cumulative effects of management activities on fish habitat and riparian areas were primary considerations during this assessment process.

All projects, at the site-specific level of planning, will require a new look at potential environmental consequences of activities, including, where appropriate, a more detailed look at the potential effects on fish habitat. See the previous comment/response for further discussion of cumulative effects.

Comment: The cumulative effects analysis (pp. 3-101, 3-113 & 3-114) does not explain how "some risk" of bank disturbance, loss of large woody debris, and catastrophic blowdown meets the SL LUD (now the Riparian Area land use designation) objective of "maintaining or improving" riparian habitat for fish. No information is disclosed to verify this assumption. (SEACC)

Response: The cumulative effects analysis referenced in the comment is not used in the final EIS. Cumulative effects were part of the consideration made during the Fish/Riparian Panel evaluation of the alternatives. Even though we believe the standards and guidelines developed for the protection of riparian and aquatic habitats greatly reduce the risk to fish and other riparian and aquatic dependent resources, some risk to resources undoubtedly remains. Based on the evaluation performed by the Fish/Riparian Panel and on the results of the Anadromous Fish Habitat Assessment we believe we can meet the management objective for fish habitat of “Maintain or restore the natural range and frequency of aquatic habitat conditions on the Tongass National Forest to sustain the diversity and production of fish and other freshwater organisms.”

Comment: You acknowledge that logging affects salmon in other areas (including results of the SAMM model), but continue to deny that those effects will occur in Southeast Alaska, even with evidence to the contrary. Failure to incorporate research from Canada and the Pacific Northwest regarding the effects of logging and roads on fish does not meet the requirements of law (36 CFR 219.12(d) and 40 CFR 1502.22). (SEACC)

Response: We agree that logging can affect salmon in Southeast Alaska similar to affects on salmon in Canada and the Pacific Northwest. Our conclusions regarding logging affects on fish rely heavily on the Anadromous Fish Habitat Assessment (AFHA) which in turn included numerous references to studies conducted outside of Southeast Alaska. Additionally, the expert review conducted during the AFHA included many experts from outside of Alaska who recognized the same geomorphic and hydrologic processes occurring in Alaska as they have observed in other coastal areas of the Pacific Northwest. Our preferred alternative, and discussions pertaining to fish, water and riparian areas all reflect our agreement with this comment.

Comment: Roads won't have <u>no</u> effect on fish habitat: try to better estimate these effects. Use NMFS approach to quantifying roading effects. (ATA)

Response: We agree that roads can have an affect on fish. Our BMP monitoring reports substantiate that, as a minimum, some road crossings on anadromous streams block fish passage. The Fish/Riparian Panel assessment recognized roads as a greater risk to fish than timber harvest. Additionally, the AFHA report also recognizes fish habitat risks associated with road construction and maintenance. The potential effects of roads on fish are discussed in the FEIS and protection measures are given in the Fish, Riparian, and Transportation Standards and Guidelines.

Comment: The TTRA buffer strips will not protect fish from the effects of road construction and timber harvesting, yet current analysis predicts no loss of fish habitat. (CHEC) To minimize potential adverse effects to fisheries, keep roading and stream crossings to a minimum.

Response: The FEIS analysis agrees, based on the Anadromous Fish Habitat Assessment and the Fish/Riparian Panel results, that road construction (and use) and timber harvesting create a risk that fish habitat could be negatively effected.

Comment: The effects analysis for pink salmon is deficient. Changes in sediment loading and hydrology, and their potential to affect stream capability for fry production, must be addressed. You need a better information base and commitments to research in this area. (AFS)

Response: The effects analysis referenced in this comment, i.e. the sediment model, is not used in the final Forest Plan. The Plan relies on the expert opinion expressed by the Fish/Riparian Panel and in the AFHA. We agree additional research is needed. The information needs section of the EIS identifies high priority research planned to improve our information base in the important areas of sediment loading and hydrology.

Comment: Why aren't the potential effects on fish survival resulting from changes to hydrological regimes discussed? The impacts of stream flow changes are not discussed. (SEACC)

Response: Although we find evidence in the literature to suggest timber harvest may effect fish we feel insufficient information exists to allow extrapolation from timber harvest levels to fish survival. Being unable to precisely model predicted effects of timber harvest on Southeast stream flow we are implementing a timber harvest threshold which is intended to minimize the effects of timber harvest on hydrologic regimes. The harvest threshold is base on a literature review and best professional judgment and is discussed in the Fish section of Chapter 3 of the FEIS.

Comment: Does the only-modest recovery of smolt habitat capability over a 210-year period indicate that timber harvest can lead to unrecoverable damage? What are the implications for BMP effectiveness? (EPA) The claim that BMP's will prevent adverse impacts to fish habitat is not supported by any documented evidence. (SEACC)

Response: We are not using the model upon which this comment is based and have no information to precisely quantify the long term recovery of smolt habitat. See previous references to the Fish/Riparian Panel and the Anadromous Fish Assessment Report for additional information regarding impacts to fish.

Comment: The commercial fishery is greatly undervalued. (SEACC) The potential adverse effects on anglers are understated. (SEA) The SDEIS understates the potential adverse effects on sport and subsistence anglers, and commercial fishermen. (SEACC, STATE)

Response: Our estimates of commercial fishery values are base on information provided by the Alaska Department of Fish and Game. The EIS analysis states that the potential short term impacts were not considered to be measurable because changes in fish habitat capability would most likely to be a consequence of changes in watershed functions and stream channel processes. Barring catastrophic natural events such and earthquakes or typhoons, stream changes are expected to take place gradually over an extended length of time. With a time lag between habitat changes and resulting decreases in fish populations it would be very difficult to predict effects on commercial, sport and subsistence harvest. The revised Forest Plan has riparian protection standards and guidelines which we expect to so significantly reduce the risk to fish and other riparian and aquatic dependent resources that little effect will be seen.

Comment: Divide sportfishing into fresh and saltwater for discussing effects. The freshwater fishing experience, especially, includes aspects of scenic quality and the importance of undisturbed surroundings that must be addressed. (TCS)

Response: The Recreation and Tourism section discusses the effects of the plan on both fishing (primarily freshwater) and on the marine-related experience. Important recreation places for these activities have been identified and the effects on these places are displayed by alternative. In the Forest Plan, standards and guidelines state that special consideration be given to these identified recreation places during

development activities. In addition, important travel routes and public use areas have been identified in Appendix F of the Forest Plan. The scenery will be emphasized from these routes and places.

Comment: Commercial fish values are over-estimated, perhaps by an order of magnitude, since gross values rather than net values were used. Simple methods are available to determine net value and these should be used.

Response: Values for commercial fish were derived from Alaska Department of Fish and Game (ADF&G) data. These data are compiled by the Commercial Fisheries Entry Commission and published annually. The commercial fishing industry is the source of all catch and production statistics from ADF&G. Commercial fisheries businesses who file Alaska Department of Fish and Game fish tickets for all fish caught in Alaska are: 1) the first purchasers of raw fish, 2) each catcher who processed fish, 3) each catcher who exported raw fish, and 4) each catcher who sold to unlicensed buyers (e.g., dockside sales to the general public).

Since the number of vessels and season of harvest are strictly limited by the State of Alaska, there are very few costs which vary with the amount of fish caught. Commercial fishermen will incur roughly the same annual costs regardless of the amount of harvests. Therefore, since most of the fishing fleet costs are considered fixed in the short-term they were not subtracted from the ex-vessel values.

Comment: (1996) When referencing PACFISH, the FEIS should clearly state that PACFISH science applies to the entire range of Pacific anadromous salmonids, including those occurring in Southeast Alaska and the Tongass National Forest.

Response: PACFISH is a watershed protection strategy and is not in-it's-self a science. The Conference Committee Report on the Fiscal Year 1994 Congressional Appropriations Act directed the USDA Forest Service to respond to the following two directives on fish habitat management in the Tongass National Forest: Proceed with stream analyses and studies and review procedures related to the PACFISH strategy in 1994 in order to study the effectiveness of current procedures [for protecting the habitat of anadromous salmonids]. Determine if any additional protection [for anadromous fish habitat] is needed. The resulting study, titled "Anadromous Fish Habitat Assessment" did not rely on PACFISH as a science but did use the best available science information to consider management impacts on watersheds, stream channel processes and fish habitat. We believe the best available science information which was the underpinning for the PACFISH strategy was the same basic science upon which the AFHA findings and recommendations were based.

Comment: (1996) None of the fish management indicator species include shellfish or marine finfish species (other than Pacific salmon species) or species that use the intertidal zone as a prime habitat area. The effects analysis is based on sediment risk to pink salmon, yet chum salmon are known to be at higher risk to suffocation from sedimentation. The FEIS should address these issues.

Response: Management indicator species were selected from the those species commonly found, within the Forest Service management jurisdiction. On the Tongass National Forest that management jurisdiction is landward of the mean high tide.

The sediment/pink salmon model was not completed and is not used in the FEIS. Although species specific risks of negative impacts due to sediment may vary, we are not aware of studies which make quantitative comparisons of such impacts. The effects of management activities, including sediment effects on fish habitat, were considered during the fish/riparian panel consideration of management alternatives (1 through 9). Based on the likelihood scores given to each alternative, the panel did recognize a very slight increase in risk to chum salmon over the risk to pink salmon. Because the effects of management activities on

various fish species were not considered to be significantly different, several species were combined in the discussion on effects. (Fish/Riparian Panel outcomes are included in the planning record.)

Comment: (1996) The RSDEIS identified 10,800 stream miles of anadromous fish habitat and 4,100 lakes and ponds, and another 12,200 stream miles and 4,700 lakes and ponds that would be afforded some level of protection. However, it does not specify how many of these stream miles, lakes, and ponds provide habitat for non-anadromous fish or the planned level of protection for non-anadromous fish resources. Also, it does not specifically name the streams, lakes, and ponds that provide habitat for non-anadromous fish only. This information should be provided in the FEIS.

Response: All fish bearing streams, including anadromous streams, are likely to provide habitat for non-anadromous fish. Protection measures for Class I (anadromous fish streams) and Class II (non-anadromous fish streams) are the same in the final Forest Plan. The FEIS Table 3-23 displays the stream miles by area, process group and stream class. We do not maintain a data base at the programmatic planning level which includes a comprehensive list of water body names. Even if all water bodies were named and our data base contained the streams and lakes by name, little purpose would be served by identifying each in this programmatic document.

Comment: (1996) The FEIS should provide an explanation for excluding from analysis all but commercial, sport, and subsistence harvested fish species in the Fish or Subsistence sections. Non-harvested and resident fish species of ecological significance should be considered in analysis before selecting a final alternative.

Response: Management Indicator Species are intended to help display the effects of management on a number of other species which have similar habitat requirements. The FEIS discusses the management indicator species and provides a reference to the list of fish found on or adjacent to the Forest. (See Fish/Riparian panel discussion in the Fish section of Chapter 3 of the FEIS).

Standards and Guidelines/Stream Buffers

Comment: The stream buffer requirements of the Tongass Timber Reform Act (TTRA) appear to have been adequately incorporated into the Revised Plan (SDEIS). (NMFS)

Response: We appreciate NMFS acknowledging that we have adequately met the requirements of the law.

Comment: Many comments addressed a need for stream protection, or "buffers," beyond the requirements of the Tongass Timber Reform Act. These were usually expressed as a specific buffer width, although many just stated that wider stream buffers were needed. Others suggested that all riparian habitat beyond the required buffer also have no timber harvest. Specific suggestions included:

- a minimum buffer of: 300 feet, 500 feet, 100 yards, 1/4 mile, or one mile - in general, this was requested for all streams
- minimums by stream class:
- Class I - 1,000 feet, 400 feet with an additional 500-foot partial cut zone
- Class II - 500 feet, 200 feet with a 300-foot partial cut zone
- Class III - 100 feet
- (1996) All rivers on the Tongass should be protected by at least a half-mile buffer on both sides.
- (1996) All streams, including Class 3, should have a minimum of a 100 foot buffer.

Response: The Plan incorporates the requirements of the Tongass Timber Reform Act (TTRA) which requires the maintenance of "a buffer zone no less than one hundred feet in width ....". The TTRA requirement is not a maximum buffer width, but for a buffer at least one hundred feet wide on both sides of

the stream. The need for buffer widths greater than 100 feet in many locations was emphasized by the Anadromous Fish Habitat Assessment (AFHA). AFHA recognizes that “Current procedures and their application have improved the way fish habitats on the Tongass are managed, compared to past protective procedures.” The Assessment goes on to state “Current direction for anadromous fish habitat protection on the Tongass National Forest is less than fully effective, and additional protection is needed to make timber harvest more compatible with maintaining high-quality fish habitat and long-term conservation of anadromous fish stocks.” The Assessment broadens the scope of consideration for fish habitat protection beyond the immediate fish bearing streams to the function of the watershed and how stream channel processes effect downstream fish habitat. Most stream channel process groups in the preferred alternative incorporates both the protection measures designed for the immediate fish bearing waters as well as the protection measures needed to insure watershed function and stream processes occur within the natural range of variability. Buffer widths are presented in the Forest Plan, Chapter 4, Riparian Standards and Guidelines section.

Comment: The 100-foot buffer is merely a "token amount." Wider buffers are needed due to:

- reduced flows from second-growth areas
- rearing habitat needs (temperature?)
- the fact that streams in Southeast Alaska frequently change course, meaning that they could leave their "buffer" and flow through logged areas, negating the positive effects of the buffer. (C-TS)

Response: Some streams could have far wider buffers than the minimum amount of 100 feet. See previous response.

Comment: (1996) Riparian Option 2 should be a Forest-wide standard and watershed analysis should be the guideline. Any deviation from Riparian Option 2 should be based on the "Ecosystem Analysis at the Watershed Scale: Federal Guide for Watershed Analysis" (August 1995 or subsequent version). In addition, there should be an implementation schedule for these watershed analyses in Chapter 2 of the plan. Watershed analysis in the draft forest plan has been severely down-graded to a suggestion in the forest-wide standards and guides. A clearly identifiable triggering mechanism for watershed analysis needs to be incorporated into the riparian area standards and guides. Watershed analysis is the current management regime throughout most of the nation. The Tongass deserves no lesser treatment.

Response: Option 2a, an updated version of Option 2 incorporating watershed analysis, is applied across the Tongass. (See the Forest Plan for a specific description of the standards and guidelines included in Option 2a.)

Comment: (1996) Riparian areas designated FHIP1 should always be given Option 1 protection, and Riparian areas designated FHIP2 should ideally be given Option 1 protection, however never less than Option 2. Option 1 standards should be implemented for those watersheds with high fish values; Option 2 standards should be implemented for all other watersheds. In order to be responsive to the Anadromous Fish Habitat Assessment, the highest level for fish habitat protection should be adopted in high-value watersheds, and no less than the next highest level of protection should be adopted for remaining watersheds.

Response: We believe the Option 2a of the preferred alternative addresses the concerns raised by AFHA and, along with other standards and guidelines, helps meet the intent of AFHA in assuring long term sustainability of fish habitat on the Tongass National Forest.

Comment: (1996) The Preferred Alternative is seriously deficient. It proposes to implement habitat protection strategies that are unproven in this particular ecosystem. The Anadromous Fish Habitat Assessment recommendations indicate that more protection is necessary than what is proposed in the

Preferred Alternative. To protect the Forest's valuable fishery resources the proposed forest plan needs to fully implement the recommendations of AFHA. The approved plan should address the need for protection of AFHA Class IV streams, additional protection for high hazard soils in steep areas, and the need for watershed analysis across the forest. The RSDEIS adequately addresses the buffer-strip recommendations of AFHA, but excludes AFHA recommendations regarding: 1) clear-cut harvesting on steep and unstable slopes (>40 percent) which creates increased risk of landslides and associated sedimentation; 2) roads on unstable soils and constructed on wetlands; 3) fish passage through drainage culverts; and 4) deficiencies in maintaining road drainage systems and in close-out of temporary road systems.

Response: Option 2 riparian protection standards and guidelines were developed by a team of specialists to meet the intent and the specific recommendations of AFHA. Since release of the RSDEIS we have conducted further review of AFHA and evaluated the consistency of Option 2 and the Forest Wide Standards and Guidelines in meeting the intent of AFHA. As a result of this additional work, we have modified both Option 2 and the Forest Wide Standards and Guidelines , and we believe we have achieved greater consistency with AFHA. Our belief is supported by a review conducted by a team of Pacific Northwest Research Station Scientists. The report titled “Evaluation of the Use of Scientific Information in Developing the Preferred Alternative to the TLMP FEIS” (Everest, Allen, Julin, Shaw, Smith, and Swanston, 59 pp) is included in the planning record.

Comment: (1996) The proposed protections for fish and riparian habitat are inadequate to protect the Tongass's highly productive fisheries or wild anadromous salmonids. The anadromous fishery resources produced on the Tongass National Forest, referred to in the RSDEIS as "major" should be more accurately characterized as being the most valuable resource, in terms of both fish production and Southeast Alaska employment. Additional protection should be included to ensure adequate fish protection throughout the Forest (i.e. the application of AFHA recommended protective measures) prior to calculating a harvest level in the selected alternative.

Response: See previous response.

Comment: (1996) The Preferred Alternative relies on the classification of stream systems based on the quality of watersheds as determined by the Alaska Department of Fish and Game's Forest Habitat Integrity Project (FHIP). This study, completed in 1978 and never updated, has no biological basis for the rating system used, and does not address fish stock viability or otherwise incorporate concepts of conservation biology. It is based only on the overall fish production files of commercially harvested stocks. ADF&G acknowledges that FHIP is a subjective rating system and does not advocate its use. [Suggestions for other rating systems were also received.]

Response: The FHIP information is not used for the final Forest Plan. All streams on the Forest will receive the same high level of protection.

Comment: (1996) Justification for the Preferred Alternative's application of a two-tiered approach (Riparian Option 2 and Option 1) for fisheries habitat protection is lacking in the RSDEIS. The forest plan should adequately protect fish habitat throughout the Forest by applying Forest Plan Protection Option 2 to most watersheds, and apply additional protection to watersheds of special significance to sport, commercial or subsistence fisheries through application of Riparian Option 1. Riparian Option 2 incorporates most of the recommendations of AFHA. AFHA and the Fish/Riparian risk assessment panel both conclude that Riparian Option 2 is the minimum level of riparian habitat protection that will adequately protect fish habitat

Response: All streams on the Forest will receive Option 2a level of protection (see the previous responses under the heading of “Standards and Guidelines/Stream Buffers”).

Comment: (1996) Applying Riparian Option 3 is equivalent to current protection measures being implemented on the forest, which has been determined by AFHA to be inadequate in protecting anadromous fish habitat. Riparian Option 3, as described in the Preferred Alternative, is scheduled to be implemented on 80 percent of the fish bearing streams in timber harvest VCUs. Riparian Option 3 will likely result in serious degradation to small systems that are an important component of the Forest's fish stock biodiversity, and poses an exceptional risk to small spawning populations. Therefore, under the Preferred Alternative, 90 percent of the fish bearing streams on timber harvest VCUs receive protection already documented to be inadequate.

Response: All streams on the Forest will receive Option 2a level of protection (see the previous responses under the heading of "Standards and Guidelines/Stream Buffers").

Comment: Stream buffers should be extended to minimize the potential for blowdown. Logging corridors through the buffers should be minimized. (NCC)

Response: Stream buffers have been extended in the Forest Plan beyond the buffer widths described in the SDEIS. Areas are also identified beyond the stream buffer where the management objective is to facilitate windfirmness of the stream buffer. In managing for windfirmness a distance of one site-potential tree may be considered but a greater distance is to be considered if site specific analysis indicates a greater distance is needed. Riparian standard and guideline F.7. in Chapter 4 of the FEIS is the guideline for consideration of logging corridors through buffers. It recognizes that consideration must be given to the tradeoffs of effects between constructing roads across the stream (which would most likely minimize the area of impact in the riparian area) and allowing logging/yarding corridors through the riparian area (which could affect a greater area of the corridor, but possibly with less impact than a road).

Comment: TLMP should incorporate the buffer extensions used for the '89-'94 Long-term Sales FEIS standards and guidelines. (SASA)

Response: The buffer standards and guidelines developed for the '89-'94 KPC Long-term Sale FEIS were based on earlier drafts of this document. Since the development of the standards and guidelines in the 89-94 KPC Long-term Sale FEIS new information has become available indicating additional protection is needed to insure the long term sustainability of fish resources (Anadromous Fish Habitat Assessment (AFHA), 1995) The final Forest Plan has Forest-wide Standards and Guidelines and Stream Process Group Standards and Guidelines which provide the additional protection needed as identified in the AFHA report.

Comment: The standards and guidelines for stream buffers need to ensure an equivalent level of protection as that required under the Alaska Forest Resources and Practices Act. (STATE)

Response: We believe the standards and guidelines for stream buffers contained in the revised Forest Plan are equivalent or greater protection than that required under the Alaska Forest Resources and Practices Act.

Comment: (1996) PACFISH guidelines should be incorporated for stream protection. The science-based provisions are essential for the long-term protection of salmon and trout.

Response: We believe the best available science information which was the underpinning for the PACFISH strategy was the same basic science upon which the Anadromous Fish Habitat Assessment (AFHA) findings and recommendations were based. The AFHA report stated that additional protection measures for fish were needed. The Standards and Guidelines for Fish, Riparian and Soil and Water, found in the Forest Plan were developed to implement the recommendations and intent of the AFHA. These standards and guidelines although developed by resource professionals expressly for watersheds and

riparian areas on the Tongass National Forest are similar to the stream protection provisions of PACFISH, in that both strive to maintain the natural function of streams and their watersheds.

Comment: (1996) Different stream gradients were not accounted for in the proposed buffer standards.

Response: Gradient was a consideration in developing the stream buffers. Stream gradients are one of the primary attributes which help define stream process groups. The buffer standards and guidelines are custom designed for the individual stream process groups.

Comment: Some commenters felt the required buffers were enough, that no more protection is needed. Some felt that no buffers were needed. (1996) The 100-foot buffer on salmon streams is acceptable. No scientific evidence has been presented to justify changing the buffer to 240 feet. Stream protection contained in the Tongass Timber Reform Act is sufficient.

Response: The buffer requirement of TTRA is not a maximum distance, it is a minimum distance. This minimum distance may be extended as needed to meet management objectives for the stream. These objectives are identified in the Riparian Standards and Guidelines for stream process groups in Chapter 4 of the Forest Plan. Section 103 of the Tongass Timber Reform Act does not allow for the use of no buffers.

Comment: TTRA buffers should not have the personal use woodcutting "loophole;" no kind of timber harvest should be allowed in the mandated buffers. (ATA) TTRA intended no timber harvesting: don't allow personal use or specialty products cutting. (SASA, SEACC)

Response: There may be situations where some timber harvest is desirable adjacent to streams. An example is the hand construction of a trail bridge or where there is a specialty product (including for native arts) that may not be available elsewhere. Therefore we did not want to use language that absolutely wouldn't allow timber removal in all circumstances, just in most. To respond to this concern, the language in the standard and guideline has been slightly modified. It now reads (Item F4 of the Riparian Standards and Guidelines in the Forest Plan): "Discourage personal use woodcutting within 100 feet of Class I streams, within 100 feet of Class II streams which flow directly into Class I streams. Avoid other Riparian Management Areas of this land use designation; other suitable locations for personal use wood cutting when other feasible locations for personal use wood cutting are available."

Comment: A clear definition of "Class II streams flowing into Class I streams" is needed. (ATA)

Response: The definition was given in a 2620/2520 letter from the Regional Forester dated November 21, 1995. This letter is included in the planning record.

Comment: Standards and guidelines for streams (Riparian Area land use designation) should not include an objective of "managing" for stream temperatures: leave this to nature by protecting the areas. (ATA) Delete all reference to "improving water temperature." (SASA) Change the "improve" water temperature objective to "maintain" temperatures at levels determined by climate and natural watershed characteristics. (NMFS)

Response: Riparian standards and guidelines do not allow timber harvest along streams and temperatures would be expected to be a function of natural stream shading. Streams which have had timber harvest in the riparian management area prior to the Tongass Timber Reform Act could receive some type of treatment of the streamside vegetation to encourage faster growth rates of trees which will provide stream shade.

Comment: Windthrow-prone trees should be removed from streamside buffer zones to minimize sedimentation resulting from upturned rootwads. The SL LUD needs provisions for skyline corridors. (AFA)

Response: Windthrown trees, including those with upturned rootwads, provide for some of the most stable, long-term trees in streams, especially the very large streams. Where one of these large trees might produce accelerated sediment for only a few years, the same tree may create pool rearing habitat for fish for 100 years or more. The ”SL LUD” from the Draft Forest Plan is not part of the final Forest Plan. Current Riparian standards and Guidelines do no prohibit yarding corridors, including skyline corridors.

Comment: (1996) The lack of adequate protection for upland, steep gradient streams, given the patterns of stream erosion and debris downflow, is an excuse for more high-country clearcuts in terrain restricted zones, where buffers would get in the way of timber harvest.

Response: We share the commenters concern for the protection of headwater areas. The preferred alternative displayed in the Forest Plan provides for protection of headwater streams by requiring no harvest buffers on Class III streams until a watershed analysis is completed. Following watershed analysis, we anticipate that harvest may be allowed along some Class III streams. These streams would most likely be streams with little connectivity with downstream fish habitat and present low risk to downstream fish habitat. The steeper headwater streams with connectivity to downstream fish habitat would continue to be protected following watershed analysis.

Comment: The statement (Plan, p. 3-76) that buffers may result in capability losses should be removed.

Response: This statement is no longer used.

Comment: (ref. SDEIS, p. 3-114) Techniques for selecting windfirm boundaries for leave strips need to be developed. Develop a key to use in determining areas susceptible to blowdown and guidelines to use in setting windfirm boundaries. (USDI)

Response: We agree that better techniques may be found over time for designing windfirm boundaries for leave trees. This is listed as an information need in the timber section of Appendix B, Information Needs, in the revised Forest Plan and as a Fish information need as part of the research priorities of the Alaska Cooperative Working Group on Forestry/Fisheries Research.

Comment: In the standards and guidelines, clarify the role of the State in the protection of fish habitat and the management of fish populations. (STATE)

Response: Forest Plan standards and guidelines are directed at Forest Service habitat management responsibilities Recent court decisions may change Federal and State fish management responsibilities. Numerous references in this section refer to coordination and or cooperation with the “state”, “ADF&G” and updating the Cooperative Fisheries Enhancement Process, which is the Process by which enhancement projects are cooperatively developed.

Comment: (1996) Warming ocean conditions should be considered to plan for increased compensatory habitat protection and restoration.

Response: The potential for increased ocean warming, as a consequence of global warming, is beyond the scope of the Forest Plan to consider, and not necessary at this time to reach a reasoned Forest Plan decision..

Comment: (1996) Fishing regulations need to be written in a clear and understandable language for guidance to avoid the over-harvesting of fish.

Response: Fish harvest and associated fishing regulations are the responsibility of the Alaska Board of Fisheries and the Alaska Department of Fish and Game. The Forest Service has responsibility for fish habitat in freshwater and above the mean high tide.

Habitat Improvement/Enhancement

Comment: The predicted success of all habitat improvement projects is questionable, as is the projected increase in salmon habitat. The fish enhancement projects aren't all going to be successful: you need to acknowledge this and adjust your estimates accordingly. No data or analysis is presented to substantiate the claim that fish enhancement will improve fish habitat and increase fish numbers. The uncertainties of fish enhancement success must be acknowledged: don't mislead the public. (ATA, SASA) The number of viable, realistic fish enhancement projects is overestimated. (SEACC) The FEIS must include an improved assessment and display of the costs and benefits of the scheduled fish habitat enhancement projects. (STATE) The plans for fish enhancement are unrealistic, and the anticipated success skews the analysis of effects. (SEA)

Response: Estimated numbers and pounds of fish produced by the various projects proposed are based on the best professional knowledge of the fisheries biologists on the Tongass National Forest. In order to estimate the numbers of fish from the projects, the biologists have relied on: 1) knowledge of the success of previous projects, 2) regional coefficients developed by all the fish biologists and the Forest Service Alaska Regional Office which are used to estimate the production from spawning gravels, rearing area, etc., 3) predicted habitat capability using the fish habitat models developed for the 1991 DEIS, and 4) knowledge of each individual system with proposed projects. The Forest Plan describes the list of projects as “opportunities” and as potential projects, since many of the projects have not been ground-truthed." At the time of the actual development of the project, a better estimate of the costs and benefits of each of these projects can be made and documented.

Estimated outputs from past fish projects are displayed in the fish section of the FEIS as well as in the "507(b)" report. The 507(b) report is included in the revised Forest Plan as an Appendix. As stated in the foot-note to the 507(b) report table 3 “Estimated production of fish is based on full utilization of habitat capability. The time it will take to reach full production varies with the species, application of bioenhancement techniques and fisheries management strategies regulating the fish stocks returning to the projects." Some projects have been very successful on the Forest, while others have not been as successful. The success is based on fisheries management strategies, whether bioenhancement was used (e.g. pre-stocking of fish above a fish passage structure so that the first population of fish doesn't have to naturally move up through the structure), how the project was finally implemented, and whether the correct assumptions were made in the project planning and output estimation. The numbers listed, and estimated for the future, are the best now available.

Each project should consider, as a part of the planning for the project, the amount of monitoring necessary. The standards and guidelines in the Forest Plan, Chapter 4 Fish Section, FISH22, III. A and B, state: "Conduct monitoring of fish improvement projects to insure their continued function at the design level of operation." And “Monitor fish production on a representative sample of improvements projects to evaluate effectiveness of the improvement program and conceptual designs of individual projects.”

Between the release of the SDEIS and the FEIS and Forest Plan, a comprehensive reassessment of the proposed future projects of the Forest Plan has been made by the Area Fish Biologists. The intervening period gave the biologists time to further review many of the projects to see if they were realistic, and also to identify new projects. Based on this review, the Ketchikan and Stikine Areas reduced their proposed fish

improvement opportunities by about 50 percent and 35 percent, respectively. The Chatham Area increased their proposed fish improvement opportunities by about 30 percent. The Forest believes that this is a very realistic improvement plan. (Note: the primary emphasis of fisheries improvement (approximately 30 percent) is the rehabilitation of streams and watersheds where timber harvest has occurred in the past.)

Comment: (1996) The FEIS should include documentation of actual production from fisheries enhancement projects rather than the projected yields presented in the RSDEIS. Production resulting from fisheries enhancement projects could be better understood if presented in terms of the percentage of total yield resulting from enhancement.

Response: See the previous response.

Comment: Several commenters are opposed to fish enhancement projects.

- you shouldn't be degrading habitat, then using enhancement to fix it
- use the buffers and don't degrade it in the first place.

Response: There is no intent stated or implied anywhere in the revised Forest Plan to degrade habitat and then fix it up with enhancement. However, habitat that has been degraded in the past is intended to be rehabilitated.

We agree with the second comment; buffers will be used at a minimum along all Class I streams and all Class II streams that flow directly into Class I streams. The fish objective of the plan is not degradation, but is to maintain or improve fish habitat.

Comment: (1996) On page 4-16 (VI.C.) Bio-enhancement projects should also assess the genetic integrity of the affected and adjacent fish stocks.

Response: Fish enhancement projects which use bio-enhancement, follow Alaska Department of Fish and Game (ADF&G) requirements which implement ADF&G genetic policy. Additionally, all projects are reviewed by the applicable Regional [salmon] Planning Team. This screening insures the project and any associated fish transfers are compatible with goals and objectives for salmon enhancement within the Planning Region.

Comment: (1996) Regarding Fish Habitat Improvement I.C. (page 4-16), while monitoring high interest/high investment projects "more intensely" may reflect reality, it is more important that projects of great biological significance, particularly those involving experimental or innovative techniques, also be so monitored.

Response: The FEIS states “Monitor fish production on a representative sample of improvement projects to evaluate effectiveness of the improvement program and conceptual designs of individual projects.” Monitoring of a representative sample should provide the information necessary to make needed adjustments to individual projects as well as broader fish enhancement program adjustments.

Comment: For the Ketchikan area, there are too many fish projects proposed, and some of them shouldn't be done. Concentrate on "real monitoring" instead. (TCS)

Response: The Ketchikan Area fish projects displayed in the Forest Plan have been carefully reassessed by the Area's Fish Program Manager and the District biologists. Based on this reassessment, approximately half the projects previously considered are now proposed for the next ten year period for the Ketchikan Area

(see the Fish Project Opportunity schedules in Chapter 2 of the revised Forest Plan). The projects that are proposed have been, in most cases, discussed with other agencies to determine that they are feasible.

No definition is given of "real monitoring." Monitoring is addressed in Chapter 6 of the revised Forest Plan and includes monitoring of the effectiveness of fish projects (Fish habitat Item #3).

Comment: Types of fish projects and their purposes vary by Administrative Area (compare Plan, p. 2-19 ... 2-28, SDEIS, p. 3-104 and Table 3-35). A standardization of terms is needed. (NMFS)

Response: For projects identified for implementation during the life of the Forest Plan, we have standardized the names of the project types, as suggested. Past projects type names should be substantially the same as future project type names, except in some cases different names may be used if there was a different emphasis for the project.

Heritage Resources

Comment: National Register eligibility should not be the only factor in protecting cultural sites. These areas still may have cultural or historical value, and should be evaluated differently, taking Alaska Native concerns into account.

Response: We agree that Alaska Native concerns should be addressed in protecting cultural sites, and that concerns may not be limited to National register eligibility factors. Native concerns, along with other public comments, are considered during the planning, inventory, and evaluation process (See the Heritage Resources Forest-wide Standards and Guidelines in Forest Plan Chapter 4.).

Comment: All lands should have thorough investigations of "Native History" during the planning process.

Response: The heritage resources inventory process includes review of literature pertinent to the prehistory and history of Native Americans and other ethnic groups who have lived within the National Forest and surrounding lands. The ethnohistorical literature is supplemented by oral history interviews, public comment, and finally by systematic on-the-ground investigations to verify the existence or absence of cultural resource sites. The Tongass Cultural Resource Overview (1987) contains a summary of this information. The continued consultation with Native Americans is important in order to provide additional ethnohistoric information about social cultural values that will aid in the identification and the protection of traditional sites whose location or traditional value may not be known (See the Heritage Resources Forest-wide Standards and Guidelines in Forest Plan Chapter 4.).

Comment: (1996) Heritage values and/or aboriginal claims of the Alaska natives who live in and depend on the Tongass National Forest should be recognized when considering a management plan. The cultural and traditional uses of the resources by indigenous peoples need to be better identified and sustained.

Response: Please see the previous two responses; cultural and traditional uses and values are recognized and considered in forest planning.

Comment: A cultural resources overview is required for the Forest Plan (36 CFR 219.24 and FSM 2361.22).

Response: A Cultural Resource Overview was completed in 1987. This document provides a comprehensive summary of the existing information pertaining to prehistory, history, ethnohistory, climatic change and other environmental information which has affected human activities throughout time. Information from the Overview is included in FEIS Chapter 3. Volume I of the Overview is available for public use at the Alaska Regional Office, Juneau.

Comment: The EIS would be improved with a summary of Native habitation in the Tongass and a review of historical information concerning the Tlingit, Haida and Tsimshian of Southeast Alaska.

Response: A comprehensive summary of ethnohistoric and prehistoric Native habitation within the Forest is available in the Overview, Volume I, at the Alaska Regional Office, Juneau. Information from the Overview is included in FEIS Chapter 3.

Comment: A plan for completing archaeological and historical inventories, and protecting such resources if found before and activity begins, is needed for each area proposed for ground-disturbing activities.

Response: The National Historic Preservation Act, the National Environmental Policy Act and their implementing regulations provide a framework to identify, evaluate, preserve and protect significant cultural resources on a Forest-wide and project specific level. Specific inventory plans are established in consultation with the State Historic Preservation Officer (SHPO) to ensure that survey intensity and methodology is consistent with established guidelines. Inventory plans are established prior to on-the-ground investigations and may be modified to include new information acquired from public comment, research methods, or during investigations. This process is dynamic and will be updated through management assessments that will schedule, refine and implement program activities, summarize current status and identify priorities for future cultural resources inventory, evaluation and protection efforts (See the Heritage Resources Forest-wide Standards and Guidelines in Forest Plan Chapter 4.).

Comment: The right-of-way of the old Yakutat and Southern (Y&S) Railway should be recognized and preserved.

Response: The Yakutat and Southern Railway is recognized as a historic site and is protected from management activities. All historic and prehistoric sites are evaluated for significance through established criteria in 36 CFR 800. Sites which have not been formally evaluated are protected as significant until determined otherwise through consultation with the SHPO (See the Heritage Resources Forest-wide Standards and Guidelines in Forest Plan Chapter 4.).

Karst and Caves

Comment: (1996) State-of-the-art guidelines for protection of karst and caves should be adopted. Karst and Caves resources should receive the safeguards proposed by the 1995 Karst and Caves Resources Assessment.

Response: State-of-the-art guidelines for managing karst and cave resources proposed by the TLMP team have been adopted and incorporated into the Forest Plan. Environment and effects are discussed in Chapter 3 of the FEIS. A detailed protocol for assessment of vulnerability and significance of karst and cave resources is provided in Appendix I of the Forest Plan.

Comment: (1996) The karst issue needs to be clarified. The document should describe exactly what a karst and cave are and what would make one significant or important enough to take special precautions in order to protect it.

Response: The karst and cave resource issues are clearly stated in the Environment and Effects chapter of the FEIS. This chapter also includes a definition of what a cave and associated karst terrain are and a description of the controlling natural variables. Appendix 1 of the Proposed Revised Forest Plan provides a detailed protocol for determining the significance and importance of these resources.

Comment: (1996) The caves and karst information is inadequate to support the proposed protective measures which unnecessarily reduce the ASQ.

Response: The karst and cave resources on the Tongass National Forest have been carefully reviewed in the field and identified as having both a national and international importance in terms of unique geological and cultural development and usage. The importance of these resources and the scientific bases supporting this conclusion are documented in numerous scientific publications, the Environment and Effect chapter of the FEIS, in Chapter 4 of the Forest Plan, and in a detailed protocol for karst and caves management in Appendix 1 of the Forest Plan. This information base is substantial and fully supports the management protocols proposed.

Comment: (1996) The Karst Vulnerability Rating should be adopted for any alternative selected.

Response: The karst vulnerability rating developed by the TLMP team has been fully adopted and incorporated into the Forest Plan. It is presented in its entirety, along with a methodology for assessing cave significance, in Appendix 1 of the Forest Plan.

Comment: (1996) The RSDEIS lacks sufficient studies on the susceptibility of cave and karst topography to damage from timber harvest.

Response: There is a substantial amount of quantitative scientific information available on the susceptibility of cave and karst topography to damage from timber harvest activities. While much of this information is developed for areas outside of Southeast Alaska, it is directly applicable to conditions in Southeast Alaska because of similarities in geology, climate, vegetation cover, and current management activity. Additional analyses and assessments of the resource and management effects within the Tongass have been completed or are on-going and generally support these findings. The Forest Plan includes a detailed protocol (Appendix 1), based on this cumulative information, that allows field personnel to estimate levels of susceptibility and adjust timber harvest activity accordingly.

Comment: (1996) The Forest Service should conduct an inventory so that the extent of the karst areas is known.

Response: The Forest Service is actively pursuing an inventory program across the Tongass. A large portion of the Ketchikan Area has been completed and detailed inventories are on-going or in the planning phase on the Chatham and Stikine Areas.

Minerals

(See also Socioeconomic and Recreation sections.)

The Minerals LUD (or Prescription)

Comment: The Minerals prescription (or LUD) is a good idea, a positive approach to development of mineral resources, puts mining on an equal footing with the other resources. (AMA, AMC) "The new mineral prescription ... is a most important achievement in the national interest." Mining only uses small areas (even within the Rx), and after reclamation the area will continue to be available for recreation and habitat.

The Minerals prescription (or LUD) is unacceptable, and should be withdrawn. (AFJ, SEACC, SC-J, TAKU) A Minerals Prescription in any National Forest is not necessary. The 1872 mining law (and Forest Service regulations) already gives miners publicly owned resources and access to them (at no cost to the miner). (SCLD, SEACC, TAKU) The Minerals Rx is unnecessary and "sets a dangerous precedent for the management of National Forests nationwide." (JAS)

Response: Clearly the issue is polarized over whether or not known mineral reserves should be considered for emphasis through a land use designation (LUD).

It is true that, in areas not withdrawn from mineral entry (including valid existing rights), the General Mining Law of 1872, ANILCA, and the NFMA planning regulations (36 CFR 228) assure prospectors and claimants their right of ingress and egress for exploration, development and extraction of locatable and leasable minerals. This right is further defined in a plan of operations which includes environmental analysis to consider the merits of the type and scale of activities proposed and what, if any, mitigation measures are necessary to ensure the long term productivity of the land.

It is also true that prospectors and claimants, in preparing a proposal for a plan of operations, need to have some idea of what other resource values are present in the area of the known mineral reserve and what kinds of activities would likely be appropriate to meet other environmental considerations. A range of activities is possible, most likely with differing operating costs. Examples include whether or not the following activities would be allowed: 1) an on-site camp; 2) low standard roads to access the ore body; 3) on-site tailings disposal; 4) on-site milling; and so on. For the prospector or claimant to make an informed decision as to whether or not the known reserve is worth the cost of exploration and development requires some idea of the type of development likely to be acceptable.

The Minerals land use designation is allocated to specific geographic areas with known mineral development potential where prospecting, exploration and development of mineral reserves would be encouraged in an environmentally sensitive manner. The land use designation would only apply if and when a plan for operations was submitted. At that time, site-specific environmental analysis of alternative ways to develop and extract the mineral reserve would be undertaken.

Comment: The Minerals prescription (or LUD) would result in unacceptable environmental effects:

- it provides for "maximum environmental impact"
- it would allow too many adverse effects to other resources; it would allow resource degradation
- it "would precipitate huge catastrophic environmental costs." (SC-J)
- it would allow noise pollution, adverse visual effects (tailings, etc.), impacts to recreationists on trails, etc.
- this prescription goes too far in limiting recreation and tourism opportunities.
- it would promote boom-bust economic development which would be detrimental to long-term economic stability (JSP) "As for the jobs issue, when the mineral is gone, so are the jobs."
- the minerals Rx "should not allow relaxation of environmental standards used for other forms of development."
- "Stringent environmental controls should be applied to the mining industry, as to any other industry." (SCS)
- the Minerals Rx will "promote irresponsible mining."
- the Minerals LUD "fails to design or even outline the resource protection measures necessary to mitigate and balance the effects of mineral development." (SCLD)

Response: The minerals land use designation encourages prospecting, exploration, and development in an environmentally sensitive manner. Standards and guidelines to maintain or mitigate for other resource values are provided. In contrast to most other LUD's, the Minerals LUD imposes less-restrictive objectives for scenic quality, and allows for reasonable access to the development site. (See Forest Plan, Chapter 3, Minerals.)

Additional mitigation measures for other resources will be included in the site-specific environmental analysis of proposed plans of operation. These would be designed to be compatible with the scale of the proposed development and commensurate with potential resource impacts.

Comment: The Minerals LUD gives priority to mineral development over other resources:

- "It fails to recognize minerals as non-renewable resources whose extraction should be made secondary to protection of fish, wildlife and water quality."
- it is a giveaway to mining interests (SEACC), a "giant step backward with regard to environmental conservation." (SC-J)
- it goes against multiple-use concepts and resource values. (AFJ)
- recreation, residential and fish & wildlife values and uses would be subordinate. (AFJ)
- "Why should the existence of a viable mineral claim immediately outweigh all other land uses, no matter how valuable? This is Single Use Management taken to extremes."

Response: The standards and guidelines of the minerals land use designation (Forest Plan, Chapter 3, Minerals) provide the framework for the site-specific environmental analysis of potential effects of mineral activity on other resources. These guidelines are designed to assure the long term productivity of the land. Short term effects associated with the minerals activity will be mitigated by measures consistent with the scale of the development and the potential resource impacts.

The Minerals LUD is not "single-use" management any more so than are the Research Natural Area or Old-growth Habitat LUD's. It is simply a LUD that is development-oriented for the known existence of a potential commodity. The Minerals land use designation does not apply Forest-wide. It only applies to areas with known mineral potential, and would only apply if and when a plan of operations to develop such potential is submitted.

Even if all allocated mineral acres were developed, the Minerals LUD would apply to less than two percent of the Forest outside of Wilderness/Monument areas. The acreage of all known mineral reserves on the Tongass accounts for only 3.6 percent of the total acreage of the Forest.

Comment: The Minerals LUD gives too much priority to economic considerations:

- it would allow economic considerations to dominate the management of minerals (SCLD, SEACC)
- don't relax environmental standards for economic reasons: "If a mineral deposit is not valuable enough to be developed following strict environmental standards then it should be left in the ground."
- "If there is to be no other mechanism to control where mining takes place, at least there should be assurances that they [sic] cannot proceed unless they can pay the cost of protecting the environment."
- "the social, environmental and economic costs of mining should be borne by the industry extracting the minerals rather than by the public." (AFJ)

Response: The standards and guidelines of the Minerals land use designation were modified between DEIS and SDEIS to adjust the language that was causing interpretations concluding that economics dominated the direction for project consideration. The Minerals LUD encourages prospecting, exploration and development in an environmentally sensitive manner. It states: "the economic practicality of the protection measures must be considered . . . include mitigation measures that are compatible with the scale of the proposed development and commensurate with potential resource impacts" ("Minerals," Forest Plan Chapter 3).

Comment: If the Minerals LUD is not dropped, it must be revised to give strong protection to recreation resources and developments. All recognized trails should be excluded from the prescription, and all recreation sites and uses must be protected from visual impacts, etc. (TAKU)

Response: The Forest Plan includes an appendix of all priority use areas and travel routes that will be managed as viewpoints for scenic quality consistent with the adopted visual quality objectives by LUD.

High-use recreation areas were considered in determining where the Minerals LUD should be applied for the Forest Plan. For example, for the Juneau Goldbelt known mineral reserve, the layout of the Minerals LUD was adjusted to exclude areas that receive high recreation use, such as hiking trails and developed sites. The Minerals LUD includes specific guidelines for the recreation resource.

Comment: If the Minerals prescription (or LUD) is retained, it should not be applied to the Juneau area: the potential conflicts with, and adverse effects to, recreation and tourism are too great. (AFJ, JAS, JSP, SC-J, SEACC, TAKU - see site-specific comments for a more-detailed discussion.)

Response: See previous response. In the Forest Plan, the known mineral reserve for the Juneau Goldbelt is shown in the Minerals LUD only in those locations where high-use recreation does not occur.

Comment: Although an excellent idea in concept and for many areas of the Tongass, the Minerals LUD is unsuitable for the Juneau area. Instead, a new joint Recreation/Minerals LUD should be studied. This should be done outside the TLMP process, "with intense public involvement." The objective would be to apply detailed zoning to the area, with mining limited to places where recreation values are "not too high."

Response: We believe the concept of "detailed zoning" for the area of known mineral reserve in the Juneau Goldbelt tract is already displayed in the Forest Plan. Those areas that receive high recreation use were excluded from the Minerals LUD. In those areas, either the Scenic Viewshed or Semi-Primitive Recreation LUDs are applied to recognize the known high recreation use. The additional site-specific mitigation measures that would be employed when a minerals plan of operations is submitted would be determined at that time. Planning is a two stage process: the "detailed zoning" stage is done at the programmatic level (TLMP Revision); site-specific issues regarding any proposed action such as minerals extraction would undergo a second analysis, including public involvement, if and when a plan of operations is submitted.

Comment: The Minerals LUD should not be applied in Wilderness or Legislated LUD II areas; this is not consistent with the Congressional intent in designating these areas. (SEACC) (1996) The minerals prescription should be applied to the LUD II lands; there's no reason for not doing that.

Response: The Minerals LUD has been removed from any known mineral tract that occurs in either a Wilderness or Legislated LUD II area.

Comment: (1996) Mining can be in conflict with tourism. The mining development plan of Alternative 1 needs to be adopted.

Response: None of the alternatives have a "mining development plan" as such, and none would preclude mineral entry where it is otherwise not prohibited (such as within Wilderness except for valid existing rights). Alternative 1, as Alternative 9, did not allocate the minerals LUD to selected mineral activity tracts as did the other alternatives.

Comment: All 52 minerals tracts (all "high-potential" areas) should be assigned the minerals prescription. (AMA, AMC, STATE) Although development of most is unlikely, economics and conditions change and the opportunity should be there for each one.

Response: We agree that development of most of the 52 known mineral reserves is not likely. The Bureau of Mines evaluated in detail the economics for each of the 52 tracts of known mineral reserves. The results of that effort indicated that only 10 of the known tracts were likely to have a net present worth above zero at even a zero percent discount rate (as of 1990). Two other tracts (Niblack and Dolomi) have critical minerals (such as lead, platinum, zinc, copper, and tungsten), and there has been indication of an interest in further exploration in the near future.

Should conditions change which is certainly possible, as some respondents noted, there is every opportunity to reconsider resource values for any given area outside of legislated areas on the Forest which could lead to an amendment to the Plan and appropriate changes in land use designations.

Comment: The Minerals LUD (or other Forest Plan direction) should allow for the "orderly development" of mineral resources no matter where they are (including currently undiscovered resources). Each prescription should have a mechanism for transferring an area to the Minerals Rx (or LUD) when a plan of operations is approved. (AMA, AMC)

Response: Discovered and undiscovered mineral resources were considered in determination of land use designations by alternative. In many parts of the Forest, given the resource values and likely costs of exploration and development to extract minerals, we do not believe that the Minerals LUD is appropriate. Should better resource information become available in the future or conditions or resource information change, resource values can be reconsidered and reanalyzed. If necessary, a Forest Plan amendment with LUD changes could be proposed.

Comment: The Minerals LUD should have an objective to "allow" rather than "facilitate" development. (EPA)

Response: By law, claimants with valid existing rights in forest lands withdrawn from mineral entry, and all forest land open to mineral entry, are "allowed" right of ingress and egress for exploration, development and extraction of locatable and leasable minerals and energy sources. We believe there are some lands (although a very small percent of the total Forest acreage) where known mineral reserve exploration and

development should be encouraged and "facilitated". The term "facilitated" is consistent with Forest Service national policy statements concerning management of the minerals resource and therefore is consistent for the Minerals LUD. An objective of "allow" development is consistent with most other land use designations (exceptions include withdrawn Wilderness, National Monument, Research Natural Areas, and Wild Rivers).

Comment: Best Management Practices designed to minimize the negative effects of mining should be specified for each LUD. (SCLD) (1996) Minerals should be extracted in accordance with best management practices.

Response: All the Best Management Practices (BMPs) are listed in Appendix C of the Forest Plan. Direction for the use of BMPs is included in Chapter 10 of the Forest Service Soil and Water Conservation Handbook (FSH 2509.22). Where applicable, BMPs and their management direction are incorporated by reference into the Forest-wide standards and guidelines. Site-specific environmental analysis will be performed when plans of operations are submitted. At that time, the appropriate BMPs for the particular site-specific project will be determined.

Comment: There are no alternatives for managing minerals. All alternatives use the Minerals LUD. (SCLD)

Response: The “alternative” for managing the minerals resource on the >98 percent of the Forest to which the Minerals LUD does not apply is the direction for whatever LUD is assigned to a particular area. Also, Alternatives 1 and 9 do not have any acres assigned to the Minerals LUD.

Comment: Rather than a pre-applied prescription, mining project decisions should be made on a case-by-case basis, with the Forest Service "reserving as much negotiating power as possible to insure that mining companies consider the concerns of other users of the area."

Response: Mining project decisions will be based on site-specific environmental analysis in compliance with the National Environmental Policy Act and other applicable laws. The Forest Service planning process is a two step process. The programmatic plan establishes land use designations (or zoning ordinances) to establish only what may reasonably be allowed to occur on that portion of the landscape. At the project level, the potential site-specific effects of exploration/development/extraction on other resources are analyzed, and appropriate mitigation measures developed consistent with the scale of the project and the potential effects. This part of the planning process also includes public involvement.

Effects and Analysis

Comment: There has only been a cursory attempt to estimate the plan's effects on [economic] mineral development: jobs from mining are held constant under all alternatives. It is not clear why every alternative projects a constant number of jobs and income for minerals employment. (USGS) With different acreages assigned the Minerals LUD in different alternatives, why don't jobs vary accordingly? This implies that the LUD will have no effect on mining and is therefore unnecessary.

Response: The Minerals consequences section of Chapter 3 of the EIS also displays, by alternative, for both known mineral reserves and undiscovered mineral reserves, the percent acreage on the Forest that is 1) withdrawn from mineral entry, 2) recommended for withdrawal, 3) open to mineral entry where operating costs could be expected to be high, and 4) open to mineral entry where average operating costs could be expected.

Minerals jobs are held constant across all alternatives for several reasons. Under any alternative, the Forest Plan does not propose any specific mineral development, nor do the alternatives differ appreciably in areas

proposed for withdrawal from mineral entry. As noted above and discussed in Chapter 3, the differences in effects relate primarily to possible differences in the cost of mineral development, but not in whether or not such development may or may not occur. The Forest Service does not have the final authority to allow or disallow mineral development. For all these reasons, it is not possible to identify potential or estimated affects on minerals employment from the alternatives.

Comment: A cumulative effects analysis of mining is needed, one that addresses ongoing developments, planned and likely developments, and possible additional development under the Minerals LUD. (SEACC) The effects of mining on other resources under different levels of management, or under different alternatives, have not been analyzed. (SCLD) The DEIS doesn't make the public aware of the potential impacts from mining (such as cyanide poisoning of animals).

Response: Addressing ongoing, planned and likely developments is an expression of the likely demand for locatable minerals. That discussion is provided in the Minerals section of Chapter 3 of the EIS. The demand discussion uses reported expenditures for exploration activities and U.S. Bureau of Mines economic viability estimates as indicators of likely demand.

Estimating the effects of potential or proposed mineral developments on other resources is not possible since the extent, timing, or actuality of such developments are not known. The Forest Plan does not propose or authorize mineral development or any specific development projects.

Comment: An analysis of the cumulative socio-economic effects of closing areas to mineral exploration and development is needed, so that the economic opportunities foregone are understood. (USDI)

Response: Analysis of the withdrawal of land from mineral entry and the associated opportunity foregone is disclosed in the Minerals section of Chapter 3 of the EIS. This is done for both discovered and undiscovered reserves of locatable minerals.

Comment: The projections of mining employment didn't include secondary jobs: look at the benefits to the Juneau economy that mining employment has brought during the 1987-1990 period. The economic benefits of mining need to be better addressed. (AMC)

Response: The “Mining and Mineral Development” portion of the Regional Economy section of Chapter 3 of the EIS discloses indirect employment resulting from direct mineral resource jobs.

Comment: The DEIS lacks a discussion of the importance of minerals to the national interest (strategic minerals, national defense, etc.). Minerals has been left out of the process as a major resource (referring to benchmark analysis).

Response: The recognition and disclosure of the importance of strategic and critical minerals to the United States is discussed in the affected environment portion of the Minerals section of Chapter 3 of the EIS.

Comment: A fuller discussion of undiscovered mineral resources is needed (they have provided considerable info on these resources). (USGS-1990) Address undiscovered mineral resources (comments on 1990 DEIS). (AMA, AMC, RDC)

Response: The undiscovered mineral resource information (Brew, 1990) has been included in the Minerals section of Chapter 3 of the EIS.

Comment: (1996) There is no discussion of the potential for mining of limestone in the karst topography.

Response: Limestone is mentioned in the discussion of locatable minerals. None of the identified mineral activity tracts identify or include limestone as a valuable commodity, and we know of no current interest in mining limestone in the Tongass.

Comment: The Minerals LUD allocations were inappropriately based purely on economic criteria (mineral values), without consideration for the other resources of the particular area. (SEACC) The use of "high development potential" of mineral activity tracts is a short-term, not a long-term, indicator of development possibility. (USGS)

Response: Economics was only one consideration in application of the Minerals LUD. The Minerals LUD was not applied to any of the known mineral deposits in Alternative 1 where the theme was a non-market emphasis. The Juneau Goldbelt is a good example, in the other alternatives, of where the Minerals LUD was not applied to the entire area of known mineral deposit. Because of high recreation values, the Minerals LUD was excluded from specific areas within the known Juneau Goldbelt deposit.

Use of the term "high development potential" was borrowed from the U.S. Bureau of Mines (Coldwell, 1990). The term is an indicator of potential for further exploration with intent to extract the known deposit which is based primarily on economics and the type of mineral known to be present (e.g. critical or strategic minerals). Since the TLMP Revision is a 10-15 year plan, potential for development of known mineral deposits will be reconsidered in cooperation with U.S. Bureau of Mines every 10-15 years. In addition, we will continue to cooperate with the U.S. Geological Survey in continuing the modeling effort to recognize undiscovered mineral potential.

Comment: The method used for minerals valuation needs further discussion and explanation. For instance, how can the Quartz Hill deposit be shown to be so valuable if Borax recently announced the area is not economic to mine at this time? (SEACC) "Considering the cost to society of the destruction and pollution due to mining [Super Fund mining cleanup costs are one example cited], the non-destructive uses of Forest Service land provide the greatest long term economic benefit." (SC-J)

Response: The Minerals section of Chapter 3 of the EIS discusses that the 52 identified mineral deposits are those which contain "critical and strategic minerals and those deposits likely to be developed in the next 10 to 15 years." Both critical and strategic (of which Molybdenum is one, and is also the major mineral value at Quartz Hill) as well as likelihood of development (economics) were methods used in U.S. Bureau of Mines identifying the known mineral deposits on the Forest.

Comment: The advantages of the Tongass for mining (aside from possessing a great mineral resource) should be identified: the closeness of the resources to tidewater (transportation), rapid revegetation of disturbed areas, and the possibilities (although currently not allowed) of the marine disposal of tailings. (AMA) "The plan needs to recognize the ephemeral nature of mining of individual deposits and the unique ability of the wilderness of Southeast to reclaim its own."

Response: The unique fjord-estuarine systems of Southeast Alaska not found in any other U.S. waters, appear to have characteristics which suit them as inert and stable repositories for mine tailings disposal. This fact is identified in the EIS in Chapter 3, Minerals section.

Comment: The analysis should include a comparison of importing minerals vs. developing them here. (AMA)

Response: The Forest Service cooperates with the U.S. Bureau of Mines and U.S. Geological Survey in analyzing the value of discovered and undiscovered mineral deposits. The U.S. Bureau of Mines model

considers location and number of existing claims, mineral occurrences, mineral terrains, mineral deposit models, regional and deposit geology, market price projections, mining models to extract minerals, pre-tax present net value, after-tax present net value, sensitivity to increased metal prices, critical or strategic mineral designation, and current commodity interest by the mining industry (Coldwell, 1990).

Access and Exploration

Comment: Mineral exploration and development is expensive, and restrictions on access make it more so. Don't put any more lands (the lands outside of Congressionally designated areas) into overly-restrictive LUD's (one's that restrict access, road development, etc.). (AFA, AMA, AMC, PLF, STATE) Many mineralized areas on the Tongass may be undiscovered due to heavy timber cover; new techniques are being developed, and geologic knowledge is improving: therefore, don't put any more areas into legislatively restricted designations. Withdraw no more areas from mineral development, and consider declassifying Wilderness with high mineral potential.

Response: Mineral potential and access opportunities were two criteria used in allocating lands to the various LUD's in the alternatives. In the Forest Plan the more-restrictive designations (such as Remote Recreation) were typically not applied to acres with a known likelihood of future development. The Minerals, and Transportation and Utilities LUD's were also used to help ensure reasonable and economic access to development. Reclassifying Wilderness is outside the scope of the Forest Plan.

Comment: The LUD prescriptions and Forest-wide standards and guidelines contain too many requirements that will unnecessarily restrict mining access and development. Examples are restrictions on helicopter use, the need for plans of operations for minimum impact exploration (often exploration has the same impact as recreation uses or less), and the cultural resource requirements.

Response: A plan of operations is required for locatable, leasable and salable minerals in accordance with 36 CFR 228 and Forest Service manual direction (FSM 2810, 2820, and 2850). The TLMP Revision merely displays current direction. Changing current agency direction is outside the scope of the Forest Plan. It is Forest Service policy to encourage the exploration, development and extraction of locatable and leasable minerals and energy resources, to assure the right of ingress and egress, and to permit reasonable access to the mining claim itself.

Mitigation measures are called for commensurate with the potential for impacts on other resources. An inventory and survey of potential cultural resources is required in accordance with Sections 106 and 110 of the National Historic Preservation Act of 1966 for any proposed ground disturbing activity. Special protection is required for certain species of wildlife like the Bald Eagle. Consideration of objectives for other species of wildlife and commensurate mitigation measures would be based on the objectives of the individual land use designation that the mineral deposit falls within.

Comment: (1996) Reasonable terms and timeliness in processing mining permits need to be addressed in the Tongass Forest Plan.

Response: The Forest-wide standards and guidelines for Minerals and Geology give guidelines for the general types of terms that would be required. As stated there: "A plan of operations will receive prompt evaluation and action within the time frames established in 36 CFR 228."

Comment: The subsurface estate of the Haida Traditional Use Sites should be withdrawn from mineral entry. (HC)

Response: Withdrawal from mineral entry is not an issue or decision that will be made with the Record of Decision on the TLMP Revision. Any specific withdrawal from mineral entry for any given piece of land on the National Forest would only be entertained through some future decision that would undergo further environmental analysis.

Comment: The EIS needs to clarify the roles played by BLM and Congress for land use designations such as research natural areas and experimental forests as it regards mineral withdrawal and how it differs from other federal statutes (i.e. Wilderness and National Parks). (NWMA)

Response: We agree; text has been added to the Minerals affected environment section of Chapter 3 to more thoroughly discuss existing areas withdrawn from mineral entry. Wilderness and National Monuments were withdrawn from mineral entry, except for valid existing rights, when they were legislated. Separate federal statutes exist for the three existing enacted municipal watersheds at Sitka, Petersburg, and Ketchikan which withdrew these three areas from mineral entry except for valid existing prior rights. Public land laws also exist for withdrawal of mineral entry on two recreation Areas, Mendenhall and Ward Lake, three existing Research Natural Areas, Old Tom Creek, Cape Fanshaw and Red River, and the Maybeso and part of the Young Bay Experimental Forests.

Comment: Minerals are addressed in the Natural Setting and Intensive Development LUD Groups of the Supplement to the DEIS Summary page 10; they should also be discussed in the Moderate Development LUD Group with wording similar to the Intensive Development section. (NWMA)

Response: We disagree. The Minerals LUD has a theme and commensurate standards and guidelines to encourage mineral exploration and development in a manner that should lead to lower operating costs for the miner than areas that do not have the Minerals LUD applied and have a more restrictive land use designation. Therefore, because of the theme and associated standards and guidelines of the Minerals LUD, it is an intensive development land use designation that would likely often visually dominate the landscape.

Comment: Several Constitutional issues may be raised by the assertions made on page 3-138 of the Supplement to the DEIS as it regards withdrawal of mineral entry from land use designations other than previously legislated by Congress. (NWMA)

Response: Corrections have been made to the cited discussion as it relates to withdrawal from mineral entry. The existing Wilderness and National Monuments are withdrawn from mineral entry. In addition, three existing research natural areas, three enacted municipal watersheds, and two recreation areas (Mendenhall on Juneau Ranger District and Ward Lake on Ketchikan Ranger District), and the Maybeso and part of the Young Bay Experimental Forests, have been previously withdrawn from mineral entry by federal statutes.

Comment: The discussion on page 3-140 of the Supplement to the DEIS can be construed to imply that an amendment to the Plan is needed before exploration or development could occur on lands open to mineral entry but that do not have the Minerals LUD applied. (NWMA)

Response: We agree that improvements can be made to the text. Changes have been made accordingly in the FEIS.

Comment: The Preferred Alternative at the Lime Point minerals tract is more restrictive than those proposed in non-development market emphasis alternatives. (SCLD)

Response: The Revised Plan recommends this area be managed for semi-primitive recreation because there's relatively little timber, the area is surrounded by private land, and the public land is difficult to access and would be at very high cost. The semi-primitive designation maintains the option for road development should a mining plan of operations be submitted.

Comment: The Revised Plan has a less restrictive management option in the Helm Bay mineral tract than the "development-oriented alternatives" (SCLD).

Response: The Revised Plan has prescriptions similar to the 1979 Plan (Alternative 9). It appears the pie chart on page J-7 of the SDEIS was in error. The other "development-oriented" alternative (7) had as one of its objectives that all recreation places within the home range of communities would be assigned non-development land use designations; such was the case for the Helm Bay minerals tract area in Alternative 7.

Comment: The Forest Service should at least show which mineral deposits are positive at both 0 percent and 4 percent discount rates if they are to be used to judge probability of development (SCLD).

Response: The text in the Minerals section of Chapter 3 has been updated to show which mineral tracts are positive at both 0 and 4 percent discount rates.

Monitoring

Comment: The monitoring costs are too low. (SEACC) The annual cost of determining the effectiveness of wildlife enhancement projects is not nearly adequate. (WLS) Budget more for monitoring the effects on fish and wildlife habitat. (1996) The Forest Service should provide adequate funding, and other necessary sources of support, to adequately perform the monitoring and feedback prescriptions.

Response: The Monitoring costs shown in the final version of the Monitoring Plan have been evaluated for both reasonableness and adequacy by the Administrative Areas, and are felt to be sufficient to accomplish the monitoring objectives. The total annual Forest Plan monitoring budget is nearly $1,000,000. It should also be noted that, as described on page 6-2 and 6-3 of the Monitoring Plan, the requirements of the Forest Plan monitoring plan are not comprehensive; and that all the monitoring required on the Forest for projects is not shown. Also not shown are non-Forest Service projects, such as minerals development. The results of monitoring for individual projects may be used for Forest Plan monitoring, however. Therefore, all the monitoring costs on the Forest are not incorporated in this monitoring plan, nor would the costs specifically for monitoring the effectiveness of all wildlife enhancement projects or other fish and wildlife habitat conditions be included in these costs. Only those costs associated with gathering the information for the programmatic level of monitoring are shown.

Comment: Include past information when monitoring the effects of timber harvest on other uses. (SSAB)

Response: Past information on the effects of timber harvest on other uses of the Forest have been evaluated by resource in the FEIS. The monitoring plan directs the evaluation of the effects of future timber harvest on other uses of the Forest to determine whether activities are implemented as prescribed, and whether the activities had the effects on other resources as predicted.

Comment: Effectiveness and validation monitoring of road construction in more difficult terrain needs to be increased over what has been done in the past. (EPA)

Response: The monitoring plan includes large increases in effectiveness monitoring over that required by the 1979 Tongass Land Management Plan, as amended. Several monitoring items consider aspects of road construction in difficult terrain, including: Soils (effectiveness of Forest-wide standards and guidelines in maintaining soil stability); Water (effectiveness of new BMP's in protecting State-designated beneficial uses of water; and Transportation (effectiveness of the standards and guidelines for forest development roads and LTF's in limiting the environmental effects to anticipated levels).

Comment: The monitoring plan needs to address the lack of baseline data, and a list made of priority watersheds with milestone dates. The monitoring plan should include:

- types of surveys
- location and frequency of sampling
- parameters to be monitored
- indicator species
- budget
- procedures for use of data and results, and
- making data available to interested parties. (EPA)

Response: Baseline data, if needed for monitoring, is included as part of each of the monitoring items. Baseline data collected because it's "nice to know" or which should be available for the next plan revision, is an "Information Need." The Forest's Information Needs are listed in Appendix B of the Forest Plan.

Priority watersheds, assumed to be those chosen for monitoring, have not yet been selected. As suggested in another comment by the EPA (see 3 comments later), the 20 percent of projects sampled (pages 6-30 and 6-64) should include those stream segments identified as impaired by the Alaska Nonpoint Source Control Strategy and Water Quality Assessment.

The monitoring plan describes the general nature of the monitoring proposed for evaluating the implementation and effectiveness of direction in the Forest Plan. Within each monitoring item, type of surveys, frequency of sampling, parameters to be monitored, indicators of effectiveness, and budgets are generally identified.

An annual monitoring report (see pages 6-1 to 6-3 of the Forest Plan) is required. It will make the results of monitoring available to the public. Data and results which are used in the formulation of the annual monitoring report are in most cases (an exception is for cultural resources) available to the general public, agencies, or the scientific community.

Comment: A feedback mechanism needs to be added and discussed, explaining how standards and guidelines, best management practices, operating procedures, monitoring intensity and timber sale administration are adjusted when monitoring indicates a need. (EPA)

Response: The feedback mechanism for best management practices is described in Chapter 10 (Water Quality Management for National Forest System Lands in Alaska) of the Forest Service Handbook FSH 2509.22, Region 10 Amendment 2509.22-91-1, effective February 26, 1991. This Chapter describes the monitoring process in section 11.6. Monitoring of best management practices and other standards and guidelines can result in a need for corrective action in implementing the Forest Plan. Possible actions are listed on page 6-3 of the Monitoring Plan.

Comment: (1996) The Monitoring and Evaluation Plan in Chapter 6 should be strengthened to improve its effectiveness in 1) determining the degree to which the management direction presented in the plan is

implemented on the ground, 2) determining the effectiveness of the management strategy in achieving the desired/anticipated results, and 3) identifying necessary corrective actions when elements of the Plan are shown to be ineffective or in need of improvement.

Response: Numbers 1) and 2) in the comment refer to implementation and effectiveness monitoring. Most of the monitoring and evaluation items are designed to accomplish one of these types of monitoring. The Plan includes eleven implementation questions and six dealing with effectiveness. Page 6-3 lists the kinds of corrective actions that may be taken.

Comment: Clarify if effectiveness monitoring is only pursued if implementation monitoring is accomplished. (EPA)

Response: It is normally the case that effectiveness monitoring would proceed only if the related implementation question has been answered in the affirmative. However, this would not always be the case, and some “effectiveness” monitoring items do not have a corresponding implementation question.

Comment: The "20 percent of projects sampled" (pages 6-30 and 6-64) should include those stream segments identified as impaired by the Alaska Nonpoint Source Control Strategy and Water Quality Assessment. (EPA)

Response: This emphasis has not been added to these monitoring items. There may be no relationship between project locations and stream segments identified as “impaired”.

Comment: The monitoring question on page 6-36 should be refocused on whether the models accurately predict changes in habitat quality or capability, rather than changes in population trends. (EPA)

Response: 36 CFR 219.19 (a)(6) requires population trends to be monitored. This section says: "Population trends of the management indicator species will be monitored and relationships to habitat changes determined. This monitoring will be done in cooperation with State fish and wildlife agencies, to the extent practicable."

Comment: The NFMA regulations (36 CFR 219.11(d)) and the minerals regulations (36 CFR 228.7(a)) have more stringent requirements for monitoring the effects of practices, and for periodic inspections, than are shown in the monitoring plan for minerals. (SEACC)

Response: 36 CFR 219.11(d) says: "The forest plan shall contain the following: ... (d) monitoring and evaluation requirements that will provide a basis for a periodic determination and evaluation of the effects of management practices." The monitoring plan was designed specifically to respond to this section of the CFR's and addresses all the major forest planning issues. As described on page 6-2 and 6-3 of the Monitoring Plan in the revised Forest Plan, the requirements of the Forest Plan monitoring plan are not comprehensive; all the monitoring required on the Forest for all projects is not shown. This includes non-Forest Service projects such as minerals development. The results of monitoring for individual projects may be used for Forest Plan monitoring, however.

36 CFR 228.7(a)) says: "Forest Officers shall periodically inspect operations to determine if the operator is complying with the regulations in this part and an approved plan of operations." This part refers to the Minerals Regulations in the manual, and not specifically to any needs for Forest Plan monitoring. However, a standard and guideline has been added in the Minerals and Geology Forest-wide Standards and Guidelines to emphasize this CFR. This standard and guideline says, "Periodically inspect minerals activities to determine if the operator is complying with the regulations of 36 CFR 228 and the approved plan of operations."

Comment: A monitoring item to assure that proportionality (under TTRA) is being met is needed. (SEACC)

Response: The requirements for proportional timber harvest under TTRA, including monitoring, are covered in Regional direction (FSH 2409.18).

Comment: The FEIS needs to display an improved program to monitor wildlife populations effects resulting from projects. Consideration must be given to: the sufficiency of baseline data, the determination of population levels of management indicator species, cumulative impacts, and volume class proportionality. (STATE)

Response: The comment refers specifically to monitoring associated with projects. As described on page 6-2 and 6-3 of Monitoring Plan, the requirements of the Forest Plan monitoring plan are not comprehensive; all the monitoring required on the Forest for all projects is not shown. At the individual project level, consideration is given to the sufficiency of baseline data, a best estimation of population levels of management indicator species for that individual project area, anticipated cumulative impacts to wildlife and other resources, and a determination of proportionality where appropriate.

Comment: (1996) A research and monitoring program should be planned, initiated, funded, and pursued using reserve blocks to better understand the Tongass old-growth forest ecosystem and the wildlife populations that depend on them as part of the adaptive management strategy.

Response: Appendix B of the Forest Plan identifies the following as an information need: Continue to obtain information on the effectiveness of old growth stands of various sizes to provide for wildlife habitat. Questions to ask include:

a) What species are associated with various stand sizes?
b) How do you measure and assess the effects of fragmentation?
c) What is the function and value of edge between old growth stands and younger successional stages?

However, such a study was not among those selected as highest priority for separate funding at this time.

Comment: The planning regulations call for several monitoring items, or estimates and analysis that would require monitoring, that however are not being monitored under the monitoring plan. These are:

1. how well objectives (for wildlife habitat and populations) are being met
2. estimated wildlife outputs
3. effects of prescriptions on wildlife habitats and populations
4. costs of implementing wildlife habitat management practices. (WLS)

Response: Items 1, 2, and 3 are generally covered under the wildlife monitoring included in the Monitoring Plan. Costs of implementing wildlife habitat management practices, for habitat improvement work, are covered in the “Costs and Outputs” monitoring item. Other habitat management practices for wildlife, such as those costs associated with the preparation of timber for harvest (for example marking wildlife trees), are included in the costs of the function which is prescribing a practice (e.g. for timber harvest, the timber function pays for any necessary marking of trees). These costs are also included in the monitoring item.

Comment: The descriptions of precision and reliability are too general and are mostly meaningless. (WLS)

Response: We have defined these terms on page 6-4 of the Monitoring Plan. These definitions have been revised from earlier versions. This material now reads:

> Descriptions of the expected precision and reliability of the monitoring process will be addressed in the monitoring and evaluation annual reports. For the purposes of this monitoring and evaluation plan, precision refers to the closeness of repeated measurements and reliability refers to the nearness of a measurement to the actual variable being measured.

Comment: For Threatened, Endangered and Sensitive Species: How will it be determined if the standards and guidelines have been successful or effective "in maintaining existing populations" of trumpeter swans, ospreys and Peale's peregrine falcons? (WLS)

Response: The Threatened, Endangered and Sensitive Species monitoring question now reads: “Are current management practices consistent with current information regarding sensitive taxa ...?” This will be determined through review of current data, consultations with other agencies, and specific studies.

Comment: The only Wildlife Habitat standards and guidelines to be monitored are those for large deer habitat blocks, bald eagle nest buffers, garbage dump closure, and facilities and activities associated with marine mammal haulouts, seabird rookeries and waterfowl habitats. (WLS)

Response: Monitoring of specific wildlife standards and guidelines is no longer included. These have been replaced with monitoring of population trends for each management indicator species.

Comment: For the monitoring question related to fish and riparian guidelines on page 6-31, the likelihood of error and risk should be "high"; the sample size and estimated cost of monitoring are underestimated. (NMFS)

Response: The Monitoring Plan no longer includes estimates of error or risk. As to the sample size and estimated cost of monitoring, as described on page 6-2 and 6-3 of the Monitoring Plan, the requirements of the Forest Plan monitoring plan are not comprehensive; all the monitoring required on the Forest for all projects is not shown. The results of monitoring for individual projects may be used for Forest Plan monitoring, however. The amount of monitoring shown is considered as a minimum to meet the monitoring requirements of the Forest Plan.

Comment: (1996) On page 6-29 (Wildlife Habitat. 2.d.(7)) the U.S. Fish and Wildlife Service no longer maintains a Candidate Species Status list. The list maintained by The Nature Conservancy and the Alaska Natural Heritage Program should be considered.

Response: This item has been corrected to remove reference to Candidate species. The lists mentioned are important input to periodic updates to the Alaska Region’s sensitive species list.

Comment: (1996) It is not clear how the proposed [minerals] monitoring activity demonstrates that mineral development is consistent with stated goals.

Response: A specific minerals monitoring item is no longer included in the Monitoring Plan.

Planning Process

Analysis and Effects

Comment: Reinstate the use of VCUs (value comparison units) for analysis of effects. Effects need to be analyzed using smaller land units than in the DEIS or Supplement. (SEA, SEACC) Impacts should be analyzed at a VCU-type level. (SCS) Watershed-level units should be used for the analysis.

Response: The analysis of anticipated effects resulting from forest plan alternatives was done on a scale that ranged from the total forest down to the 141 management areas (from the 1979 Plan) and 190 Wildlife Analysis Areas (WAA's) delineated by the State Department of Fish and Game, depending on the resource in question, the accuracy of the data, and the usefulness of such a breakdown. (A description of the different geographic divisions used is given on pages 3-4 and 3-5 of the FEIS.) Going to a watershed or VCU level of analysis would not have been meaningful given the programmatic nature of the alternatives, the limitations of the data, and the lack of site-specific information for some of the resources. Even at the management area or WAA level, projections of effects over several decades can only be rough approximations since site-specific ground disturbing activities are not a decision made in this programmatic plan. They are useful in comparing alternatives, but must be used with caution when evaluating effects on specific resources in specific areas. Most project-level analysis is done at the watershed or smaller level, with site-specific information and the knowledge of the actual magnitude and location of proposed activities.

Comment: The two-step planning process will fail unless site-specific and cumulative effects analysis is done. (TCS, WLS) (See also Fish and Timber sections.) The cumulative impacts of logging need to be analyzed by community and watershed. (SCS) Under the two-step planning process, the forest plan is the appropriate place to evaluate the overall (cumulative) effects of timber harvest over the entire forest and a timber rotation; however, planned timber harvests must be depicted in more detail, and the short- and long-term effects on fish and wildlife and their users reported more clearly. (SEACC, STATE)

Response: We agree with the first comment in concept. That is why a separate site-specific environmental analysis is done for each project (the second step in the two step planning process). The cumulative effects of the project and any past, present or reasonably foreseeable future projects (in the same area) are also analyzed for the project. The Forest Plan does not authorize specific projects, and therefore, does not provide or need to provide the site-specific information for such projects; thus, the cumulative effects analysis focuses on the estimated effects of the alternatives as a whole. Where effects can be estimated by smaller land units, such as timber harvest by Wildlife Analysis Area (effects on deer), such information is used. The cumulative effects are primarily based on the assumption that the maximum amount of activity allowed under an alternative, or for a particular area, will in fact occur, and these amounts of activities (timber harvesting, road building) are accumulated over time to estimate long-term cumulative effects. Cumulative effects on soils, water, wildlife habitat and species, subsistence opportunities, fish, visual quality, biological diversity and recreation have been analyzed in this manner. Some of these effects have also been displayed by community. Actual determination of alternative ways of implementing projects is appropriately left to the second step in the planning process.

Comment: The cumulative effects analysis is weak, inadequate or absent. (NMFS, SCS, SEACC, TCS, WLD, WLS) Some of the inadequacies are [see also specific comments by resource]:

- detail on proposed, site-specific actions is lacking
- there's no 10-year harvest schedule (1990), or the actual locations of proposed harvest and road building aren't displayed
- detail on activities in particular areas (such as key subsistence or wildlife areas) is lacking
- the effects of past, present and anticipated future actions on adjacent private lands aren't displayed or taken into account (especially logging on Native corporation lands).

Response: For a response to the first three items, see previous response. Past, present or future actions on adjacent private lands have not been consistently documented or reported, and are not known in sufficient detail to include quantitatively in the effects analysis. Most Forest-wide analyses, for instance concerning wildlife habitat, assume no contribution from private lands.

Comment: The cumulative effects of the 3.4 billion board feet of logging on Native and State lands since 1983 are not displayed on any maps, and are only generally analyzed related to wildlife effects. More analysis, including how much of the different volume classes has been logged, is needed. (GP) (1996) One of the problems which the alternatives fail to address is the cumulative effects of the surrounding lands on the National Forest. This is critical on Prince of Wales.

Response: Please see previous response. Data on timber harvest locations, or amounts by volume class, are generally not available for most areas. Forest-wide standards and guidelines are included in the Forest Plan to direct that cumulative effects of logging and other activities on private or State lands in conjunction with individual projects are evaluated if applicable during site-specific environmental analysis for those projects.

Comment: The Supplement fails to meet the NEPA "best information" requirement by: not establishing that missing information is impossible or exorbitantly expensive to obtain; not identifying the cost of proceeding without more or better information; and not disclosing how the incomplete or unavailable information has affected its decision. (Examples are on pages 3-25 and 3-214.) (SEACC)

Response: We believe the commenter is misrepresenting what the implementing regulations (40 CFR 1502.22) state. The requirement (40 CFR 1502.22) overall states that when "there is incomplete or unavailable information, the agency shall always make clear that such information is lacking." This we have done, in the sections called "Methodology and Scientific Accuracy" which appear by resource section throughout Chapter 3 of the EIS, in other portions of Chapter 3, and in the "Information Needs" appendix to the Forest Plan (including the pages referenced in the comment). The NEPA requirement goes on to say that if the incomplete information "is essential to a reasoned choice among alternatives" then considerations such as the cost of obtaining it apply. While we are always seeking new and better information, and attempting to improve our techniques for evaluating it, we don't know of any missing information that could truly be termed "essential" to a reasoned decision about the alternatives. "Better information" may be useful, however, we believe that the Regional Forester has the "essential" information needed to make a reasoned choice.

Comment: (1996) The Forest Service should use the best available information in a balanced scientifically valid decision-making process. The Draft Revision shows major inadequacies in natural resource baseline and impact information. It also suffers from a disconnect between use of best available biological information and planning decisions. Even when reliable information has been provided through interagency efforts, such as activities under the 1994 Memorandum of Understanding between the Forest Service, Alaska Department of Fish and Game, and the Fish and Wildlife Service, this planning process does not discernibly integrate fish and wildlife findings and conclusions into Tongass Forest management decisions in the revised plan. Based on the available literature, the Forest Service has not completed the necessary studies to obtain a complete, overall picture of the Tongass. Better science and more studies are needed (including viability, riparian areas, wildlife).

Response: Please see previous response. The FEIS (as did the Revised Supplement) has included the best and most recent information available in designing alternatives and estimating effects (for example: AFHA; scientific assessments for wolf, goshawk and murrelet; karst and caves assessment and studies; etc.) This was supplemented by analyses by panels of experts when information was incomplete or inconclusive. All this information and more (including that noted in the comment) has been available to the decision maker. The final decision on a Forest Plan is not, however, based on or determined by just one

part of the available information, but must evaluate and balance all the relevant factors. No such decision was made in the Revised Supplement.

Comment: (1996) The Tongass National Forest is using information in its planning process from Washington and Oregon forests. What applies in Oregon and Washington very often does not apply in Southeast Alaska. The science used for the TLMP should be based on studies conducted in Southeast Alaska. Foresters should not extrapolate findings from other areas of the country.

Response: Information and studies from other areas, if applicable to resources within the Tongass, are at times used to supplement on-Forest studies, or to fill gaps where such studies are lacking. However, such legitimate uses are the exception rather than the rule, and generally serve only as a starting point for additional analysis within Southeast Alaska. The fish and wildlife assessments referred to in the previous response are examples of this.

Comment: The Analysis of the Management Situation should have been re-evaluated between DEIS and Supplement to reflect changes, in goals and objectives and in the demand projections, resulting from TTRA. (APC)

Response: The "Analysis of the Management Situation" (AMS) prepared in January 1990 represented the information base we had at that time, and was intended to precede the draft EIS (DEIS). Much of this information was incorporated into the DEIS, and quite a bit of it updated at that time, primarily in the "Affected Environment" portions of Chapter 3. This information was again updated and re-evaluated for the Supplement, and again for the FEIS, including information relevant to TTRA as suggested in the comment. The AMS itself, as a document, simply represented a "point in time," and is considered superseded by the affected environment sections of the environmental impact statements that have followed the AMS.

Comment: The Supplement has failed to make available, or use, monitoring information required to be gathered for implementing the current plan (1979, as amended in 1985-86). This violates NFMA (219.12(k) and NEPA (especially the public disclosure requirements). (SEACC)

Response: A close look at the Current Plan monitoring plan ('85-86 Amendment) shows that it is primarily outputs-oriented, and the information to be collected consists primarily of numerical counts (acres, timber volume, numbers of structures, etc.). Where relevant this type of information has been reported and used throughout Chapter 3 of the EIS (DEIS, Supplement, FEIS), and has been readily available to the public since the Analysis of the Management Situation was published. This information was not on the whole useful in evaluating resource standards and guidelines or the effects of activities (part of the NFMA section cited). The results of other monitoring efforts (see for example the FEIS discussion under "Water") have been reported and used in this context when available. The NFMA requirement cited (219.12(k)) specifies the contents and purposes of a Forest Plan monitoring plan, the primary intent being to monitor implementation of a Plan, using the information collected during monitoring to determine when and if amendments or revisions to that Plan are needed. The '85-86 Amendment to the Current Plan was in part the result of such information, but the Forest Plan revision was the result of a different NFMA requirement, beyond the monitoring process. See the section on "Monitoring" for comments and responses related to the monitoring plan developed for the revised Forest Plan.

Comment: (1996) Various types and degrees of uncertainty are associated with all physical, biological, economic, and sociological disciplines considered in the Tongass National Forest planning effort. Uncertainty related to the various disciplines was recognized in background material for the draft plan, but not appropriately addressed in the decision making process. The FS should explicitly address the risks associated with making choices based on uncertain information. For example, implementation of certain fish and wildlife conservation measures has been deferred until more information is gathered. The risks

(i.e.,. probabilities of all short- and long-term adverse consequences) of that deferral should be evaluated in the effects analysis. In addition, rationale for decisions resulting in resource tradeoffs should be fully documented in the FEIS so that potential impacts and relative risks may be more thoroughly understood. (1996) Several techniques are available for explicitly and consistently addressing uncertainty related to all disciplines, and for weighing the effects of uncertainty in decision-making. Appropriate techniques should be used to reconsider adoption of certain conservation options.

Response: The FEIS incorporates and discusses elements of risk associated with the different Forest Plan alternatives for many resources, including air, biodiversity (old-growth forests), fish, heritage resources, karst and caves, soils, water and wildlife (see FEIS, Chapter 3). The rationale for the final Forest Plan decision is presented in detail in the Record of Decision.

Comment: (1996) Inconsistent treatment of uncertainty factors has precluded implementation of a fresh approach to management of the Tongass National Forest. Moreover, the Supervisors' assurance that future management changes could be effected when the science becomes more certain may serve as a basis for avoiding use of new management policies and tools, rather than implementing them. From a long-term biological and habitat conservation perspective, scientific certainty in most of the nonphysical sciences is almost always the exception rather than the rule.

Response: Please see previous response. We agree with your statement about scientific certainty being an exception in the long-term resource perspective.

Land Use Designations, Standards and Guidelines

Comment: There are too many similar prescriptions (or LUD's), making the plan needlessly confusing and hard to implement. We recommend combining some, especially in the "natural setting" category. (AMA) The number of LUD's should be condensed to a list of those with distinct differences that the public can relate to. (SEACC)

Response: The main reasons for developing the number of different land use designations (LUD's) that are used in the Forest Plan revision were to respond to the public issues, and to provide more specific management direction than was previously available. Rather than making the plan "hard to implement," we believe that the specificity contained in the different LUD's will make it easier for the Forest Service to manage individual areas; will provide more assurance that the original intent in assigning a particular LUD to a particular area to reflect the resources on-the-ground will be carried out; and the interested public will have a much more specific "zoning ordinance" map than they do under the current Plan. We realize that the distinctions between some LUD's are not always apparent to the reader, and in discussing alternatives and environmental consequences, we have often used "LUD groups" rather than individual land use designations to make things easier to understand.

Comment: The Other Areas LUD seems unnecessary. There should be enough information to assign these areas to one of the other LUD's (suggestions made, usually Primitive or Semi-primitive Recreation). Using the Other Areas LUD will make future plans for these areas suspect. (USGS)

Response: The Other Areas LUD is no longer being used.

Comment: (1996) What is the justification for designating LUD II Congressionally designated unroaded areas in areas containing significant Native land allocations?

Response: The legislated LUD II areas were designated by the U.S. Congress as part of the Tongass Timber Reform Act. Whatever justifications may have been used are outside the scope of the planning process.

Comment: (1996) The restrictions and requirements in the proposed "Enacted Municipal Watershed" land Use Designation should be incorporated in the Forest Plan in such a way that the same restrictions and requirements apply to all municipal watersheds on the Tongass, not just the three enacted municipal watersheds.

Response: The final Forest Plan (Alternative 11) expands the use of this LUD to apply to 11 watersheds serving Southeast Alaska's 9 incorporated cities. The word "enacted" has been dropped from the name.

Comment: There is much vague wording in the LUD prescriptions (reference is to the map legends) that appears to allow the Forest Service to "apply whatever standards they deem appropriate." Exact definitions should be used. (NCC)

Response: The descriptions of the land use designations (LUD's) used for the map legends are only intended to give a general idea of management under each one. They are not intended to be, or to provide, direction. The direction for each LUD is in the Forest Plan, and includes the management prescriptions in Chapter 3 and the applicable Forest-wide Standards and Guidelines in Chapter 4. Chapter 1 of the Forest Plan provides an explanation ("Priority of Direction"). There is not space in the map legends to include this kind of "exact direction."

Comment: Many vague or wishy-washy terms are used for the LUD prescriptions and the Forest-wide standards and guidelines. Examples are: "to the maximum extent feasible," "to the extent practicable," "whenever possible," ... . These loopholes will allow environmental degradation which would be inconsistent with the Anti-degradation Policy. (EPA) Many terms used in the standards and guidelines need clarification (in addition to those just listed), including:

- "to the extent compatible with objectives of the LUD"
- "consider needs of wildlife within overall objectives of the LUD"
- "special consideration will be required"
- "include consideration of other resources ... if they do not have a significant adverse impact on the timber resource goals." (SEACC, STATE)

(1996) Standards and guidelines included in the draft plan are vague and will not provide for the intended accountability because compliance with the standards and guidelines will be difficult or impossible to measure. Standards should be measurable objectives for management practices, and guidelines should provide recommendations for achieving the standards. The Plan does not clearly distinguish between a standard and a guideline. The standards should be separated from the guidelines. The FS should prepare measurable Standards that will provide improved accountability for managing the public's resources. Wording like "where possible," "normally," "generally," "minimize," and "to the extent feasible," should be replace with wording that provides specific and measurable stipulations on management activities.

Response: The standards and guidelines contain two types of direction. "Standards" are required actions or practices that must be followed when doing projects or activities under the Forest Plan. Standards are noticeable in that the words "shall", "will", or "must", are used. "Guidelines" are preferred or advisable actions or practices that will normally be followed but which allow project-level decision makers some leeway in their application. It is for these latter types of direction, the guidelines, that most of the discretionary types of statements highlighted in the comment are used. The intent of guidelines, as opposed to standards, is to leave discretion to resource professionals and interdisciplinary teams in designing projects that will achieve the desired level of resource protection while at the same time meet other multiple-use goals. Phrases such as "to the extent feasible" and "whenever possible" emphasize the basic

intent (resource protection) while allowing for such discretion when on-the-ground site-specific activities are considered. The wording in many standards and guidelines has been clarified in the Revised Plan.

Comment: (1996) The TLMP Revision Standards and Guidelines are not based on credible scientific data. There is no indication that current logging activities have negatively impacted the Forest, fishing or tourism. No studies have been done to what effects the Tongass Timber Reform Act has had on fish habitat. There are no studies which indicate the necessity for large buffer areas on fish streams.

Response: The commenter is referred to the discussions of current and anticipated effects from “logging activities” that make up the bulk of FEIS Chapter 3. Specific to fish habitat and stream buffers, a detailed analysis may be found in the 1995 Anadromous Fish Habitat Assessment.

Comment: (1996) The standards and guidelines should identify the goals and objectives they are intended to achieve.

Response: The goals and objectives of the Forest-wide standards and guidelines are typically included along with the more specific direction.

Comment: The standards and guidelines must be enforced. In developing the final ASQ [timber harvest level], the Forest Service should evaluate and reconcile any differences to ensure that the standards can be fully enforced while meeting the timber harvest objectives. (STATE)

Response: The standards and guidelines specified for each land use designation (the "management prescription"), including the applicable Forest-wide standards and guidelines, will always be applied to any project occurring within that designation. If any conflict should arise between meeting a standard or guideline, and achieving a particular output objective such as level of timber harvest, the standards and guidelines will take precedence. One important aspect of Forest Plan monitoring is to evaluate the achievement of output objectives in relation to meeting standards and guidelines. In our best estimate at this time, the timber harvest objectives can be achieved while meeting the standards and guidelines. If monitoring shows differently, the situation will be evaluated at that time, and adjustments may be made through the amendment or revision process.

Comment: (1996) The Final Forest Plan should include additional opportunities for timely incorporation of new issues and scientific information into forest management, preferably as quickly as information becomes available. Methods for adaptive management (for incorporation of new information) should be included in the Standards and Guidelines.

Response: Chapter 5 of the Forest Plan discusses the amendment and revision processes, and the general concept of adaptive management. New information is continuously becoming available and is almost as continuously evaluated as it relates to current forest management. Amendments to the Forest Plan, as well as individual projects, may be made at any time if needed.

Comment: (1996) The FEIS should give direction for project planners to modify current project planning to reflect the Revised Plan. Current timber harvest planning may preclude management direction and habitat protection identified in the RSDEIS. Although the timber harvest component would impact annually a relatively limited percentage of the entire forest acreage, the areas identified for harvest represent the most diverse and productive habitat types for fish and wildlife.

Response: Chapter 5 of the Forest Plan discusses the compliance of currently planned and future projects with the direction of the revised Forest Plan.

Comment: We suggest a section be added to the standards and guidelines (Minerals, Geology and Caves) for the preservation of buried resources, both petrified and un-petrified. These are important features similar to caves. (USGS)

Response: We appreciate the comment and have added direction regarding collection of fossils and similar related items to the Minerals and Geology Forest-wide Standards and Guidelines.

Comment: (1996) Is there a provision somewhere in the TLMP for a long-term lease by a not-for-profit organization such as a school, possibly under the LUD SA (special interest area), LUD EF (experimental forest) or LUD II designations?

Response: No.

Goals, Objectives and Policies

Comment: (1996) The Plan does not identify the management goals and objectives for the Tongass, nor does it identify how the direction presented in the Plan will achieve the goals and objectives.

Response: This is the content of Chapter 2 of the Forest Plan.

Comment: The Revision falls far short of meeting "the Chief's vision" as stated in his (Dale Robertson's) "Forest Service Pathway Into the 90's and Beyond." His main points which should be the emphasis of the plan revision are:

- enhancing recreation, wildlife and fisheries resources
- ensuring that commodity production is environmentally acceptable
- improving scientific knowledge about natural resources, and
- responding to global resource issues. (TRS)

Response: These four points were the four major themes of the 1990 Resources Planning Act for the Forest Service. A discussion of how the Tongass Plan revision responded to them was given on pages 2-5 and 2-6 of the 1991 Supplement. Briefly summarized, this discussion highlighted:

- the land use designations (LUD's), standards and guidelines, and ten-year programs related to recreation, fish and wildlife;
- the coordinated set of standards and guidelines for each LUD used to ensure environmentally acceptable projects and activities;
- the emphasis on sustained-yields of forest products and uses;
- research opportunities, and improving our knowledge and information about resources; and,
- ensuring ecosystem sustainability and natural diversity.

Comment: The Tongass Timber Reform Act (TTRA) isn't being implemented, or the "mandate," "spirit," or "obvious intent" of TTRA isn't being followed. [See also specific comments under Economics, Fish and Timber.]

Response: Implementation of the Tongass Timber Reform Act (TTRA) was discussed in Chapter 1 of the 1991 Supplement, and in several sections of Chapter 3 (Fish, Roadless Areas, Timber and Wilderness). Estimates of timber demand have been evaluated and revised (see Timber in Chapter 3 of the FEIS) to help respond to the TTRA provision that the Tongass seek to meet the market demand for timber from the Forest. Beyond this, there are many different public and private interpretations of the "mandate" or "spirit" of TTRA: from significantly reducing timber harvest to significantly increasing it; or from substantially

increasing resource protection to substantially increasing commodity production. We believe we have adequately responded to the specific requirements of the Act.

Comment: The "Desired Future Condition" should give a clear and accurate picture of the ultimate result of each alternative, including detailed information on unmodified old growth, fragmentation of habitat, numbers of deer and bear, watersheds and viewsheds impacted, etc. (GP)

Response: Although the term "desired future condition" is used in the current NFMA regulations, it is not defined. In our interpretation, the "desired future condition" is designed to portray (or give a picture of) the land and resource conditions that will result, in the long term, from implementing the Forest Plan. This portrayal is of the same level of specificity (or generality) as that of the Forest-wide goals and objectives (or, if provided for a LUD, the LUD goals and objectives). The detailed information requested in the comment is of course provided for each alternative as part of the environmental analysis presented in Chapter 3 of the EIS.

Comment: (1996) Recommend the addition of a financial, hold harmless policy. Alaskan residents, businesses, schools and hospitals should be compensated if the Preferred Alternative creates hardship and distress. This should be part of any alternative.

Response: The Forest Service does not have the authority to grant or provide for such compensation. The U.S. Congress may do so through a special Act or budget provision.

Comment: The Forest Objectives are just numbers, with no underlying basis or justification, and sometimes are wrong (such as Volume Class 7 old growth). Budgetary factors of the objectives should disclose expenses and revenues, in detail, program by program. (GP)

Response: Goals and Objectives by land use designation have been added to the Revised Plan. Program budget revenues and expenses were displayed in the Supplement to the DEIS, Appendix B, Table B-28. In the FEIS, they are displayed in the Regional Economy portion of Chapter 3.

Public Participation and Coordination

Comment: There was no opportunity for communities to meaningfully or effectively participate in the planning process. (C-TS, GCA) The Forest Service has not worked enough with interest groups or communities to minimize conflicts. (SEACC) (1996) State, local, and tribal governments were supposed to participate in the revision of the TLMP. The TLMP plan is illegal. While the Forest Service has recently improved its relationship in some areas with the Native peoples, it needs to build an ongoing relationship with the Native governments. Planning needs more consultation, co-management and communication.

Response: Communities, interest groups, agencies, organizations and individuals have been involved, and invited to participate, in the planning process since the identification of public issues began in 1987. This involvement has included formal hearings, meetings, workshops, presentations to communities and groups (including many Native communities and organizations), reviews of draft documents, and numerous one-on-one contacts and discussions by Forest Service personnel throughout Southeast Alaska. The planning team in Juneau, and the planning staffs, District Rangers and Forest Supervisors of the Tongass have always been available for meetings and discussions; many presentations and meetings have been conducted at the request of local communities or groups. As one example, numerous informal meetings with Southeast Alaska Conservation Coalition (SEACC) have been held during this period, both to share information and to receive comments and suggestions. Newsletters and other publications have been used throughout the process to summarize planning actions and keep interested persons informed. Besides the formal periods of public review (for issue identification and for the Draft, Supplemental, and Revised

Supplemental Environmental Impact Statements), comments were invited on drafts of the Forest-wide Standards and Guidelines. The full three-volume Analysis of the Management Situation was made available to interested parties.

Comment: Public participation activities should be scheduled to be compatible with community lifestyles. (RF&G) Scheduling the hearings so soon after release of the Supplement meant that no meaningful analysis could be done by people wishing to testify. The hearings were scheduled during the wrong time of the year: during commercial fishing season; when seasonal occupations prevented residents from attending. (NCC, SEACC)

Response: The workshops and hearings for both the DEIS (1990) and Supplement (1991) were scheduled with the intent of providing as many Southeast Alaska residents as possible the opportunity to attend, while also taking into account weather and travel. For both years the late summer/early fall period was chosen, with the following in mind:

- many families and individuals take vacations during the summer, and many Southeast Alaska residents spend part of the winter "down south"
- travel to many of the smaller communities is difficult, and scheduling uncertain, starting in mid to late October and lasting through the winter
- the summer tourist season posed potential conflicts for travel and for attendance at hearings
- spring, summer and fall all posed conflicts with seasonal occupations and various fishing and/or hunting seasons

Workshops and hearings for the 1996 Revised Supplement were held in late May and early June.

The DEIS was released well in advance of the hearings. This was not the case for the Supplement, due in part to unforeseen printing delays. However, postponing the hearings would have led to winter travel uncertainties and the likelihood of many of the interested public also being out of town. Workshops were still available prior to the hearings. In spite of the shorter review time prior to the hearings, it is interesting to note that about the same number of people (roughly 400 in each case) presented testimony at the 1991 hearings as at the 1990 hearings, and the same general issues were discussed with about the same depth. In 1996, a few more than 400 people spoke. Hearings are only one means of obtaining comments: the great majority of people chose to provide written input.

Comment: (1996) The Regional Forester should grant the extension requested by the Alaska Forest Association, KPC and others until at least December 15, 1996, and hold off implementing the new forest plan until January 1997. This would allow the people of Southeast Alaska sufficient time to review the lengthy and complex document, whose release coincided with the busiest time of the year for loggers, miners, fishermen, mill workers, and those involved in the tourist industry.

Response: The 1996 comment period was extended one month based on public requests. Significantly more people commented on the Revised Supplement (over 21,000) than on the 1990 DEIS and 1991 SDEIS combined (10,000).

Comment: The statement used in the community effects sections: "Those who commented were part of a sparse, non-random, self-selecting sample. Their comments do not necessarily reflect community opinion," shows that community input is being devalued. (RF&G) The use of this statement for certain communities where a large turnout spoke with a consistent voice is unfair or inaccurate. (GCA) Forest planning continues to ignore public input and past recommendations. (1996) I am concerned that my comments will not be heard. The Forest Service must be responsive to all comments. The Preferred Alternative must reflect not only National mandates, but also the concerns and needs of Alaskan communities.

Response: This phrase was used for every community in the Subsistence portion of Chapter 3 of the Supplement. It is simply a technical way of saying that voluntary written or oral comments received during a public comment period do not have statistical validity, in the sense that a public survey might. Even for smaller communities with large turnouts at the hearings (such as 36 for Gustavus), less than 1/4 of the residents were represented. While this percentage would be adequate to reflect public opinion from a randomly conducted survey, it cannot be said to reflect public opinion when attendance is voluntary (non-random). We probably erred in using this statement for one community in the Supplement, Meyers Chuck. A resolution from the Meyers Chuck community was signed by nearly every property owner or family, and included the majority of Meyers Chuck residents.

However, the use of this disclaimer does not mean that we have devalued or ignored community input. As noted in a previous response, many of the changes made in allocating the land use designations were done as a result of community input. Please see the first response of this sub-section, and also the responses to the Subsistence and Area-specific comments. Regardless of whether the comments we received can be said to technically represent "community opinion," we do believe that they represent the opinions of those people interested or concerned enough to comment. We value these opinions highly, and have attempted to recognize and address the concerns expressed within the overall context of National Forest planning.

Comment: The Forest Service needs to coordinate better with NMFS and ADF&G so that the "modeling and planning efforts might better address the realities of the Tongass." (ATA) (1996) There is little discussion in the RSDEIS regarding the need or potential for improved interagency planning and project coordination.

Response: The National Marine Fisheries Service (NMFS) and the Alaska Department of Fish and Game (ADF&G), as well as the U.S. Fish and Wildlife Service (FWS), participated jointly with the Forest Service in many aspects of modeling and analyzing the fish and wildlife resources. The identification and selection of fish and wildlife management indicator species was a joint agency effort involving all four agencies, and the habitat capability models previously used for estimating wildlife effects were developed in conjunction with ADF&G and FWS. NMFS and FWS have contributed to the identification and analysis of threatened, endangered and sensitive species, and reviewed and concurred with the biological evaluations for threatened and endangered species. The Viability Committee which studied wildlife species viability included biologists from ADF&G and FWS as well as the Forest Service. We also worked closely with ADF&G on other aspects of fish and wildlife, including fishing and hunting use and demand, and on the evaluation of subsistence resources. For the Revised Supplement/FEIS process, representatives from these and other agencies participated even more closely with the Forest Service throughout the process (some examples: preparing wildlife assessments and resource analyses; as members of assessment panels; and on the Policy Group).

Comment: The Revised Plan should be consistent with the Alaska Department of Natural Resources Plan designations. Marine Park designation should not conflict with known or future log transfer sites or accepted tow routes. (KPC) The Alaska Department of Resource Area Plans should be referenced, and care taken to assure that site-specific decisions on adjacent National Forest lands will be consistent with State Area Plan designations. (STATE) Activities, including log transfer facilities, in the coastal zone should be analyzed for consistency with the Alaska Coastal Zone Management Program. (SEACC) The Forest Service must undertake a cooperative planning and management approach with the State for project activities adjacent to ("in conjunction with") Marine Parks and National Forest Grant Lands selected primarily for community recreation (a list of each is provided). (STATE)

Response: As far as State Marine Parks not conflicting with "known or future log transfer sites or accepted tow routes," that comment needs to be made to the State, since Marine Park designations are under State jurisdiction. Activities proposed within the coastal zone are analyzed for consistency with Alaska Coastal Zone Management during site-specific project planning. Activities proposed adjacent to State lands, including those selected for community recreation, will be analyzed for consistency with Alaska State Area

Plans during site-specific project planning. The Alaska State Area Plans have also been reviewed between Supplement and FEIS to ensure consistency.

Comment: A team of non-Forest Service agency and group representatives is recommended for the interdisciplinary team.

Response: Non-Forest Service agency, and community and group interactions have been discussed in several other responses within this sub-section. In particular, other-agency involvement and participation has been an integral part of the planning and analysis process for several resources. However, the development of a forest plan, and the analysis of alternatives and effects, are Forest Service responsibilities under both NFMA and NEPA, and the use of a Forest Service interdisciplinary team is an integral part of fulfilling those responsibilities. There are laws and regulations limiting the use of non-Federal personnel on such teams. There is also the problem of fairly representing all the different public interests if non-agency persons were to be included.

Comment: The Forest Service failed to disclose and respond to the material comments made on the DEIS (by SEACC, CHEC and ADF&G), leading to a repetition of many of the same mistakes in the Supplement. (SEACC)

Response: All comments made on the DEIS (those of the entities referenced as well as the 3,000-plus other commenters) were summarized in Appendix A of the Supplement. Many public comments on the DEIS provided information that led to changes in analysis procedures and other aspects of the planning process, and also helped refine proposed land allocations, all of which were incorporated into the Supplement. All substantive comments on both the DEIS and Supplement were combined with subsequent Revised Supplement comments and are being commented on here for the FEIS, which is the only requirement we know of. All public comments received are available for review at any time by the public, and we have attempted to summarize these in newsletters and subsequent document appendices, as well as here in the FEIS. Some changes to the analytic techniques used for the FEIS were a result of review and discussions with Randy O'Toole from CHEC.

Law and Regulation

Comment: (1996) The preferred alternative is not consistent with the planning process. The Forest Supervisors' selection of the preferred alternative independent from the planning team circumvented the FS's interdisciplinary approach.

Response: It is the Forest Supervisors' responsibility to select a Preferred Alternative for a draft EIS, and to recommend a final alternative to the Regional Forester. The Forest Supervisors were closely involved in the development of the alternatives by the IDT and subsequent analysis of those alternatives. The Forest Supervisors based their preferred on this analysis, modifying one of the original alternatives somewhat.

Comment: (1996) The RSDEIS should be withdrawn and a corrected document resubmitted to the public for a 90-day comment period because it fails to meet key requirements of NFMA and NEPA, in particular because the Forest Supervisors did not direct the efforts of the planning team in preparing the RSDEIS.

Response: Whether or not the Forest Supervisors adequately directed the planning team (an allegation we would deny), it is unclear what mistakes in the "document" this may have led to, or how a "corrected document" would solve the perceived problem.

Comment: (1996) The Preferred Alternative was not given the same level of analysis as the other alternatives for comparison. National Environmental Policy Act (NEPA) requirements have not been met. The Preferred Alternative was not given equal analysis and it was not presented in a manner that allowed reviewers effective comparison with the other alternatives. The Preferred Alternative should be given the same amount of scrutiny and impacts analysis as the other alternatives and this information should be presented in the FEIS. The selected alternative should be grounded on more scientific information than that provided for the Revised Supplement Preferred Alternative.

Response: The Revised Supplement Preferred Alternative was a variation of Alternative 3 from that document, and had very similar effects for most resources. The differences in the Preferred were discussed in the Forest Supervisor's letter, and all EIS tables were updated in a separate summary document circulated shortly after mailing of the RSDEIS to include the Preferred. In the FEIS this same alternative is analyzed in detail as Alternative 10.

Comment: (1996) No decision should impair the ability or right of the Native Communities to proceed with the correction of the original ANSCA, which unjustly excluded the communities of Haines, Tenakee Springs, Petersburg, Wrangell and Ketchikan, as the recent Congressional study has shown.

Response: We know of no aspect of the revised Forest Plan that would interfere with or limit an amendment to the Alaska Native Claims Settlement Act or similar legislation, should the U.S. Congress take up such an action.

Comment: (1996) Management of the Tongass National Forest should be driven by ANILCA requirements for subsistence use and viable population requirements of the National Forest Management Act.

Response: ANILCA Title VIII, and NFMA regulation fish and wildlife viability provisions, and how they are addressed, are discussed extensively in the Fish, Subsistence, and Wildlife sections of Chapter 3 of the FEIS. These are two of many requirements that "drive" the management of the Tongass.

Comment: (1996) The Preferred Alternative is illegal. According to the Tongass Timber Reform Act, Congress specified that any area over 5,000 acres, which is to be removed from the timber base, should be approved by Congress.

Response: We know of no such provision of the Tongass Timber Reform Act (TTRA). The Alaska National Interest Lands Conservation Act, which was amended by TTRA, does include a provision (Sec. 1326(a)) pertaining to "withdrawals" of public land in general "exceeding five thousand acres in the aggregate", but requires only notification of Congress by the President or Secretary, not approval.

Alternatives

Comment: The range of alternatives is narrow, inadequate or too restricted. Alternatives don't adequately respond to major public issues (such as Wilderness, termination of the long-term contracts, market demand for timber, etc.). [See also specific resource comments.]

Response: The 1990 DEIS (on which this comment was originally made) included ten alternatives, which for resources related to several public issues had the following ranges:

- recommended Wilderness: 0 to 1.8 million acres
- allowable sale quantity: 181 to 550 million board feet
- recommended Wild & Scenic Rivers: 0 to 112 rivers (1,504 miles)
- Primitive Recreation outside Wilderness: 1.53 to 4.56 million acres

Several of the DEIS alternatives considered additional Wilderness and inadequate timber volume to sustain one or both of the long-term sales.

In the 1991 Supplement to the DEIS, some of these ranges were narrowed as a result of the Tongass Timber Reform Act (TTRA). Since Wilderness designations and whether or not to cancel the long-term timber sales had been a major part of deliberations preceding passage of the Act, these two issues were considered resolved by the Act, for the present, and no additional recommendations were made. In addition, TTRA included direction for "seeking to meet market demand." Considering allowable sale quantities at less than what was projected to maintain the two pulp mills seemed inappropriate; the range in the Supplement was 298 to 472 million board feet. Most other ranges remained wide, as before. It should also be kept in mind that this is a revision of an existing land management plan, and that the focus of many of the issues was not on "starting from scratch," but on making changes or adjustments to the current plan based on current issues, concerns and resource opportunities.

The 1996 Revised Supplement included nine alternatives plus a preferred alternative, with a wide range of options addressing the key issues. Ten alternatives are considered in the FEIS, again with a wide range of outputs and options addressing the issues.

Comment: An alternative that has logging, mining and "other extractive industries" done in "the least disruptive manner possible" is lacking and should be included.

Response: We interpret the comment to conclude that the commenter meant that the only way to do logging, mining, etc. in "the least disruptive manner possible" is not to do them at all. Such an alternative was not considered consistent with the legal mandate of the Forest Service which is to consider multiple use. The least disruptive alternative in terms of timber harvest would be the one with the lowest timber volume (allowable sale quantity) and (correspondingly) fewest miles of roads. Alternative A in both the DEIS and SDEIS was that alternative, as was Alternative 1 in the Revised Supplement and FEIS. Since the Forest Service does not decide whether or not mining may occur, but can control how it is done, the alternative that minimizes the use of the Minerals LUD (which may result in fewer restrictions than the original LUD) would meet the "least disruptive" criteria. This is Alternatives A and C (no Minerals LUD applied), in the DEIS and SDEIS, Alternatives 1 and 9 subsequently.

Comment: An additional alternative should be analyzed, one that displays "the full effects of protecting important fish and wildlife resources while ensuring sustained yield opportunities for the timber and mineral industries". (STATE)

Response: This is a reference to a specifically-defined alternative that the State of Alaska requested the Forest Service to model. In this case, "important" fish and wildlife resources were defined as particular Wildlife Analysis Areas identified by the Alaska Department of Fish and Game. During meetings with the State following the comment period on the 1991 SDEIS, such an alternative was modeled and evaluated.

The State chose not to pursue it further. It is discussed in the "Alternatives Eliminated from Detailed Study" section of Chapter 2 of the FEIS.

Comment: The preferred alternative (for the 1990 DEIS) was not a part of the document, nor analyzed in detail like the other alternatives, thus it couldn't be adequately evaluated or commented on. (USDI)

Response: We wanted to know what the interested public thought about all of the alternatives in the DEIS. We agree that the Preferred Alternative in the 1990 DEIS was not displayed to the same level of detail as the other alternatives. The Supplement to the DEIS (August, 1991) included a preferred alternative (Alternative P) as one of five analyzed in detail in the document.

Comment: Following is a synopsis of comments on alternatives from the 1990 DEIS or 1991 SDEIS (lettered alternatives), and the 1996 Revised Supplement (numbered alternatives). Few comments in 1996 focused on specific alternatives except the Preferred Alternative. One general response follow all these synopses.

> **Alternative A:** Alternative A is recommended for its protection of amenity values and emphasis on non-timber resources. Alternative A is best for recreation opportunities, fish and wildlife habitat, scenic quality, old-growth forests and subsistence use. Alternative A has the least amount of timber harvest among the alternatives. Other general comments in support of Alternative A included: it best maintains the ecologic balance; it's the best for old growth; it's best for the world ecosystem; it will best protect the land for future generations; and it's best for subsistence, personal use (hunting, etc.), and cultural resources. Alternative A was also favored for its greater acreage of "natural setting" LUD group allocations, and for its high number of Wild, Scenic and Recreation River recommendations. Some supported Alternative A with changes, such as: no more clearcutting or no new roads; increasing riparian protection or widening stream buffers; and, providing additional protection for subsistence areas.
>
> **Alternative B:** Alternative B should be selected for its emphasis on the needs of local communities, to maintain current employment, and as the "best balance" between preservation and allowing traditional lifestyles to continue. Alternative B offers good levels of recreation opportunities, scenic quality, and fish and wildlife habitat protection.
>
> **Alternative C:** Alternative C will maintain the timber industry. There is no reason to change from the current plan (or land use designations).
>
> **Alternative D:** Alternative D is favored because it will maintain the timber industry and a healthy Southeast Alaska economy, and provide for resource development in general. Other aspects of Alternative D favored are its emphasis on mineral development, and provisions for transportation and utility corridors. The majority of Alternative D supporters asked that the proposed harvest level be increased, usually to 500-565 million board feet. Other reasons for supporting Alternative D included: many communities could not survive without the base of timber employment; Alternative D would offer more opportunities for the smaller timber companies in Southeast Alaska; and Alternative D will supply the capacity of local mills, and make up for projected declines from Native Corporation harvests. Those favoring the land use designations of Alternative D felt that enough areas are already set aside for other uses (especially Wilderness), and that the "remaining" lands should have the least-restrictive designations possible.
>
> **Alternative P:** Those favoring Alternative P (the Preferred alternative in the 1991 SDEIS) felt that it offered a good balance between preservation and resource uses. Most of these commenters liked its resource development aspects, although some requested a higher harvest level. Alternative P was sometimes mentioned as a second choice after Alternative D, or as a compromise from a more development-oriented alternative. Most commenting on Alternative P, however, were opposed to it;

in general, either because it had too high an amount of timber harvest, or too low an amount. In the former category, commenters were concerned that the proposed amounts of harvest would have adverse effects to fish and wildlife, tourism and recreation, and subsistence. In the latter category, commenters were concerned with the potential loss of jobs in the timber industry, and possible wider economic effects, and felt that Alternative P proposed too many additional areas where access or development would be limited or precluded.

Alternative 2: (1996) Support Alternative 2. There is no scientific evidence to indicate that the timber base should be reduced another 700,000 acres.

Preferred Alternative (1996 Revised Supplement): The Tongass Forest Plan needs to reflect a stronger balance of uses and not such a strong emphasis on commercial timber production. Other industries such as tourism, recreation and fisheries need equal attention and additional analysis of effects on these resources, if the preferred alternative is selected. The preferred alternative inappropriately downplays economic factors, the country's demands for wood production, and people's right to use and enjoy National Forest System lands. Too much biology and little consideration of social and economic concerns does not ensure sustainability of communities through lack of a constant, reliable flow of goods and services.

Response: The Final Environmental Impact Statement (FEIS) contains ten alternative considered in detail, several of which were based initially on Alternative P from the 1991 SDEIS (with revisions made in 1992 based on public comment), and one on a modification of 1991 Alternative D. Alternative 1 was modeled somewhat on 1991 Alternative A and comments made on that alternative. The concerns and resource emphases expressed in the preceding comments continued to be displayed and analyzed. The Preferred Alternative in the FEIS (Alternative 11) is changed from the Preferred Alternative accompanying the Revised Supplement (and included as Alternative 10 in the FEIS), in part to respond to some of these same concerns. The "Comparison of Alternatives" section of FEIS Chapter 2 gives an issue-by-issue comparison of the ten alternatives, summarizing the in-depth analysis of FEIS Chapter 3. The rationale for the selection of Alternative 11 as the final Forest Plan, which addresses many of the considerations mentioned in the comments above, is included in the Record of Decision, to which the reader is referred for further discussion.

Comment: (1996) A much better alternative to the Preferred Alternative is the Southeast Alaska Conservation Coalition's "transition alternative", with its provisions for additional safeguards and protection of "special places." Additionally, it maintains a strong economic base for all communities of Southeast Alaska, and ensures a healthy, quality ecosystem free from constraints. The alternative prepared by Association of Forest Service Employees for Environmental Ethics is based on good science, without the political constraints of the "official" Forest Service position.

Response: Both these alternatives are discussed under "Alternatives Eliminated from Detailed Study" in Chapter 2 of the FEIS.

Recreation and Tourism

(See also Socioeconomic, Minerals, and Wildlife sections.)

Modeling, Analysis and Effects

Comment: The idea of "no net loss" of recreation places doesn't take into account the differences in recreation experiences. (SEA) Your analysis is flawed in that you have made no attempt to differentiate the quality and types of recreation experiences. "Apparently we are expected to exchange our preference for recreation in natural settings for that in logged and roaded areas." Averaging all recreation experiences together under-estimates effects to recreation uses at the community level. The current method of lumping all types to show effects is "unacceptable." No values are assigned to different types of recreation. (JAS)

Response: The DEIS did make the assumption of "no net loss" for recreation place capacity, but acknowledged a change in setting conditions, and the likely effect on quality or attractiveness. The SDEIS, RSDEIS, and FEIS discarded the "no net loss" assumption for recreation place capacity consistent with your concern, and acknowledged there is indeed a loss. The more recent analysis divided recreation supply and demand into three major categories using the Recreation Opportunity Spectrum (ROS) framework. Several assumptions were made in this analysis addressing the "no net loss" concern. For instance, a primitive or semi-primitive recreation place on a remote island not connected to a road system would lose all capacity once the setting were changed, primarily from timber harvest and road construction. The capacity of a primitive or semi-primitive recreation place in an area connected to a road system served by the Alaska Marine Highway, would not be lost, but would changed to providing capacity in either a roaded natural or roaded modified setting. This analysis of supply was then combined with demand projections for the three categories. The results indicate the ability of the forest to meet demand for the three recreation settings, and how this ability changes by alternative.

The SDEIS, RSDEIS, and FEIS also differentiated among those recreation places which were more important for such things as tourism and within the home range of communities. Different concepts of assigning values or ratings for recreation places were considered. However any discussion of quality is inherently laden with value judgments and totally subjective. For instance, it is impossible to judge which recreation place is more important for tourism; a visitor center with bus tours in a roaded setting having use in the 1000's of Recreation Visitor Days, or a kayak excursion in a primitive setting that may have 15 Recreation Visitor Days per year. The conclusion could be that they indeed are both important to consider, and would be rated accordingly. By displaying the consequences of development activities on these important recreation places, such as tourism, readers can then make their own personal value judgment. See the discussion in the Recreation section of Chapter 3 of the FEIS.

Comment: Recreation impacts are understated. (SEACC) The negative impact of continued logging and road building on recreation is not disclosed. (SEACC) The long-term, cumulative effects on recreation and tourism need to be displayed. (SCS)

Response: The FEIS discusses, by alternative, the amount of road construction and percent change of recreation place acres from a natural setting to a developed setting. The discussion provides an in-depth disclosure of the changes to recreation places in general, home range recreation places, recreation places important to tourism, fishing and hunting, and marine recreation. The Use and Demand part of the Recreation and Tourism section of the FEIS discusses some of the consequences of these changes to recreation users. Part of the discussion states; "projected use indicates that Semi-Primitive Motorized settings, characteristic of the marine interface, will reach capacity within the decade." The summary begins with the following statement; "Over time, the Forest will continue to shift toward the developed end of the recreation opportunity spectrum, bringing about increased opportunities associated with roads, and decreased opportunities associated with primitive forms of recreation."

Whether this change is negative or positive is one of personal preference. We have acknowledged the traditional ties of recreation use with the natural marine setting, and some of the implications of change.

Comment: Dispersed and developed recreation should be listed separately. Recreation places should be categorized as to "high value," "dispersed" (unroaded) and "developed" (road-based) recreation, and "areas important to tourists." Roaded recreation areas are too narrowly defined: roaded-type effects extend far beyond the roadway; and unroaded recreation is too broadly defined: included are many areas where only a "developed" experience is possible. (WLS)

Response: See response above for a discussion of rating important recreation places. The Recreation Opportunity Spectrum incorporates and addresses the concerns expressed in this comment. This nationally-used system recognizes that a continuum of setting opportunities exists, and that people prefer to engage in recreation activities in certain settings. Seven categories are identified on the continuum, ranging from urban to primitive. The criteria for assigning an ROS class incorporates guidelines for remoteness, social encounters, degree of naturalness, and others. It recognizes that the influence of roads may be felt up to a half mile before qualifying as a semi-primitive setting, and up to three miles before qualifying as a primitive setting. The inventory and much of the analysis is based on the ROS system. A discussion of the recreation opportunity spectrum categories on the Tongass can be found in the Recreation and Tourism section of Chapter 3 of the FEIS.

Comment: (1996) Distinguish between consumptive versus non-consumptive recreational activities, a customer and a visitor, recreational consumptive use (hunting/fishing/firewood gathering/berry picking) and subsistence use**.**

Response: Our analysis of recreation use focuses mainly on the setting experience that people use and prefer and not the activities in which they engage. Whether someone is berry picking or viewing scenery would not matter for this type of analysis.

Comment: Your idea that clearcuts will provide a wilderness experience after 40 years growth is ridiculous: the trees in 40-year-old clearcuts are too close to walk between. Address the negative effects of reduced old growth on tourism and recreation: when the old growth is gone, where will people go? Your analysis of recreation potential is not adequate. "Polls clearly show" that visitors come to Southeast Alaska for wilderness values, not to see roads and clearcuts. These latter diminish tourism potential. (1996) Clearcutting alters the recreational opportunity. Some activities are enhanced while others suffer.

Response: We agree 40 year-old clearcuts will likely not provide a wilderness experience, and they would be identified accordingly as providing a Roaded Modified ROS setting. The analysis in the FEIS for projected ROS classes assumes that once an area is in a roaded setting, it will not revert back to a more primitive setting. The consequences to recreation opportunities, recreation places, and recreation places important for tourism are displayed by describing the changes to the mix of ROS settings by alternative. As to old-growth forest, our analysis indicates over 85 percent of all forested lands will be greater than 150 years of age, one hundred and fifty years from now, and about 70 percent of the productive old growth will never be harvested on the Forest. The state, tourism, and research information we have reviewed indicates the leading attractions in the state are associated with scenery and wildlife. Many of them are facilitated by roads, structures, and other developments. There are no surveys or polls which demonstrate a clear relationship between setting components, such as wilderness or old-growth, and how recreation or tourism demand is affected by changes to them. Some of these surveys suggest a relationship, and much of it is intuitive. We have displayed the changes to ROS settings, potential effects to demand, and implications for the tourism industry, in the Recreation and Tourism Section of Chapter 3 of the FEIS. This analysis is based on the information, surveys, and polls available.

Comment: (1996) Recreation is taking a back seat to timber harvest. Tourism is an important part of Alaska's economy, and it is based on a healthy environment, which is defined as one with less emphasis on timber harvest. Non-consumptive use that depends on the health of the forest ecosystem is being neglected.

Response: The revised forest plan puts a great deal of emphasis on tourism. Eighty-seven percent of the acres of the recreation places important for tourism are placed in natural setting land use designations. Appendix F of the forest plan identifies places from which the scenery will be managed with more stringent guidelines. There are separate tourism goals and specific standards and guidelines that address tourism developments.

Comment: The Primitive Recreation category is under-valued. Primitive recreation carrying capacity needs to be addressed. Primitive recreation benefits are underestimated, maybe by an order of magnitude: they shouldn't be averaged with other types of recreation.

- RVD values (Table B-7) should differentiate between ROS classes. Primitive ROS should be at least $100/RVD
- show primitive recreation separately for recreation outputs (Tables 2-23 and 3-273), and show for 10, 20 and 50 years. (SWE)

Response: Carrying capacity and demand for primitive recreation was combined with semi-primitive non-motorized, based on the level of information available. The data was not collected as a function of settings, such as primitive. We believe the information and analysis is adequate for the programmatic decision to be made.

Comment: The demands for recreation resources appear to be underestimated. Recreation demand must be projected beyond the first decade. (TRBA) Project primitive recreation capacity and demand beyond 1995: what will happen as capacity is diminished and demand rises past this period? You should project recreation demand as far as you do timber demand. (SWE) Showing recreation use stabilizing after 20 years is "ludicrous." Use a more accurate model that takes into account population growth and diminishing primitive and semi-primitive resources. The Preferred Alternative will lead to shortages of semi-primitive and primitive recreation opportunities within 20 years, yet this shortfall is not disclosed because future recreation use and capacity are only projected for 10 years. (CHEC) No quantitative assessment of recreation supply and demand is given. It's impossible to compare future recreation opportunities with present status. (SEACC)

Response: The recreation and tourism demand discussion in the Regional Economy section of Chapter 3 of the FEIS has been revised to reflect an estimate of demand through 2010. Some of the consequences of demand/supply analysis are discussed in chapter 3 of the FEIS. Basically, it describes the nature of the Forest as changing over time from one which predominately provides primitive and semi-primitive opportunities (the Forest is currently 90 percent roadless), to one which provides increased opportunities associated with roads. This change is expected to occur, however, only at the rate of about 1/3 to 1/2 of one percent per year. Some of the consequences associated with an increase in the road network include: 1) increased social encounters, and 2) competition for resources such as solitude, fish, and special areas. This could result in increasing use of Wilderness and other natural setting areas. As the Forest changes, those providing services such as the tourism industry, will need to be adaptive. Recreation users will either adapt to the changes, substitute their activities, be displaced to other areas, or choose to no longer engage in recreation on the Forest.

Comment: Recreation demand for, and value of, fish and wildlife-oriented experiences in pristine areas needs to be re-analyzed to eliminate the underestimates inherent in the present documents. (RF&G, SEACC) The adverse effects of all alternatives on sport hunting and fishing, and commercial outfitters and guides, are understated. (STATE) [See also Fish and Wildlife sections.]

Response: Recreation demand for primitive and semi-primitive settings is addressed in the Regional Economy section of the FEIS and summarized in the Recreation and Tourism section. Much of this use is associated with fish and wildlife oriented activities. The analysis indicates an adequate supply of capacity in these more primitive settings to meet demand. One of the factors discussed in the FEIS is distribution. Due to access and traditional use patterns, many recreationists and outfitters tend to use the same areas. For some areas at some point in the future, management strategies may be required to restrict or redistribute the various users due to increased competition. Commercial outfitters and guides will need to be responsive to these changes, just as they need to be responsive to other changes in the marketplace such as user preferences.

Comment: Tourism and its components (lodges, charter boats, etc.) must be treated separately from recreation to assure the specific needs of the tourism industry are addressed:

- your tourism database needs to be updated, and specific places important to tourism identified
- there's no presentation of tourism (or recreation) demand
- the impacts to important tourism and recreation places are understated or ignored
- you falsely assume that roads will benefit tourism: no data is presented to show that tourists use roads, or where, or how many. (AD)

The plan doesn't address the needs of the tourism industry. Prince of Wales roads lead to clearcuts, but "high-yield tourists do not recreate in clearcuts." (PWC) Clearly distinguish between recreation and tourism uses. A tourism survey (of tourism businesses) could help identify key areas and places. (JCV, STC) Tourism is not synonymous with recreation: it's a separate industry and should be treated as such. (SEACC)

Response: The FEIS has a more focused discussion on tourism in response to this comment. Our data base was refined between the DEIS and SDEIS to identify those areas important for tourism, and a variety of sources were used including industry and chambers of commerce. Unfortunately there is no data source or survey that distinguishes tourism demand from recreation demand, or that distinguishes tourism demand for the region from the National Forest.

The impacts to the settings of recreation places important to tourism are discussed in the FEIS. This avoids any value judgments as to which forms of tourism are good or bad. No where in the document do we infer that roaded forms of tourism are any better than unroaded forms of tourism. We do acknowledged that some forms of tourism rely heavily on roads, structures and other developments, while other forms of tourism rely on natural settings with few social encounters or managerial controls. Discussion of the changes by setting groups allows each individual to draw their own conclusions based on their own values. We have also included a map in the FEIS map packet (Recreation Places map) that discloses current information indicating areas important to tourism to assist the reader in evaluating effects.

Comment: Identify needs for the development of tourism facilities, such as remote and/or destination sport fishing lodges, developed wildlife viewing areas (for which there is "incredible demand"), a hut-to-hut system of hiking trails, full-service RV campgrounds, and more kayaking and mountain biking opportunities. (AD, JCV) Needed are more campgrounds, trails and beach access. (PWC) Identify present and future logging roads with tourism potential and maintain them at a reasonable standard. (JCV) A site-specific tourism plan is needed.

Response: The Forest Plan is a programmatic plan, and does not make site specific decisions. These decisions are made at the local level when projects are considered. Specific concerns for communities, businesses, resources, etc., can be specifically addressed at this site specific level. The forest plan does incorporate those projects which have been identified at this level. The recreation and tourism projects are identified in the Forest Plan schedules (Appendix L) for capital investment.

The Forest Plan standards and guidelines were revised to respond to this concern within the context of the programmatic nature of the plan. The standards and guidelines now provide guidance as to which land use designations are appropriate for recreation and tourism developments, and at what level of development.

Comment: Your idea of recreation places is flawed. Recreation is often not about a place, but a journey. Therefore you need to identify popular "recreation routes" throughout the forest, to assure their continuity and keep them from fragmentation. This would include selected shorelines, and "extended wilderness expeditions" that include linking two or more wildernesses by SP or PR LUD's. (NOLS)

Response: We agree recreation is more than just a place. It begins with the planning and anticipation, and ends with recollection and remembrance. Many steps occur in between, such as the travel, journey, participation, and the experience. The concept of recreation places focuses in on the destination, and the setting attributes which contribute to the activity and experience. The journey, or travel, is addressed in the inventory of travel routes using the Visual Resource Management System, which includes small boat travel routes. The travel routes are considered in the range of alternatives, and those selected for an emphasis on scenic quality are listed in the Forest Plan (Appendix F) as the Visual Priority Travels Routes and Use Areas. In addition, the beach and estuary fringe Forest-wide standards and guidelines provide for natural settings in development-oriented land use designations.

Comment: Recreation places should also include areas that are not easy to access and don't rely on well-developed anchorages, boat ramps, airstrips or roads. (NOLS) The recreation place inventory appears to discount important recreation areas where outstanding values exist but may not yet be used. (SEA)

Response: Recreation places include all areas with recurring recreation use, and are not dependent on access or facilities. Some areas are included in the inventory where we believe a high probability for use exists.

Comment: It would be more meaningful to display recreation outputs (RVD's) for areas rather than just acres. You display both (outputs and acres) for timber harvest.

Response: Recreation outputs or visitor days (RVD's), are more dependent on variables outside of the control of the Forest Plan. Some of these variables include human behaviors and desires, amount of leisure time, cost of travel, lodging, and recreation equipment, value of American currency in foreign countries, and marketing strategies of business and tourism industries. Demand for recreation can be projected by past and current trends, but actual use of the Forest (RVD's) would be highly speculative to display.

Comment: The ROS categories and recreation classes differ between the DEIS and the Supplement, thus can't be compared. (SEACC)

Response: The Recreation Opportunity Spectrum categories are the same in all documents. Use of the land use designation groups to discuss effects is essentially the same, except for minor additions or deletions of land use designations,. Numbers between documents may change slightly due to updates in the ROS inventory.

Comment: Some available recreation place information was not used. (SEACC) You don't have adequate baseline information for recreation. You haven't done a recreation survey since 1975. How can you make decisions to destroy more roadless areas, or monitor changes in the forest, without an undated baseline inventory?

Response: The recreation places inventory is more than adequate to provide a baseline and assess the consequences of implementing the programmatic alternatives displayed. Numerous sources were used for the inventory, including the Alaska Department of Fish and Game, local businesses and outfitters, and individuals at the local communities. In addition a map of the inventory has been displayed at public meetings, such as state parks advisory committees, and the 1991 Southeast Alaska Tourism Council. All comments were considered and incorporated into the inventory, consistent with the concepts, criteria and knowledge of the particular place. For instance, the Alaska Department of Fish and Game provided input, but sometimes identified large areas of general hunting use areas. These were then considered by local knowledgeable sources and refined to identify those areas with recurring use or specific attractions, and not just incidental use.

Comment: Include a map of recreation areas and uses so the effects on these can be plainly seen. (STC)

Response: The FEIS map packet does include a map of the recreation places inventory, those recreation places important for tourism, and recreation sites with existing facilities.

Comment: (1996) On page 3-79, the FS plans to permit helicopter "flight-seeing" activities. This activity will adversely affect the public's enjoyment of the National Park System. Currently, helicopter "flight-seeing" is a considerable problem for Klondike Gold Rush National Historical Park. The Temsco Helicopter, Inc. staging area is located on the Skagway waterfront, 100 yards south of the Park's visitor center. Helicopters usually land and takeoff in groups of three or four at intervals of five to thirty minutes. Noise from landings and departures disrupts NPS interpretive programs, distracts audiences, and degrades the quality of the park visitor's experience.

Response: The Forest Plan is a permissive document, meaning that it indicates where activities are allowed and where they are prohibited; It does not authorize or specifically plan activities. Site-specific planning will determine whether activities will actually be authorized. Problems as may be occurring in Skagway should be dealt with at the project level.

Comment: (1996) Forest Service activities which are incompatible with recreation may displace recreationers from the forest to the National Park System. The FS should address the potential for its activities to directly or indirectly affect resources and public use of the National Park System in the FEIS.

Response: The Recreation and Tourism section of the FEIS does state that if people cannot find the type of recreation experience they desire, they may go to places off the Forest to get that experience. Since we have no idea where people would go - whether to Glacier Bay National Park or to New Zealand - , we cannot predict specific consequences to the National Park System.

Allocations and Alternatives

Comment: The Resources Planning Act recreation strategy has not been met by the alternatives: no alternative is included that emphasizes recreation, tourism, subsistence, sport fishing and hunting needs. (SEACC)

Response: None of these activities or emphasis items are precluded by the alternatives, and are emphasized in the Forest-wide recreation standards and guidelines. The alternatives provide a range for the mix of settings in which these activities may occur. Alternative 1 provides the most natural settings for unroaded forms of recreation and tourism, while alternative 7 provides the largest road network for roaded forms of recreation uses.

Comment: Recommend the entire Juneau area be placed under a "Recreation Prescription' with any mining or timbering planned to avoid conflicts with existing recreation patterns." (JSP) Reasons:

- Juneau is an increasingly popular recreation area, with 1/4-1/3 million "recreation oriented" visitors/year
- importance of recreation visitors to the local and regional economy (vs. "boom/bust" mining)

Response: The land use designations in the revised Forest Plan in the immediate Juneau area are Semi-Remote Recreation and Scenic Viewshed. The Semi-Remote Recreation land use designation does emphasize recreation values in a natural setting, and forest lands are considered unsuitable for timber harvest. The Scenic Viewshed land use designation allows timber harvest to be considered, but emphasizes scenic quality for those priority travel routes and use areas identified in the Forest Plan (Appendix F). Both land use designations allow for mineral entry. In addition due to the high minerals potential of much of the Juneau area, the Minerals land use designation is applied in the revised Forest Plan in those areas but is excluded from areas of high recreation use including trail corridors and recreation sites. Any proposal for minerals exploration or development will be subject to a site specific environmental analysis, which will address conflicts with recreation and other resource values.

Comment: All of Juneau's trails and recreation facilities (a list is provided) should be off-limits to mining. (JSP) (See also comments under Minerals)

Response: The Mendenhall Glacier Recreation Area is withdrawn from mineral entry. The remainder of the recreation sites and trails are open to mineral entry, subject to the Forest-wide and individual land use designation standards and guidelines. See the above response as it relates to the minerals concern.

Comment: A comparison of Revision proposal (1990 preferred alternative) with the City and Borough of Juneau Comprehensive Plan shows that most of the Forest Service designations (Semi-Primitive, Roaded Recreation and Scenic Viewshed Rxs) are compatible with the "recreation resource" designation. Compared with the "Juneau Area Recreation Plan" (1982), which had an objective of regulating other uses in important recreation areas, it appears that about 15 percent of the recreation places important to Juneau (15-30 mile radius) would be modified. (CBJ)

Response: The Roaded Recreation land use designation is no longer being considered as the concepts were very similar to the Scenic Viewshed and Modified Landscape land use designation group and thus considered redundant for all practical purposes. The Scenic Viewshed and Semi-Remote Recreation land use designation are the primary allocations around the Juneau area in the revised Forest Plan. The FEIS indicates in the Communities section that only 8% of Juneau’s community use area is within moderate or intensive land use designations.

Comment: The Roaded Recreation prescription (1990 DEIS) should not be applied to currently unroaded areas.

Response: See response above.

Comment: A prescription for "high-value recreation and tourism places" should be applied to the entire Juneau road system. A special recreation/minerals designation should be developed for the Juneau area [see Minerals section for discussion.]

Response: The Semi-Remote Recreation, Scenic Viewshed, and Minerals land use designations around the Juneau area accomplish this and are part of the revised Forest Plan for the Juneau area.

Comment: Each popular small boat anchorage should be listed, and protected (by the appropriate land use designation) from Log Transfer Facilities and incompatible uses. The need to maintain tree stands to provide wind buffers for safe anchorages must be factored into logging plans. (ATA)

Response: In land use designations where development is allowed, the standards and guidelines provide for a buffer along the beach fringe and estuary fringe in most alternatives. This should provide for safe anchorages in most situations. Site specific projects such as Log Transfer Facilities, will consider the impact to small boat anchorages, need for windfirm buffers, and effects of other perceived incompatible uses.

Comment: Ninety percent of all non-Wilderness recreation places should be maintained in a natural setting. (NCC)

Response: Alternative 1 would maintain 99% of non-wilderness recreation places in a natural setting. Alternative 11 would maintain 65% of the recreation places in a natural setting - more than any alternative except 1 in the long term.

Comment: (1996) Areas and anchorages that are important to recreation/subsistence need to be identified and protected.

Response: Important recreation areas (including anchorages) are identified in the Recreation Places map in the FEIS map packet and in the forest geographic information system which will be used during project planning. Standards and guidelines in the revised forest plan require that these places be considered during project planning.

Comment: The over six million acres of Wilderness and LUD II on the Tongass provide significant opportunities for development of the specialized ecotourism industry. Opportunities should be identified for encouraging such developments within these "limited use" designations. (STATE)

Response: We agree there are many opportunities. In addition there are another four million acres in natural land use designations which could support ecotourism as well as other forms of tourism. Seventy seven percent of the Forest is either legislated or assigned to natural setting land use designations in the revised forest plan. Goals, objectives, and standards and guidelines have also been updated in response to this concern. Tourism goals and objectives have been identified. The Forest-wide Recreation and Tourism standards and guidelines and each of the land use designations were revised to provide further direction as to whether major or minor tourism developments are acceptable or discouraged in each land use designation. The Forest Plan is not the appropriate level to identify site specific opportunities, but these guidelines should facilitate review of any specific proposal.

Comment: "Discrete areas offering unique opportunities to watch and photograph fish and wildlife" should be maintained. These are important to the growing tourism industry; industry should be asked to identify the most important areas. (STATE)

Response: Many comments have been incorporated into the revised Forest Plan land use designations which emphasize wildlife viewing opportunities. Commenters include industry, individuals, organizations, and agencies such as the Alaska Department of Fish and Game, who supplied maps of important viewing areas.

Comment: The majority of Southeast Alaskans (as shown in public surveys) want roaded access to recreation sites and areas. The Primitive Recreation LUD should apply only to Wilderness or inaccessible areas. (KPC)

Response: The revised Forest Plan seeks to strike a balance between roaded forms and unroaded forms of recreation. In addition, natural setting land use designations such as Remote Recreation (formerly Primitive Recreation) have other values such as wildlife, aesthetics, research, and subsistence.

Comment: The Plan must place greater emphasis on the expansion of back country, roaded and facility-oriented recreation opportunities on the Tongass to increase and diversify tourism in Southeast Alaska. (STATE)

Response: Numerous changes to land use designations in the revised Forest Plan primarily from primitive to semi-primitive recreation were made in response to this and similar comments. Further, roads are permitted under certain circumstances in several of the natural setting (backcountry) land use designations such as Semi-Remote Recreation, Special Interest Areas, and Scenic Rivers. The Transportation and Utility System land use designation allows for development of the State's identified transportation and power transmission intertie network, which could provide improved access to primitive recreation settings and legislated areas.

Comment: The Plan fails to address the shortages of non-motorized and boat-access recreation that will occur. (SEACC)

Response: The plan acknowledges that projected demand will exceed existing supply capacity for semi-primitive motorized forms of recreation, which includes much of the marine oriented recreation in Southeast Alaska. There is a discussion on the effects of this shortage, such as increased competition, increased social encounters, individuals preferences, and pressures on Wilderness, LUD II's, and natural land use designations.

Comment: You assume that recreation and tourism needs will be satisfied by a general "environmental" alternative. They won't. You need an alternative emphasizing recreation and tourism. A "tourism-based" alternative is needed. (AD)

Response: Tourism takes on many forms. Some require extensive development such as roads, buildings, and support facilities. Others require vast tracts of natural landscapes. A range of natural settings and development opportunities is provided in the various alternatives, while the revised Forest Plan seeks to strike a balance.

Trails, Cabins and other Facilities

Comment: The Tongass' potential for a "world-class system of trails and shelters, especially in roadless and primitive areas" is poorly addressed. Hiking "will be increasingly valued as an end in itself, not just as a means of traveling from one point to another." The Plan needs to recognize this: give trails high visibility, include renovation and reopening of trails, and construction of new ones. More trails are needed. Better recognition of and emphasis on trails is needed. Proposed new trail miles are "gigantically lower" than proposed new road miles.

Response: We have added additional discussion in the FEIS in response to this comment. Decisions for trail construction, reconstruction, maintenance, and management are made at the site specific level. Ranger Districts are identifying these needs in various recreation planning efforts. Recently completed plans include Petersburg and Wrangell District on the Stikine area, and an interagency effort in the Juneau

area. These planning efforts generally involve extensive public involvement to identify and prioritize future opportunities. The current list of scheduled trail projects can be found in Appendix L of the Forest Plan. The level of activity for construction, operation, and maintenance is a function of funding through annual appropriations from Congress.

Comment: Expansion of the back-packing trail system is needed; also, a system of small craft harbors and kayak harbors as "trails" would be nice. A system of "tracks" through primitive areas is proposed. These would be blazed or marked undeveloped routes to scenic areas, fishing spots, etc. ("the easiest way to a place"), similar to the Kuiu Island canoe/kayak route.

Response: These are all excellent ideas for the ranger districts to consider when identifying their future goals. Also see response above.

Comment: "Every alternative and every prescription should include protection for all recognized trails in the Tongass Forest" (such as those in "90 Short Walks Around Juneau"). This should include a corridor of sufficient width to protect the trail environment and views. Also, historic trails and proposed new trails should be similarly protected. (TAKU)

Response: Protection of trails was an important consideration in deciding on land use designations for the revised Forest Plan. In addition the Visual Priority Travel Routes and Use Areas, (Forest Plan, Appendix F), identifies numerous trails where scenic quality will be emphasized. Trails in the Juneau area are protected or maintained by the Semi-Remote Recreation, and Scenic Viewshed land use designations and their associated adopted visual quality objectives, and beach fringe and estuary standards and guidelines.

Comment: Expand the USFS cabin system, especially in "micro-pristine" settings close to (a small-boat trip away from) larger communities. Build more campsites on Prince of Wales, more cabins on Admiralty. Needed trail improvements (especially boardwalk-type) should be highlighted in the Plan. Close all roads and put the money into well-maintained trails and cabins.

Response: The revised Forest Plan land use designations allow for various recreation opportunities, and the standards and guidelines support their development. The current schedule for development of many of these opportunities can be found in the Forest Plan in Appendix L. The number of projects developed is dependent on annual appropriations from Congress.

Comment: More recreation opportunities (including roaded, and boat and trail access) are needed in unlogged areas. More recreation developments not linked to timber sales are needed.

Response: See response above.

Comment: No more "development" for recreation is needed.

Response: See response above.

Comment: Coordinate recreation development with timber harvest planning to "maximize public access to the forests." (PLF)

Response: Coordination of recreation opportunities with timber sale planning is a requirement of the forest-wide recreation standards and guidelines. The level of access provided is considered with each project including road management objectives to consider access after the timber sale.

Comment: The budgets/expenditures proposed for recreation/tourism facilities and developments are inadequate. (AD, C-TS)

Response: The schedules for recreation developments found in Appendix L of the Forest Plan are generally based on past funding levels from Congress. An increase in funding would simply accelerate the level of implementation of the capital investment program.

Comment: You need a forest-wide ORV (off-road vehicle) policy, and especially one for the Yakutat Forelands. ORV trails are being built "daily" without USFS knowledge. Close all ORV trails except those essential to community ventures and which do not impair habitat.

Response: Guidelines have been added to the Forest Plan in response to this comment. The Forest is designated open to Off Highway Vehicles or ORV's, if the use is compatible with land management and resource objectives, and capabilities unless specifically designated closed. Travel management and access plans, which include closures, have been and will continue to be developed normally at the Ranger District level as the need arises.

Roadless and Wilderness

(See also Geographic Area comments.)

Comment: Manage the entire Tongass as Wilderness and "Watershed Preserve": all roadless areas should be made Wilderness. Why is no more Wilderness being considered? You still include it as an issue, and more Wilderness is what Americans want. (1996) More wilderness-type areas (or areas where no development such as timber harvest and road construction would occur) should be established.

Response: The Tongass is managed as part of the National Forest System. National Forests are managed for a variety of multiple uses which range from Wilderness to intensive use of resources. Currently over 35 percent of the Tongass is set aside as Wilderness. Another 4 percent was set aside by Congress as LUD II designation, to be managed primarily to maintain its wildland character. In addition, land use designations in the Revised Forest Plan which emphasize natural conditions, namely Remote Recreation, Semi-Remote Recreation, Wild and Scenic Rivers, and Old-Growth Habitat constitute land allocations covering 44 percent more of the Forest. Thus over 79 percent of the forest will be allocated to land use designations that have goals to primarily maintain natural conditions, such as a "watershed preserve". Of the remaining 22 percent (about 3.2 million acres) of the Forest, only about 1.2 million acres is considered for ground disturbing management activities over the 150 year planning horizon.

The Draft Environmental Impact Statement considered Wilderness additions to the Tongass. Between the DEIS and Supplement to the DEIS, Congress addressed the Wilderness issue with passage of the Tongass Timber Reform Act in November of 1990. The legislation added over 300,000 acres of Wilderness to the Tongass as well as the creation of LUD II areas totaling over 727,000 acres. Since Congress addressed the Wilderness issue during this planning effort, no additional Wilderness is considered as part of this plan revision. However, 110 roadless areas that meet the criteria for consideration for Wilderness remain on the Tongass. Each of these 110 roadless areas is disclosed in Appendix C of the FEIS.

Comment: No more Wilderness (AFA, AVA, AMA, others). No more timberland should be made Wilderness. (GOLD) The Alaska National Interest Lands Conservation Act (ANILCA) precludes doing any more studies for Wilderness (AMA, PLF). (1996) We already have enough Wilderness.

Response: Congress addressed the Wilderness issue with passage of the Tongass Timber Reform Act in November, 1990. No further recommendations are made in this revised Forest Plan.

Comment: A "protective status" should be considered for the areas that were part of Tongass Timber Reform Act deliberations but which the Act did not "set aside." (SEACC)

Response: Land use designations which provide a "protective status" were considered for areas considered but not set aside for Wilderness by the Tongass Timber Reform. Many of these areas did receive allocations to maintain the natural conditions.

Comment: No lands outside Wilderness should be put in a "quasi-wilderness" status (such as Primitive Recreation LUD): leave them open for multiple use management and access. (AMA) There should be no "de-facto wilderness" such as Primitive Recreation. (PLF) (1996) How are Habitat Conservation Areas and other special designation or special restriction areas different from legislated Wilderness? Is the intent to manage HCA's as Wilderness Areas?

Response: The land use designations provide for a spectrum of multiple uses. Some of these land use designations such as Remote Recreation (formerly Primitive Recreation), allow for uses not permitted in Wilderness, such as rustic recreation facilities, and different techniques for managing visitor use. Other land use designations such as Semi-Remote Recreation and Old-Growth Habitat move further along this spectrum, where additional developments and uses are permitted. Both of these land use designations allow for many types of recreation, wildlife habitat improvements, communications sites, road corridors, mining, and numerous other special uses.

Comment: The Roadless sections of the Supplement fail to disclose the resource trade-offs or wilderness opportunities foregone as development occurs. (SEACC)

Response: The roadless section discusses the overall impact to roadless areas by alternative and the wilderness opportunities forgone by the various alternatives. Other resource trade-off discussions can be found in the recreation, wildlife, and subsistence sections. Appendix C, Volume II discusses the changes to each specific roadless area. The discussions include resource values and tradeoffs, impacts to Wilderness values, and the land use allocations of the roadless area by alternative.

Comment: Concerns with the Wilderness LUD prescription:

- traditional access to Wilderness is guaranteed by ANILCA. The Wilderness standards and guidelines seem overly restrictive in this light.
- there are no provisions for fisheries enhancement or for facilitating public access, also as guaranteed by ANILCA. (TRS)

Your plan doesn't protect traditional Alaskan activities in, and access to, ANILCA Wilderness.

Response: Upon review of the standards and guidelines for Wilderness and Wilderness National Monuments, traditional access and activities are provided for in conformance with ANILCA. Fisheries enhancement is also addressed and allowed in the standards and guidelines. Specific fisheries enhancement projects are identified in Appendix L of the Forest Plan, some of which are in Wilderness.

Comment: The "stricter and unnecessary regulations" for helicopters (vs. fixed-wing aircraft) in ANILCA Wilderness are of concern. The prior use of helicopters can be demonstrated. (AACA)

Response: An independent study and analysis is being conducted for the Tongass on whether or not to allow helicopters landings for access by the general public in areas that were used prior to Wilderness

designation. The study also incorporates Wilderness areas designated by the Tongass Timber Reform Act. A decision regarding this analysis will be made by the Regional Forester this winter.

Comment: (1996) Do not allow helicopter landing sites within designated Wilderness.

Response: See response to the prior comment above**.**

Comment: You permit roads and snowmobiles in Wilderness? How, why?

Response: The enabling legislation for Wilderness areas in Alaska, ANILCA, specifically allow for certain traditional activities and access. Snowmobiles are included. ANILCA Title XI, "TRANSPORTATION AND UTILITY SYSTEMS IN AND ACROSS, AND ACCESS INTO, CONSERVATION SYSTEM UNITS", defines a process for studying and authorizing roads and utility corridors in Wilderness. In making these exceptions to the Wilderness Act for Alaska Wilderness, Congress recognized the remoteness and lifestyles of many rural residents, as well as the undeveloped nature of transportation and utility networks.

Comment: Temporary facilities in Wilderness should have a specific time limit for removal of the structures and rehabilitation of the site (reference Lands standards and guidelines, p. 4-29). (SCS)

Response: Issuance of a Special-Use permit for temporary facilities requires a site specific environmental analysis, outlining timeframes and rehabilitation of the site as well as other conditions of use. These permits are generally granted for periods of 1 or 5 years. Alaska region manual direction calls for temporary camps to be taken down and laid flat during periods of non use, and all unnecessary equipment removed from the site.

Comment: The Roadless Area Map contains one known error: there is more roadless in the Honker Divide/Sweetwater River area than is indicated, especially on the northern end. (GP)

Response: We have made some corrections to the roadless inventory. The inventory was updated for the SDEIS and again for the FEIS. The inventory was electronically generated, then reviewed by the areas and corrected. It includes several assumptions, such as the exclusion of NEPA approved roads and harvest units as well as existing ones. In addition a buffer of 600 feet around harvest units and 1,200 feet along roads was incorporated to reflect the impact of development activities to the roadless character. Consequently small slivers of areas may not be included in the roadless inventory.

Scenery

Comment: (1996) Clearcuts are a form of eye pollution. They hurt the wilderness experience and are a detriment to tourism.

Response: Approximately 5.7 million acres of the Tongass are formally designated as Wilderness. An additional seven million acres (approximately) are allocated to land-use designations in which essentially no commercial timber harvest will take place. A vast majority of the areas identified as important to the various components of the tourism industry are included in 12.7 million acres of “no-harvest” LUD’s. Many other major saltwater boat routes, destination saltwater areas, or interior recreation sites or portions thereof, are allocated to the Scenic Viewshed LUD. In these areas timber harvest will be characterized by generally small clearcuts to single tree or group selection. Many of the remaining sensitive viewsheds are allocated to modified landscape where timber harvest will generally be characterized by clearcutting. However, harvest areas will be designed to blend as much as possible with natural features in the landscape and in some cases will incorporate such features as groups of “legacy trees” to partially mitigate visual and habitat impacts.

Comment: The Marine Highway viewshed, and the viewsheds of cabins and other recreation facilities, should be managed for Retention (visual quality objective). "Some of the more prominent corridors which the cruise ships pass through should be managed to keep the tourists happy so that at least some money will still come into Southeast Alaska." The 1990 preferred alternative is supported, but there should be additional consideration for scenic values in visual Sensitivity Level 1 areas. (AVA) The viewsheds and recreation areas of or near communities should have a scenic quality emphasis.

Response: One of the goals of Alternative 11 is to provide scenic landscapes adjacent to identified recreation use areas and travel routes including the Alaska Marine Highway and other cruise ship routes. Forest Service cabins, recreation use roads, trails, the Alaska Marine Highway, the cruise ship routes, small boat waterways, boat anchorages, marine parks, picnic shelters, campgrounds, resorts, and related recreation attractions were considered and a list of those determined to be a priority for visual consideration were identified and are a part of the revised Forest Plan (Forest Plan, Appendix F).

In areas allocated to the Scenic Viewshed land use designation, the adopted Visual Quality Objective is Retention and is applied in foreground areas seen from the identified Visual Priority Travel Routes and Use Areas (Forest Plan, Appendix F). A Retention visual quality objective means activities are designed to not be visually evident to the casual forest visitor. In areas allocated to the Modified Landscape land use designation, the adopted visual quality objective is Partial Retention which is applied to foreground areas seen from Visual Priority Travel routes and Use Areas (Forest Plan, Appendix F). A partial retention visual quality objective means management activities may be evident but remain visually subordinate to the characteristic landscape. Alternative 11 also allocates major portions of the viewsheds of major boat routes and important recreation areas to “no-harvest” LUD’s.

Comment: Prescriptions that emphasize scenic quality outside of Wilderness are not appropriate. (AMC) Visual constraints in the Timber Production LUD are inappropriate. (AFA) There is too much emphasis on visual quality in timber harvest areas. If people don't like it, they should look the other way. Allow silviculture in scenic viewsheds and interpret it: show a working forest.

Response: Management of scenic quality is appropriate in areas outside of Wilderness. The National Forest Management Act states (Section 6.F.(v)): "Such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation and esthetic resources, and the regeneration of the timber resource". The National Environmental Policy Act of 1969 supports the integration of scenic values in Section 102 (A): "utilize a systematic, interdisciplinary approach which will insure the integrated use of the

natural and social sciences and the environmental design arts in planning an decision making which may have an impact on man's environment".

The timber production land use designation does emphasize production of industrial wood products. The visual quality objective is primarily maximum modification which means they area is likely to be dominated by management activities. The one exception is in the foreground seen area along identified priority travel routes and use areas (Forest Plan, Appendix F) where the adopted visual quality objective is modification. Even in a modification visual quality objective, activities may visually dominate the original characteristic landscape.

Comment: Managing for scenic quality should not take precedence over wildlife values.

Response: Scenic quality does not necessarily take precedence over any other resource value including wildlife. Nineteen land use designations with differing resource emphases are used to provide a mix of goods and services.

Comment: The Forest Service approach to visual quality is questioned: the idea of a percent of an area being modified or affected and still meeting visual objectives. Specifically: (NCC)

- if an area is to have a visual emphasis, then zero percent should be altered
- the objectives for the Scenic Viewshed and Modified Landscape LUD's are not compatible with what the names imply: areas currently managed with "special concern" for scenic quality (Rynda Island, for example) appear devastated. Is this how these areas will be managed?
- what about the effects of spur roads? Guidelines are needed.

Response: (See also response to the first comment in this section.) The use of Visual Quality Objectives (VQOs) is nationally recognized as a method of incorporating the concerns of forest users while allowing varying degrees of management activities to occur. Our approach to visual quality is well documented in the National Forest Landscape Management Handbooks, specifically: Volume 2, Chapter 1: The Visual Management System (1974).

Questioning the Forest Service approach to visual quality is outside the scope of the Revision of the Forest Plan. We disagree that visual emphasis means "zero percent should be altered". Depending on the theme and objectives of the specific Land Use Designation, visual emphasis could be applied by using a variety of timber harvest methods to achieve adopted VQOs. In seen areas, some of these techniques include:

- Single tree selection
- Group selection or small clearcuts shaped to appear to be a natural occurrence

We do not agree that the Scenic Viewshed and Modified Landscape land use designation names are misleading. In areas allocated to the Scenic Viewshed land use designation, the adopted Visual Quality Objective (VQO) is Retention which is applied in foreground areas seen from the identified Visual Priority Travel Routes and Use Areas (Forest Plan, Appendix F). A retention VQO means activities are designed to not be visually evident to the casual forest visitor. In areas allocated to the Modified Landscape land use designation, the adopted visual quality objective is Partial Retention which is applied to foreground areas seen from Visual Priority Travel routes and Use Areas. A partial retention visual quality objective means management activities may be evident but remain visually subordinate to the characteristic landscape.

We agree there are areas which currently exist in visual conditions not compatible with the desired future condition of the Scenic Viewshed and Modified Landscape land use designations in the revised Forest Plan. Future management of these areas will be to move toward the desired future condition. There are numerous options to move toward this goal including:

- defer any harvest in the viewshed until the visual condition of the area meets the desired future condition, or
- use rehabilitation techniques to expedite moving toward the desired future condition.

Visual resource guidelines for road construction are provided in the Transportation Forest-Wide Standards and Guidelines.

Comment: The "adjacent height requirement" for visual quality is excessive. It will lead to adjacency problems beyond what is currently modeled, and will make much of the surrounding timber uneconomic. "Concealing stumps" should be the primary objective. (AFA) The visual constraint of 20-50 percent height of adjacent stands (SV and ML LUD's) is too restrictive. (KPC)

Response: The "height to adjacent mature stand" referenced provides a guideline (not an absolute requirement) for modeling purposes to assess the impact of the adopted visual quality objective for a given land use designation in a given landscape setting (visual absorption capability (VAC)). In the middleground setting, textural differences between old growth and second growth are often dominant features; stumps are not discernible. A primary objective of "concealing stumps", as you suggest, would address management of foreground seen areas only, and not the remainder of the visible forest.

Comment: The visual guidelines for rockpits are too restrictive. Well-planned rockpits can have many benefits, including turnouts, improved site distance and safety. (KPC)

Response: We agree that there are many benefits associated with rockpit development and often road design can incorporate a rock pit that provides added safety to the facility. However, the process of rock extraction leaves a permanent imprint on the landscape, and depending on location and design, could have long lasting visual impacts. The visual standard and guidelines for rockpits are applied to those areas seen only from Visual Priority Travel routes and Use Areas (Forest Plan, Appendix F), not all rock pits across the Forest. The degree of mitigation depends on the land use allocation, associated adopted visual quality objective, and the characteristics of the landscape from the viewing position.

Comment: FORPLAN modeling used only one average visual quality objective per analysis area. This does not adequately represent the standards and guidelines, and will likely lead to negative visual resource effects. (WLD)

Response: We have substantially improved the modeling of the visual resource in FORPLAN for the FEIS. Many different combinations of visual conditions were incorporated into the FORPLAN model. Please refer to Appendix B for a more thorough discussion of the modeling process used.

Comment: The EIS should address the potential of the alternatives for affecting the visual quality of the Chilkat Peninsula, including:

- an assessment of the importance of the Chilkat Peninsula scenic viewshed to visitors traveling to Glacier Bay (via ship or airplane)
- an analysis of the affects on the visual experience of those travelers.

The preferred alternative has classified the area as Modified Landscape without such an assessment. (USDI)

Response: The revised Forest Plan does recognize Icy Strait as a visual priority route (Forest Plan, Appendix F) and therefore it will be used a viewpoint to assess visual quality from. Using the Visual Management System, our visual inventory reflects the use patterns and visitor sensitivity associated with the Chilkat Peninsula.

The revised Forest Plan made adjustments of land allocations in this area. The entire foreground and portions of the middleground seen from Icy Strait are allocated to the Scenic Viewshed LUD. This includes Excursion Inlet, south to Couverdon Island, and north to Lynn Canal. Areas of suitable timber lands, seen in the middle to background distance, are allocated to the Timber Production LUD. Foreground views from

these areas in Scenic Viewshed LUD have an adopted visual quality objective of retention, which means activities would be designed to not be visually evident to the casual observer, while activities seen from middle and background distance would be designed to remain subordinate to the characteristic landscape, meeting the partial retention visual quality objective.

Comment: Many areas assigned the Scenic Viewshed or Visual Timber land use designations have already been logged. How will you restore the scenic quality of these areas to fit these land use designations?

Response: We agree there are areas which currently exist in visual conditions not compatible with the desired future condition of the Scenic Viewshed and Modified Landscape land use designations in the revised Forest Plan. Future management of these areas will be to move toward the desired future condition. There are numerous options to move toward this goal including:

- defer any harvest in the viewshed until the visual condition of the area meets the desired future condition, or
- use rehabilitation techniques to expedite moving toward the desired future condition.

Comment: We support the Marine Highway as a National Scenic Byway. (AVA)

Response: The Southeast Alaska State Marine Highway has been recognized as a Visual Priority Travel route in the revised Forest Plan (Appendix F). Nomination of the Alaska Marine Highway as a Scenic Byway was considered but did not receive a consensus of support from local Southeast Alaskan communities. In 1991, Congress enacted the Intermodal Surface Transportation Efficiency Act (ISTEA) which provides support to management of scenic travel routes as well as state transportation programs. The State of Alaska, Department of Transportation, in response to ISTEA, has established the Scenic Travel Enhancement Program (STEP). The Forest Service fully supports this new program and will be actively involved as the State's program evolves.

Comment: Charge the cruiseships for the scenic benefits derived from the Tongass.

Response: Visitors to any part of the Tongass, whether they are residents, tourists or cruiseship passengers are allowed to enjoy the scenery without charge. Should commercially operated endeavors, such as outfitter guides, tourboat operators, etc. take their customers to shore to enjoy the National Forest, then fees are charged in accordance with the specific special use permit.

Socioeconomic

(See also Minerals, Recreation, Timber and Wildlife sections.)

Community Stability and Diversity

Comment: The subsistence effects displayed for the Wrangell area are unacceptable, with 40-60 percent reductions in habitat for deer. This is not consistent with the long history of subsistence use in the area, nor with the TTRA requirement for providing for the sustained yield of all renewable resources.

Response: The subsistence effects related to deer habitat for the Wrangell area displayed in the FEIS do show a reduction in habitat capability after 100 years for most alternatives (ranging from <5-20 percent). They also show, however, that all alternatives will exceed the habitat capability necessary for the projected increase in Wrangell deer use, and most alternatives, including the preferred, for all rural hunters.

Comment: There should be no more roads, and no more logging, in the traditional hunting and fishing areas used by the people of Hoonah. A recent Alaska Department of Fish and Game study predicts drastic declines for the area if logging continues. Work with the people of Hoonah, don't dictate to them. (HTC) (1996) Cumulative effects of profit corporations and Forest Service logging schedules to the Hoonah's customary and traditional usage areas will eliminate traditional and customary harvesting, hence altering the status of a hunting and fish gathering people.

Response: The subsistence effects related to deer habitat for the Hoonah area displayed in the FEIS do show a reduction in habitat capability after 100 years for most alternatives (ranging from <5-35 percent). However, in 100 years the estimated increase in Hoonah deer use exceeds even the current capability. The Preferred Alternative includes several large old-growth habitat reserves in the Hoonah use area.

Comment: Angoon's traditional use areas are seeing losses of habitat because of logging, and increased competition from sport hunters and from persons displaced from other areas (also due to logging). Competition and regulations aren't allowing the people of Angoon to "get their fair share" even now, and they're very concerned about additional future losses and competition as logging and roading continue.

Response: A list of 15 important subsistence areas was provided by the people of Angoon (48 signatures) as comment on the DEIS. Eight are within the Kootznoowoo Wilderness. For the remaining areas (some site-specific, some entire coastlines), a mix of non-timber and timber LUD's apply, although most specific bays and inlets are either in Semi-remote Recreation, Scenic Viewshed, or Modified Landscape. For those areas within timber LUD's, site-specific sale planning will include consideration of subsistence uses and needs. The subsistence analysis shows that, for those areas most used by Angoon for deer harvest, the needs of Angoon plus all other hunters will be satisfied over the next 100 years.

Comment: Estimates of effects from proposed timber harvest show 50 percent reductions in old-growth habitat for the Point Couverdon area. This will have drastic effects on subsistence use by Gustavus residents, since this is the only nearby subsistence use area they have. (GCA)

Response: The commenter is referring to the long-term (150-year) estimates of deer habitat reductions displayed in Appendix L of the Supplement. These figures are no longer applicable, although the revised analysis by WAA in the FEIS does show considerable reductions in deer habitat capability for both WAAs covering the lower Chilkat Peninsula. However, the TRUCS information shows that Point Couverdon is not one of the areas most used by Gustavus residents for subsistence purposes: Pleasant Island Wilderness, the Point Adolphus LUD II area, and private lands opposite Hoonah represent the majority of their

subsistence deer hunting. For the National Forest lands in these areas, deer habitat capability is estimated to exceed the projected increase in Gustavus deer use for all alternatives, and meet or exceed it for all rural hunters.

Comment: The harvest levels proposed for Tenakee Inlet won't permit a sustained yield of fish and game for subsistence purposes (ADF&G study cited). There is no "excess" habitat left. Any additional loss of deer habitat will adversely affect subsistence uses by Tenakee Springs residents. (C-TS, TSAB)

Response: The subsistence analysis for Tenakee Springs shows that deer habitat capability in those areas most used by residents will exceed the projected increase in Tenakee Springs deer use for all alternatives in 100 years, and for all rural residents.

Comment: None of the DEIS (1990) alternatives adequately considers "the lifestyles, local employment or traditional uses of the Hydaburg people with respect to their surrounding area," since most of the land is allocated to timber harvest. (HC)

Response: We agreed, and alternatives in the Supplement, RSDEIS, and FEIS responded to these concerns. The Forest Plan allocates approximately 47 percent of Hydaburg's community use area to a development LUD, but only 10 percent of these development areas are actually scheduled for timber harvest. Much of Hydaburg's community use area, including several specifically mentioned in their comments such as Sukkwan and Goat Islands, has been allocated to non-development LUDs or is not scheduled for timber harvest.

Comment: (1996) Communities on the Tongass should be encouraged to diversify economically in order to be less dependent upon logging and timber operations in the future.

Response: We agree and have included a Forest-wide standard and guideline to promote rural community assistance. The State and Private Forestry division of the Forest Service also provides grants and assistance to communities interested in diversification of their economy.

Comment: (1996) The timber industry provides stability to the communities of Southeast Alaska. Diversity comes from economic growth which the timber industry can also provide.

Response: The population and economy of Southeast has continued to grow and diversify over the last 10 years, even while the timber industry has been in decline. Trends and available data indicate that while some communities are dependent upon the timber industry, others are diverse and growing outside of the timber-based economy. This is discussed in detail in the Regional and Subregional Economy sections of FEIS Chapter 3.

Comment: (1996) Much of the data on subsistence harvests on pages 3-328 through 3-441 (Communities) comes from the Tongass Resource Use Cooperative Survey (TRUCS) conducted in 1987. Subsistence patterns in many Southeast Alaska communities have changed since those data were collected. Other information about the communities (e.g., demographic and employment characteristics) is based upon the 1990 census or the 1995 Alaska Economic Trends. Combination of harvest levels from 1987 with more recent socioeconomic data distorts the full picture of subsistence uses in communities. This inconsistency should be corrected in the FEIS.

Response: We have used the most recent available data for community level assessments, unfortunately the data available at this scale is not provided or updated yearly by a single source. Some information, including community population makeup, per capita income, and percentages of natives are only collected

by the United States Census Bureau every 10 years. TRUCS data is collected by the ADF&G and is currently in the process of being updated, until the update is completed, the 1987 survey data is the most current data concerning household use available across all communities. The number of deer harvested by community by WAA is updated by the ADF&G on a yearly basis. The State of Alaska, Department of Labor, updates community populations and community-group non-agricultural wage and salary employment on a yearly basis.

Comment: (1996) On page 3-409 (Port Protection) the numbers, from the Alaska Department of Community and Regional Affairs Database, 1995 do not appear to be accurate. For example, if 1.6 percent of 48 people in Port Protection are Native, that would be less than one person. One person of 48 would be 2.1 percent. There should be some explanation of how percentages were estimated.

Response: As stated in the previous response, the statistics for this section are not from a single source, or in a single base-year. The population numbers are from the State of Alaska Department of Labor and represent 1995 estimates. The percent of natives within each community are from the 1990 United States Census, these statistics are the most recent data available as the Census is updated every 10 years. To clarify the FEIS, we have identified dates with each statistic stated in the community assessment section.

Comment: (1996) Destruction of the forest, which provides for subsistence, is already responsible for declines in the quality of life. It is very important to Alaskans to preserve the environment, and to insure healthy fish runs and game populations.

Response: We have taken this into consideration and the Final Forest Plan incorporates old growth reserves and other provisions for fish and wildlife viability as well as the protection of other resources.

Modeling and Analysis, including Demand

Comment: The valuations used for "social goods" are faulty: wilderness, recreation and subsistence uses are all undervalued, since some values, such as "uniqueness" and quality of life, aren't accounted for. Recreation, fish and wildlife values are understated.

Response: Through identification of issues at the beginning of the NEPA process, important values are identified and embodied at an early stage in the forest planning process. All values need not and, perhaps, cannot be expressed in monetary form. The economic analysis for the FEIS has been conducted in accordance to FSH 1909.17, which states "Determine values only for outputs that are sold or potentially eligible to be sold if the law or Forest Service policy permitted." Therefore, no dollar value has been assigned to "quality of life" and other intangible goods. Recreation, fish and wildlife values were adopted from research publications based on recent survey information collected in Southeast Alaska. Under a different set of assumptions and using other methodology, presumably higher or lower values could be calculated. However, there is considerable disagreement within the research community as to the accuracy of any technique in measuring the social welfare contribution of some non-market goods. The values used in the FEIS were adopted because they were both current and area specific and submitted for peer review to assure their overall compliance with generally accepted economic principles.

Comment: The economic modeling and analysis in the DEIS is poorly done, and often does not follow accepted economic principles. (NMFS) The main problems are:

- the economic valuation methodologies and procedures, including fundamental theoretical issues and specific empirical considerations, have been used inconsistently, leading to factual misstatements, omissions, and logic contradictions.

- the surplus measures used are not unique and therefore do not correctly measure social welfare changes because the ordinary demand curve does not hold the level of utility or satisfaction constant. The conclusions drawn thus provide erroneous "willingness-to-pay" values.
- it is not reasonable, empirically or theoretically, to assume that demand for timber is perfectly price elastic and effectively infinite; demand and supply volatility over time has shown this to not be the case.
- the arbitrary demand cut-off constrain their respective "surplus" measures, thus effectively understating their true worth to society and virtually assuring that the value of non-timber goods and services will not be optimized.
- the use of linear program constraints to approximate non-priced demand cannot be justified either on the basis of empirical evidence or economic theory; non-priced demand and supply must be treated in an equivalent manner with market goods if any conclusion about net social welfare are to be made. Using a national accounting method to value non-priced demand could be a useful tool.
- it is not clear the DEIS employed the consumer and producer surplus measures it claims.

Response: Two types of economic analyses are included in the FEIS; economic impact analysis and economic efficiency analysis. Economic efficiency analysis measures the value placed on a good, service, or resource by an individual or group. Economic impact analysis traces actual dollar expenditures throughout the regional economy. Although different, the two types of analyses are complementary. Impact analysis provides information about market transactions and efficiency analysis provides information about values that the market fails to capture. Economic impact or distributional considerations can enter into policy decisions completely consistent with economic efficiency. It is the resource manager's option to decide whether or not impact or equity considerations outweigh any economic value foregone by other groups within society. The information provided by an economic efficiency analysis makes such tradeoffs explicit and allows for a more fully informed resource allocation decision to be made.

While it is true that the surplus measures are not unique for individual sites in the Tongass, they **are** unique to Southeast Alaska. The level of sensitivity necessary to measure changes in social welfare reflective of all attributes of the Tongass was not attainable using the best available data. Consequently, surplus values were developed at an aggregate level, unique to the Tongass, but lacking in sensitivity to the innumerable quality differentials inherent in the forest resource.

With regard to timber demand, Alaska competes in global wood products trade, supplying only a fraction of the total volume of raw materials purchased by the countries of the Pacific Rim. In Japan alone, the annual demand for timber far exceeds the long term sustained yield of the Tongass. Alaskan producers sell their products in a highly competitive market where the price for all but the most specialized solid wood products is determined by global supply and demand interactions. Therefore, the demand for timber depends primarily upon the ability of processors in Alaska to manufacture wood products at a cost at or below the going market price to remain competitive with other sellers of like products. The demand and supply volatility observed over time is largely reflective of the fact that timber processors in Alaska are operating in a high cost environment causing them to be extremely sensitive to fluctuations in the market price of their end products. When timber markets soften, high cost producers are the first to feel the effects of lower prices and reduced profits. Estimates of timber demand for the next decade are based on an analysis of market share in which the relative competitiveness of Alaska in world timber markets is assumed to remain relatively stable. Thus, demand for timber is not projected to be infinite, but remain somewhere between 330-600 MMBF annual net sawlog for the next 10 to 15 years. (Brooks/Haynes, 1994; Irland, May, 1992).

The consumer surplus values in the FEIS are consistent with the concept of "value in use". Use value, as the name implies, pertains to physical use of the resource, or participation in a resource-related activity. An estimate of the potential future use of resources (i.e. demand) is, therefore, essential to determine the value of resource outputs generated over an extended period of time. Of course, the net present value calculated for any resource will be in error to the extent the underlying demand projection fails to materialize. However, even as the reliability of any forecast diminishes at its outer limit, the values of concern are also greatly reduced by the discount rate.

There are no constraints on net social welfare within the FORPLAN model.

Consumer surplus values were incorporated in the economic efficiency analysis (see Chapter 3-Socioeconomics, discussion on net public benefit).

Comment: No real price or cost trends have been used. (NMFS)

Response: We have undertaken further research through the Pacific Northwest Experiment Station (Richard Haynes and David Brooks) and through an independent contract (Lloyd Irland). Alaska Forest Association also independently undertook a study which was completed by Gruenfeld and Associates. After review of the findings of each of these studies, we have elected to utilize the predictions made by Brooks/Haynes (1994). Those predictions looked at both price and cost projections for the coming 20 years and have predicted a real price increase in net stumpage. Those real increases have been incorporated into the FORPLAN model for the FEIS. See the Timber section of FEIS Chapter 3 and Appendix B for further detail.

Comment: The following are specific problems related to the economic modeling of recreation, fish and wildlife uses: (NMFS)

- the use of composites to value induced wildlife and fish user-days and recreation
- using fixed recreation use values for wildlife when the cumulative effects indicate rapidly declining wildlife carrying capacities (this is empirically and theoretically incorrect)
- no value has been displayed for the demand for retention of wild, scenic, and undeveloped resources
- the use of Alaska population trends to predict demand is inappropriate because much of the use comes from out-of-state users
- there are no estimates of changes in recreation demand that would result from increases in timber industry jobs under development oriented alternatives
- a composite RVD with a fixed value is inappropriate, the values will change in response to differing competing uses.

Response:

- Demand projections were made in terms of visitor days rather than activity days. The average visitor participates in a number of activities, each having a different willingness-to-pay value. Using the weighted average value across all activity groups assumes that the pattern of recreational use in the future will be similar to that currently observed.
- The bulk of non-consumptive wildlife use occurs in designated viewing areas where populations are not expected to decline.
- The recreation demand analysis was expanded to include demand estimates for each ROS group.
- Demand was projected to be linear for all ROS groups, this assumption is discussed in the FEIS. Only the supply of the ROS3 group was found to already be limiting consumption, ROS supply for groups ROS1 and ROS2 were not estimated to be limiting consumption during the planning period.
- Employment impacts were analyzed using a single multiplier for all recreational opportunities provided under the alternatives.

Comment: The economic analyses are flawed. (SEA) The economic analysis of non-timber outputs appears flawed. (TRS)

Response: A brief description of the rationale and assumptions supporting the economic analyses is included in Chapter 3 (Social and Economic Environment) and Appendix B of the FEIS. Please see the other responses to comments in this section for further clarification.

Comment: It is not appropriate to apply fixed costs to a long time horizon as you have done.

Response: Please see response to previous comment on price and cost trends.

Comment: (1996) The RSDEIS does not accurately portray the economic impacts to fish and wildlife-dependent industries and users. It essentially ignores the economic values of wildlife for both consumptive and viewing uses.

Response: As discussed in the Socioeconomic section in Chapter 3 of the FEIS, salmon harvesting and seafood processing employment was estimated and displayed for past trends, but impacts to the fishing industry due to implementation of the Forest Plan were not. Values and industries dependent on non-consumptive fish and wildlife uses are not directly addressed in the analysis due to a lack of available data, but are considered within the employment and income figures for recreation and tourism activity.

Comment: (1996) The economic analysis in the RSDEIS only deals with timber and timber related jobs. It did not analyze subsistence, which has proven to be of substantial economic importance to this region.

Response: Impacts to subsistence have been analyzed qualitatively within the community assessments.

Comment: (1996) The RSDEIS fails to include information regarding the land use needs and economies of the recreation/tourism industry which is comparable to the information provided on the timber industry. The RSDEIS also failed to address the rapid growth of national and international demands for the types of experience the Tongass offers, or the role the Tongass plays in drawing out-of-state visitors to Alaska as a whole.

Response: Throughout the Socioeconomic section in Chapter 3 of the FEIS the need for data concerning the recreational and tourism-related uses of the Tongass are mentioned. The impact analyses includes a definition and explanation of assumptions made concerning the recreation and tourism industry. The trends at a national and international level are beyond the scope of this project.

Comment: (1996) The term "tourist dollars" needs to be clarified. Often these are generated by people recreating following a business function relative to the timber industry. There should be a distinction between "timber tourists" and "tourist vacationers."

Response: Such an analysis would require data collection beyond the scope of this analysis. The money that flows into Southeast Alaska from outside visitors, whether tourist on vacation or business, will generate the same impact to the local economy based on the multipliers used in the FEIS analysis.

Comment: Willingness-to-pay values for recreation, tourism and non-consumptive wildlife uses should be pursued rather than dropped from the analysis. (SEACC) The concept of willingness to pay (as used for recreational hunting and fishing) includes not having to travel to a more distant or less preferable site. This factor hasn't been accounted for in your analysis of the effects of displacement due to timber harvest.

Response: Willingness-to-pay values for recreation and tourism, which include non-consumptive wildlife uses, were removed from the FORPLAN model but they are still included in the economic efficiency analysis (see Chapter 3, Socioeconomic section of the FEIS).

The concept of net willingness-to-pay represents the economic benefit received by an individual from using a site given the alternative of no access. Therefore, it is apparent the availability and cost of substitute goods is embodied in the concept of willingness-to-pay. However, the values listed in the FEIS are

necessarily broad and relate to the choice between the Tongass National Forest or an alternative site. Evaluating the economic efficiency of project level activities (including the economic effects of the redistributing use among sites within the Tongass) is beyond the scope of the forest plan.

Employment Estimates

Comment: (1996) The economic effect of a reduction in the Allowable Sale Quantity or harvest level was not considered or completely analyzed. While the number of jobs each alternative could provide is shown, the number of jobs which could be lost under each alternative was not shown. The significance as well as the severity of the socioeconomic impacts deriving from any selection which results in the loss of timber jobs on the Tongass should be incorporated into the document.

Response: The number of jobs that could be lost or gained by alternative can be determined by subtracting the number of jobs estimated by alternative from the number of jobs currently held. The FEIS includes a graphic analysis, as well as a table of the differences in jobs by alternative from an estimated baseline level of jobs.

Comment: (1996) The Preferred Alternative will not sustain the economy of Southeast Alaska. The job protection promises of the Tongass Timber Reform Act must be kept. There will be further job losses resulting from the closure of mills if the Preferred Alternative, with its reduced harvest level, is implemented. Jobs in all public sectors, private businesses and non-profit organizations that provide goods and services to the communities will be lost.

Response: The TTRA provision regarding seeking to provide a timber supply to meet the market demand may be interpreted as a concern for employment. Potential effects of alternatives on timber supply and employment are discussed in Chapter 3, Timber, and Economic and Social Environment, sections of the FEIS. The Forest Plan will create an updated multiple-use sustained yield national forest management framework for the economy of Southeast Alaska. Past trends indicate that while the timber industry in Southeast Alaska has been declining, population and economic growth in other sectors has been increasing. The employment and income impacts by alternative have been presented in Chapter 3, Regional Economy Consequences, of the FEIS.

Comment: (1996) Clearcut logging and ecotourism cannot coexist. In the long-term, ecotourism will provide more jobs. Continued logging would terminate many fishermen's' ability to make a living. More people's jobs depend on fishing than logging/timber.

Response: The Tongass National Forest is managed under applicable law to provide for the multiple use of forest resources. The Forest Plan has been revised to balance the resource opportunities between the wood products industry, recreation and tourism, salmon fishing, seafood processing, and mining.

Comment: Your employment projections appear to ignore interactions between timber harvest and other uses of the Tongass. Unchanging employment is shown by alternative: cannot "comprehend or accept that only timber ... jobs will vary with the type of Forest management selected." The assumption of no significant changes to employment throughout all alternatives is unreasonable. The "no effects on jobs" projections are unbelievable; how can recreation and tourism be unaffected regardless of the harvest level? (TRS) Timber management will have effects on other employment sectors, such as tourism (ugly landscapes) and guiding/charter boating (declining wildlife populations). You imply that there will be no net incremental benefit to preserving the forest for non-timber related jobs: as if cutting 1.4 million acres will not affect commercial fishing, sport fishing, or recreation/tourist jobs! "This is utter nonsense!!" Showing no effects of alternatives on employment [income] from fishing, recreation, tourism and hunting "totally ignores the years of research." (SC-J)

Response: Employment impacts were reanalyzed to account for the varying levels of recreational opportunity provided under the alternatives. The employment and income associated with commercial fishing is still held constant across all alternatives as discussed in Chapter 3, Socioeconomic section of the FEIS. Standards and guidelines and management area prescriptions have been structured to prevent the deterioration of fish habitat in areas of timber harvest. Also, within a given range of resource availability, government regulations limiting entry and catch have more significant implications for employment. There is no known research that has shown that timber management has had adverse effects on jobs related to commercial fishing, sport fishing, recreation or tourism. In fact, trends are quite the opposite.

Comment: Timber employment appears to be overestimated: a higher multiplier was used for timber-related secondary jobs than for non-timber secondary jobs (fishing, tourism). According to Dr. Arlon Tussing, "the most one can use is 1/2 of a secondary job for each job in a primary industry." Also, you need to display seasonal and year-round employment separately.

Response: There are a number of reasons why timber-related secondary jobs have a higher multiplier than tourism. The primary reason is the fact that the tourism industry is actually a composite of retail and trade businesses that supply goods and services to people while they are away from home. In general, the retail and service sectors of the economy pay lower wages and retain less of their sales dollars within the region in comparison to manufacturing industries. More integrated sectors of the economy result in higher economic multipliers. Manufacturing industries, such as the wood products industries, usually attract other spin-off businesses which feed into their production process. This results in higher economic multipliers. As with many economic parameters, the multiplier is largely defined by the economic model used in the analysis and the assumptions underlying its use. It serves as only one of numerous ways to quantify the relative importance of an industry, or group of industries, to the regional economy.

Economic Effects

Comment: "Using timber harvest as a means to establish community stability has been a horrible failure. Little logging villages are temporary camps for transitory people. ... Thinking that providing a continued supply of logs will automatically provide for healthy lifestyles is a lot like feeding bears ... ." If the timber industry is allowed to grow, that's just asking for more economic problems in the future, similar to the situation now in Washington and Oregon.

Response: One of our objectives is to manage the Forest to promote community stability in an environmentally sound manner. Providing a mix of goods and services that maximize net public benefit is the goal. The Tongass Timber Reform Act, Section 101, provides for seeking to provide a supply of timber from the Forest which meets annual market demand and meets the market demand for each planning cycle consistent with providing for multiple use and sustained yield of all renewable forest resources. Timber market demand studies indicate that market demand for the coming 10 to 15 years will likely be in the range of 330 to 600 MMBF net sawlog (Brooks/Haynes, 1994; Irland, May, 1992). The closure of both Southeast Alaska pulp mills could result in a lower demand. The revised Forest Plan seeks to meet the predicted market demand in the context of this TTRA direction.

Comment: After eight decades of logging, none of the smaller mills have made it or remained in business. Only APC and KPC, due to the artificiality of the long-term contracts, have made it. Instead of a healthy market economy, the Forest Service has created two regional monopolies. The Proposed Plan only continues and strengthens this situation.

Response: See previous response regarding the Tongass Timber Reform Act, Section 101; i.e. seeking to meet market demand. In addition, the Tongass Timber Reform Act, Section 105(f) directs the Secretary of Agriculture to "seek to provide a supply of timber from the Tongass National Forest to those purchasers

qualifying as 'small business concerns' under the Small Business Act" to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources.

Comment: The Supplement fails to discuss what will happen to the timber industry once the 50-year contracts end (2004 for KPC and 2011 for APC). (SEACC)

Response: The TLMP Revision is only a 10-15 year plan. Providing a decadal allowable sale quantity on a non-declining even flow basis that seeks to meet market demand annually and for each planning cycle, in accordance with Section 101 of the Tongass Timber Reform Act, is our goal. Reassessment of market demand on an annual basis is a part of the monitoring plan (see Chapter 6 of the revised Forest Plan). The RSDEIS and FEIS reflect the termination of the APC long-term contract and do not project continuation of the KPC contract beyond the year 2004. The FEIS addresses the very recent KPC pulp mill closure announcement.

Comment: (1996) The people who developed the infrastructure of this region [i.e., the timber industry] are being forced out of business for the sake of tourism.

Response: The Tongass National Forest is mandated through the National Forest Management Act to provide for the multiple use of forest resources. The Forest Plan has been revised to balance the resource opportunities between the wood products industry, recreation and tourism, salmon fishing, seafood processing, and mining.

Comment: An adequate socioeconomic effects analysis has not been done. The effects of a "limiting timber supply" on timber-related employment and "the existing forest products infrastructure" have not been "confronted accurately." (STATE) Additional analysis is also needed on: (STATE)

- the economic and social impacts on the principle communities if one or more wood processing mills close
- the likelihood of permanent sawmill closures in Haines and Klawock under all Supplement alternatives
- the variable impacts of "different level salaries of employment"
- how the development of more "value-added activity in the timber being harvested" will be encouraged
- how the development of tourist and recreational related facilities and attractions will be aided and encouraged
- the effects on commercial guides and outfitters, and commercial fisheries.

Response: The variable impacts of different levels of employment are embodied in the relative magnitude of the secondary employment effects. The on salmon harvesting and seafood processing have not been estimated by alternative – Chapter 3, Socioeconomic section of the FEIS includes a full discussion of the reasons for the lack of impact estimates. The effects on commercial guides and outfitters are incorporated in the employment and income effects in tourism and recreation industries.

The socioeconomic effects analysis is being reanalyzed to more closely examine the employment and income effects of varying levels of timber supply in the context of the existing mill capacity. Because the State Department of Labor retains the confidentiality of information for individual firms the small size of most Southeastern communities leads to data disclosure problems when attempting community-level analyses. In many cases, an entire economic sector is represented by a single firm and the data is withheld. Consequently, employment and income effects are modeled in the context of the southeast Alaska regional economy with some inferences about specific locales within. A discussion of the potential impacts of mill closures on employment has been added to the socioeconomic section in Chapter 3 of the FEIS.

Comment: (1996) The Forest Service failed to conduct an adequate socioeconomic analysis of the complete effects of each alternative on each specific community in Southeast Alaska.

Response: The community by community analysis includes a qualitative description of impacts by alternative. Chapter 3, sub-regional and community assessment sections, of the FEIS include discussion of the ability and usefulness of gathering data at the community level and the pitfalls associated with a community level analysis.

Comment: Providing year-round jobs means a stabilizing force, both economically and socially. Based on personal income, timber is the biggest contributor to the economy of Southeast Alaska. The plan needs to be sensitive to economic impacts, and strive to increase employment opportunities. (AFA, JCC, KCC)

Response: The level of employment associated with the goods and services that come directly or indirectly from the Tongass National Forest is one of the planning criteria used in determining the mix that maximizes net public benefit.

Comment: "Jobs is not the issue. If jobs were the issue, logging which is more labor intensive would be preferable. Clearcutting old-growth is the least labor intensive choice. If jobs were the issue, whole logs would not sit stockpiled in Seattle waiting to be shipped, un-milled, to Tokyo."

Response: In Southeast Alaska, the forest products industry's ability to compete in the Pacific Rim market place is of utmost importance to the stability of the economy of the industry and Southeast Alaska. Alaskan producers sell their products in a highly competitive market where the price for all but the most specialized solid wood products is determined by global supply and demand interactions. Therefore, the demand for timber depends primarily upon the ability of processors in Alaska to manufacture wood products at a cost at or below the going market price to remain competitive with other sellers of like products. The demand and supply volatility observed over time is largely reflective of the fact that timber processors in Alaska are operating in a high cost environment causing them to be extremely sensitive to fluctuations in the market price of their end products. The ability or inability to domestically process the raw material does have a significant affect on the number of jobs locally.

The forest products industry contributed 2,070 jobs (24 percent of all resource-dependent jobs) to the goods producing sector of the Southeast Alaska employment picture in 1995. Clearly employment is an issue in Southeast Alaska and an issue for the Tongass National Forest.

Comment: "The Forest Service must think again about its role in the economic development of the nation's forests. If it is largely subsidized by the taxpayer, can we really call this economic development?" To support an additional 2,300 jobs/year, you will spend an additional $34 million/year, a subsidy of 15,000 Federal dollars per job. "This cannot be justified." A free-functioning market place should be the highest priority (not jobs, and especially not subsidized jobs).

Response: Many of the goods and services provided by the Tongass National Forest, as well as every other forest in the nation, come with little or no direct cost to the user, hence are paid in the form of federal taxes. Congress determines what level annual appropriations will be expended by the Forest Service.

Comment: (1996) A declining fisheries industry will have more of an impact on the economy of Southeast Alaska than a reduction in timber harvest levels.

Response: The potential effects on salmon harvesting and seafood processing have not been estimated by alternative for reasons discussed in Chapter 3, Socioeconomic section, of the FEIS. It is difficult to

compare the potential impacts of these two industries with so many of the forces likely to effect the markets unknown and not necessarily linked to Forest management decisions.

Comment: The overall goal, after TTRA, should be economic growth and development. The mandate of TTRA is "to manage the forest to meet the demands of the market place." (KGB)

Response: An overall goal as it relates to economic growth and development, in the context of the Tongass Timber Reform Act, is found in Section 101 of the Act which states, ". . . the Secretary shall, to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle."

Comment: The State objects "to land management tradeoffs which reflect a disproportionate forest-wide allocation to 'Natural Setting' at the expense of economic stability within the region." (STATE)

Response: The goal of the revised Forest Plan is to maximize net public benefits. "Mostly Natural setting" land use designations provide public benefits as well; some examples are hiking, backpacking, kayaking, wildlife viewing, sport hunting and fishing, hunting, fishing and gathering for subsistence purposes, and other related recreation and tourism activities. Many of the "natural setting" land use designations are in areas that do not have a reasonable amount of resources that would promote economic development. Providing a mix of land use designations that leads to maximizing net public benefits was the desired outcome that lead to the revised Forest Plan.

Comment: (1996) The RSDEIS greatly understates the negative effects of the alternatives on the tourism industry. A study by the Alaska Wilderness Recreation and Tourism shows that 55% of important boat anchorages have been affected by logging. The timber industry ruins places and resources for other segments of the economy.

Response: The Tongass National Forest is managed under applicable law to provide for multiple-use of forest resources. The revised forest plan has been selected to balance the resource opportunities between the wood products industry, recreation and tourism, salmon fishing and seafood processing, and mining. Recreation places that are important for tourism activity were identified and the impacts analyzed by alternative (see the Recreation section, Chapter 3 of the FEIS). The exact location and type of timber sales on the Tongass will be defined and scheduled by the individual ranger districts. That is a more appropriate level for discussion of specific on-site concerns.

Comment: A better discussion of the possibilities of trade and commerce across the Southeast Alaska/Canada border is needed. There would be local as well as national benefits. You haven't analyzed the effects on the balance of trade if timber harvests are reduced.

Response: Potential for access from portions of the Tongass to Canada is discussed under Transportation in FEIS Chapter 3. None of these proposals is currently active, but neither would Forest Plan decisions preclude any. Effects on the balance of trade are beyond the scope of this FEIS.

Budgets, PNV

Comment: The alternative budgets are unrealistic: $80 million may be a maximum realistic budget (comparing to current budgets). "A comparison of net value using a constant or limited budget to reflect alternative emphasis is needed." Only Alternative A could be implemented at current budget levels. Alternative C (the "Current" level) would require a 30 percent boost in funding and the Preferred Alternative would require a 59 percent boost. (CHEC)

Response: We believe we have made adjustments to the budget levels by alternative that are consistent with implementing all aspects of the management alternative and its associated goals and objectives at realistic levels. Keep in mind that the 1979 Forest Plan as amended is not currently fully funded in all program areas. Budget estimates by alternative by resource area and totals can be found in Chapter 3, Socioeconomic section, of the FEIS.

Comment: Show the budgets for each resource to assure that mitigation is carried out. (TCS)

Response: Estimated forest budget requirements by each of the major resource categories is shown in Chapter 3, Socioeconomic section, of the FEIS.

Comment: How can there be only a six percent difference in economic efficiency between any of the alternatives? (Comment on 1990 DEIS.)

Response: In the economic efficiency analysis for the FEIS, only timber, recreation and tourism resource values are included. The net willingness to pay values for timber, recreation, hunting, and sport fishing are all included in the analysis and together make up the economic efficiency of the alternative. With regard to outputs with economic parameters, the FEIS alternatives differ mostly in the allowable sale quantity (ASQ) of timber. Because of the significant resource protection standards in all alternatives, there is little difference in the production of other resources, salmon harvesting, mining, recreation and tourism, among alternatives. When the net willingness to pay values for all resources are compared, timber is only a small proportion of the total present net value (PNV), which results in little variation between alternatives.

Comment: Using net present value (NPV) encourages high-grading. NPV has nothing to do with maintaining healthy forests, or maintaining future timber jobs.

Response: Constraints were applied to the FORPLAN model to avoid so-called high-grading. Some of those constraints included a no below-cost decadal constraint for every decade, and a roading constraint to ensure that a reasonable amount of road construction occurred in the early decades.

Comment: Your plan has seriously understated the effects of a mill closure on the economy of Southeast Alaska.

Response: The FEIS includes an analysis of the direct impacts to communities with sawmills and/or pulp mills.

Comment: In addition to an environmental study, an economic study should be performed to determine the negative impact on the timber dependent communities.

Response: The FEIS includes an analysis of the current situation and past trends of community groups in Southeast Alaska as well as an analysis of potential impacts on communities in the event of a mill closure.

Comment: Capital improvements need to be treated as a sunk cost and subtracted from total receipts. This would show the true deficit nature of the Tongass timber program.

Response: Roads are included as a capital improvement to the national forest system as they provide public access to the forest.

Comment: The Forest Service's derived demand estimate of 320 MMBF for the Tongass grossly underestimates actual demand and sets up a self-fulfilling prophesy of ever declining apparent demand totally independent of actual market factors.

Response: The Forest Service has undertaken further research, since the publication of the Supplement, through the Pacific Northwest Experiment Station (PNW) (Brooks/Haynes, 1994), and through an independent contract (The Irland Group, TIG). The Alaska Forest Association also independently undertook a study, which was completed by Gruenfeld and Associates. The Brooks and Haynes study was updated in 1997. There is wide variation in the results of these studies.

Comment: You have failed to measure the effects on taxes, schools, community infrastructure, health care, transportation, and public utilities.

Response: The analysis includes potential impacts to the 25 percent payments to the State of Alaska. A qualitative discussion of potential impacts to communities has been included in the community assessment section.

Comment: The installed mill capacity, plus new capacity which could be brought on line during the planning period, should have been used in the RSDEIS as a short term surrogate for demand.

Response: The regional economic consequences section in Chapter 3 of the FEIS includes a graphic comparison of the timber supply by alternative and the historical use capacity as well as the full capacity (installed capacity) for all the sawmills in Southeast Alaska.

Comment: The Socioeconomic Panel discussion was undefined and confusing.

Response: The community by community summary, within the Community Assessments, of the Panel results has also been explained and expanded in the FEIS. The Socioeconomic Panel methods, results, and discussion are fully documented in the planning record.

Comment: You have failed to determine an accurate jobs baseline, and to measure shifts from the baseline by alternative.

Response: The FEIS includes the development of a regional employment baseline and compares each alternative to an employment projection in the year 2000 based on the baseline.

Comment: There is no socioeconomic information in the plan that tells me how my community will be affected.

Response: The community assessments provided for each community (FEIS Chapter 3) include qualitative analysis of the potential impact by alternative at the community level.

Comment: The Forest Service's RSDEIS is unable to tell us how many jobs they think will be affected by each alternative.

Response: The number of jobs affected by alternative was not directly stated in the RSDEIS, the number of potential jobs by alternative and 1994 employment levels were presented in table 3-110. Using subtraction, the actual change from 1994 could be discerned. In the FEIS the difference in employment levels by alternative has been directly compared to an employment baseline projection.

Comment: There is no socioeconomic study present in the current RSDEIS.

Response: The Socioeconomic section includes a quantitative regional impact analysis by alternative for the major resource-dependent industries. Each community assessment also includes a qualitative impact analysis by alternative.

Comment: How many government employees will be impacted by the plan?

Response: The impact to government employees is not directly analyzed in the FEIS, but these employees are included within the indirect jobs created by direct resource-dependent industry income and employment. The actual number of government employees will likely depend more directly upon budgets, government policy and possible agency downsizing.

Comment: The NEPA required socioeconomic impact study has not been done.

Response: The RSDEIS (Chapter 3) and FEIS (Chapter 3) include detailed sections on the Economic and Social Environment, and analyze information and effects at the regional and community levels.

Comment: There are two outstanding weaknesses in addressing social and economic effects:

1) No way to compare the preferred to other alternatives except with the tables.
2) Economic effects are portrayed only at a regional level.

Response: The FEIS has been expanded to include some graphical comparisons of employment impacts by alternative. This is still done at the regional level due to constraints in available data at the community level. Community level analysis is done qualitatively in the FEIS, similar to the analysis in the RSDEIS.

Comment: Forest Service advertisements in local papers have stated that the Forest Service does not create jobs, but when you control 90% of the land base in Southeast Alaska, you definitely control how many jobs can be created.

Response: The publication states that the Forest Service creates job opportunities, whether or not these opportunities become employable positions depends upon the private sector taking advantage of the opening. The economic impact analysis indicates that there is a limit to the number of job opportunities the Forest Service will likely provide by alternative due to different resource uses.

Comment: There needs to be a clear definition of what is meant by 'local hire' or 'hire by jobs'.

Response: These terms were not used in the RSDEIS or the FEIS.

Comment: No where in your publication have I seen any figures on how many indirect timber related jobs will be lost.

Response: Indirect jobs are included in the total employment figures throughout the socioeconomic section, summarized in Tables 3-109 and 3-110.

Special Areas

This section includes Experimental Forests, Research Natural Areas and Special Interest Areas.

Experimental Forests

Comment: Experimental Forests should be established for wildlife-related studies.

Response: In part as a result of the recent regional strategy for ecosystem management, the revised Forest Plan has retained the Young Bay Experimental Forest. This area to date has no roads and has had no experimental vegetation treatments therefore it may be useful to consider for wildlife-related studies since a baseline could be utilized. Other opportunities for wildlife-related studies will be considered during project implementation. On-going administrative studies and research will continue which could also lead to changes in current knowledge which could then lead to changes in the way we manage wildlife habitats. Examples include brown bear and marten studies on northeast Chichagof Island and goshawk telemetry studies currently occurring on north and central Prince of Wales Island. (See Appendix B, “Information Needs,” in the revised Forest Plan.)

Forestry Science Lab personnel and other Forest Service staff have evaluated other potential opportunities for Experimental Forests but have found none to date that would provide long-term research opportunities without conflicting with other resource uses.

Comment: Experimental forests should be established to test New Forestry ideas: alternatives should incorporate new forestry concepts. (WLS)

Response: "New Forestry" (or Ecosystem Management) concepts are part of the Timber Forest-wide standards and guidelines, in the form of a range of available silvicultural methods and second growth management options. The two Experimental Forests (Maybeso and Young Bay) are available for testing of "New Forestry" ideas. In addition, new concepts are considered during project analysis for timber sales were appropriate.

Comment: Neither the Young's Bay nor the Maybeso Experimental Forests contain vegetative characteristics that lend themselves to useful buffer zone research, therefore additional watersheds should be designated for this purpose. (NMFS) Dropping these two Experimental Forests is a good idea.

Response: The revised Forest Plan retains both the Maybeso and Young Bay Experimental Forests for future options. There are hundreds of watersheds on the Tongass, many of which lie within legislated areas, available for baseline controlled research. There are also a multitude of watersheds under differing intensities of management development that provide additional opportunities for administrative studies.

Research Natural Areas (RNA's)

Comment: Confine Research Natural Areas to Wilderness, and if they aren't, they should be returned to mineral entry when the research is finished. No new RNA's should be established.

Response: FSM 4063, Appendix A of the Alaska Regional Guide, and 36 CFR 219.25 give direction for the designation of Research Natural Areas. 36 CFR 219.25 states, "Forest planning shall provide for the establishment of Research Natural Areas (RNA's). Planning shall make provision for the identification of examples of important forest, shrubland, grassland, alpine, aquatic, and geologic types that have special or unique characteristics of scientific interest and importance that are need to complete the national network of RNA's. Biotic, aquatic, and geologic types needed for the network shall be identified using a list provided by the Chief of the Forest Service. Authority to establish RNA's is delegated to the Chief at 7 CFR 2.60(a) and 36 CFR 251.23. Recommendations for establishment of areas shall be made to the Chief through the planning process."

The Alaska Regional Guide (1983), in Appendix A, provides direction for the National Forests in Alaska to consider additional Research Natural Areas (RNA's). The direction in the Regional Guide on page A-4 describes the priority for selection of RNA's on different types of lands. First, national monuments will be selected, since these were established partly for scientific and educational purposes. If a monument is unavailable to meet the RNA requirements, then wilderness, wilderness study areas, or other withdrawn lands will be selected next. In these locations, the RNA should be reasonably accessible. Next choice is in land use designations with no programmed resource management (LUD II or equivalent). Finally, if the RNA type remains a priority need, then the search may broaden to areas of programmed resource management (equivalent to LUD III's and IV's in the 1979 Tongass Land Management Plan as amended).

Two of the six new RNA’s recommended are within Wilderness, as is the relocation of the RNA formerly at Pack Creek. A third is in LUD II (legislated) and a fourth (Warm Pass) is in an area allocated to the Natural Setting LUD group in all alternatives.

Forest Service Manual (FSM 4063) states "The Regional Forester may ask the Bureau of Land Management to withdraw a research natural area from mineral entry after its establishment in conformance with section 204 of the Federal Land Policy and Management Act of 1976 .. ." The withdrawal of an RNA is considered on a case-by-case basis.

Comment: All potential RNA's should be recommended in the preferred alternative.

Response: When selecting RNA's, it is also necessary to look at other activities occurring at, or near, the proposed RNA. For instance, is there mineral activity potential; is the area used for dispersed recreation, outfitter-guiding, or other tourism; does the site include a Forest Service recreation cabin; is the site used for personal use wood cutting; is there prolonged sound disturbance (such as from landing and departing jets or a large quantity of flightseeing planes); are there species of plants and animals that are not endemic to the site or southeast Alaska? All of these considerations, and tradeoffs between them and the value of the RNA to the national network of RNA's, are factors in selecting sites for consideration in the Forest plan alternatives.

As discussed in the FEIS, after reconsidering all the potential trade-offs and conflicts, six potential RNA’s remained for consideration by alternative. The Preferred Alternative does recommend all six.

Comment: The following RNA's are supported, for their unique geologic or hydro-geologic significance: (USGS) (Note: SIA = Special Interest Area)

- Blue Lake Lava (or as an SIA)
- Crater Ridge - Freds Creek (or as Mt. Edgecumbe SIA)
- Redoubt Lake
- Gambier Bay
- Pleasant Island
- Upper Tenakee Hot Springs
- Bailey Bay Hot Springs (or as an SIA)
- Port Camden Fossil

Response: The following allocations were made in the revised Forest Plan: Blue Lake Lava is selected as the Blue River Lava Flow Geological Area (SIA); Crater Ridge - Freds Creek is selected as a part of the Mount Edgecumbe Geological Area SIA; Redoubt Lake is not selected because of its large amount of recreational use and the fisheries improvement work done on the lake, including lake fertilization and stocking -- the site is no longer "natural;" Gambier Bay is selected as a replacement of the RNA at Pack Creek; Pleasant Island is not selected because of the recreation and subsistence use associated with its proximity to Gustavus -- the Island is in a Wilderness Area; Upper Tenakee Hot Springs is not being considered at this time because of its potential conflict with a transportation corridor and recreation uses; Bailey Bay Hot Springs is selected as a part of the Bailey Bay Hot Springs Recreation Area (SIA). Port Camden Fossil is an area that needs additional inventory to obtain better knowledge of where the fossil resources are located; it was not included as one of the priority potential RNA's.

Following are comments on specific areas:

Comment: Dayebas Creek - potential hydro site and transportation corridor: don't designate as an RNA.

Response: This site has not been recommended as an RNA in the revised Forest Plan; it is assigned the Semi-remote Recreation land use designation.

Comment: Devil Lakes (new proposal) - In VCU 647 on Dall Island. The area including Devil Lakes, the salt water and Camp Cove has a combination of karst formations, lake and salt water that may present an interesting RNA opportunity. (TCS)

Response: Devil Lakes was not identified during the RNA process. The type of karst topography included in this proposal is included in the Karst Areas Geological Area which includes a number of sites on Dall Island, including parts of both VCU's adjacent to VCU 647. Forest-wide standards and guidelines provide additional direction for maintaining Karst features. The rest of this portion of Dall Island is allocated to LUD's in the Natural Setting LUD Group.

Comment: Indian Creek (new proposal) - Indian Creek, near Hollis, was used in the 1950's and '60's for research and data collection of an unlogged watershed. This research and data collection should continue and not be lost: the area should not be logged, and if not made an RNA (which, however, is recommended) it should be in a no-logging LUD. (AIFRB)

Response: Indian Creek has an approved timber sale located within its boundaries and is no longer eligible for designation as an RNA.

Comment: Limestone Inlet - There is no demonstrated need for this to continue as an RNA, especially with the ADF&G Alterations that have occurred there; also, there are many mining claims in and near the RNA: for these reasons, it's future as an RNA should be re-examined. Suggest replacing this area with Young Bay (existing Experimental Forest) as an RNA (see Young Bay below).

Response: Our records do not indicate that Limestone Inlet has been withdrawn from mineral entry. To maintain options for additional research particularly in light of recent ecosystem management direction, we believe Young Bay should be retained as an Experimental Forest and is shown accordingly in the revised Forest Plan.

Comment: Lovers Creek - This potential RNA is perhaps the wettest place on the North American continent. It has a history of fisheries research, and could provide research on flora and fauna of a very wet, mild climate. It should be added to Alternative P for designation.

Response: Lovers Creek was listed as an "other recommended potential candidate" proposal in the RNA report summarized in Appendix D of the EIS. As such, it was a potential site, but not highly recommended. Lovers Creek is allocated to natural setting land use designations in the revised Forest Plan and, therefore, the features you describe should remain unchanged for future consideration as an RNA.

Comment: Pack Creek - This existing RNA should not be declassified. Important research has gone on there for ten years, and should continue. The continuity of data collected for this location is important: the database on brown bear is unique and irreplaceable, and provides a basis for continuing long-term research.

Response: Due to its high popularity as a wildlife viewing area, Pack Creek is no longer suitable to retain for exclusive RNA research uses. It has been replaced by Gambier Bay as an RNA on Admiralty Island. Pack Creek will, however, be managed as a special interest area.

Comment: Rio Roberts - There are no unique features to support this area as an RNA: leave it in timber management. Why not use Karta as an RNA instead? (KPC)

Response: Features desired for inclusion in the RNA network include the various vegetative, wildlife, and aquatic cell types of southeast Alaska. The Rio Roberts RNA would represent riparian flood plain spruce stands (spruce/devils club plant associations), upland old growth and natural second growth stands, and upland hemlock on drumlin fields (a glacial feature). Karta does not represent these same features.

Comment: Tonalite Creek - This is already protected as LUD II: doesn't need the RNA designation.

Response: The process laid out in the Alaska Regional Guide (1983) for selection of RNA priorities was previously mentioned. The Guide says that priority should be: 1) monuments, 2) wilderness, 3) LUD II's, 4) LUD III's and IV's. At the time of the Alaska Regional Guide release, the Tongass Timber Reform Act (1990) had not permanently designated any area as LUD II. This emphasis in selecting areas without anticipated development (such as legislated LUD II) was part of the reason for recommending Tonalite Creek as an RNA in the revised Forest Plan.

Comment: Twin Lakes - This area is in a potential transportation/utility corridor: no further encumbrances on that are needed.

Response: Twin Lakes is not recommended as an RNA in the revised Forest Plan; the state transportation and utility system corridor LUD is applied in this area.

Comment: Upper Tenakee Hot Springs - This area is protected sufficiently already.

Response: Upper Tenakee Hot Springs is not recommended as an RNA in the revised Forest Plan.

Comment: Warm Pass - This area should not be an RNA. It is a Class 2 mineral area and is possibly trans-border water (and what kind of message would that send to Canada?).

Response: Warm Pass provides a unique climatic environment for Southeast Alaska because of a pronounced rain shadow affect. A considerable amount of recently deglaciated land is in various stages of plant colonization. The Warm Pass valley is the only forested portion of the U.S.-Canada border between the Taku River and Chilkat Pass. Therefore, we find that the Warm Pass valley is an important migration corridor for interior vegetative species that mix with the coastal forest and tundra and have recommended it as an RNA in the revised Forest Plan accordingly. There will be no decision to withdraw the area from mineral entry as a part of this revised Plan decision.

Comment: Young Bay - Though not suitable for continuation as an Experimental Forest, the research done here so far shouldn't be abandoned: make it an RNA.

Response: The current designation of Young Bay as an Experimental Forest has been retained in the revised Forest Plan. With recent direction regarding ecosystem management, we believe maintaining the experimental forest as an option for additional research is appropriate.

Special Interest Areas (SIA's)

Comment: All Special Interest Areas should be withdrawn from mineral entry, and closed to off-road vehicles. (SEACC)

Response: Although no Special Interest Areas have been proposed for areas with known high potential mineral reserves, mineral exploration or development could potentially affect the values for which an area was classified. The need for withdrawal from mineral entry subject to valid existing rights will be determined on a case-by-case basis during Forest Plan implementation. This revised Forest Plan will make no mineral withdrawal decisions. Closures to off-road vehicle use are indicated for the majority of Special Interest Areas. Others could be closed in the future if such use was present and affecting the natural values or uses of the area. (See FEIS, Chapter 3, "Special Interest Areas.")

Comment: The Tongass has several richly "fossiliferous" areas that would be appropriate to manage as Special Interest Areas. These include Walleigh Island, Trocadero Bay, southwest Esquibe Island, and Halleck Harbor (on Kuiu Island). (USGS)

Response: There was not time or funding to determine if potential paleontological resources do exist in the subject areas such that special designation is warranted. The information will be retained, and these and other areas may be evaluated as potential Paleontological Areas in the future.

Comment: The following SIA's are supported, for their unique geologic or hydro-geologic significance: (USGS)

- Blue River Lava Flow (or as an RNA)
- Mt. Edgecumbe (or as an RNA)
- Karst Areas
- Patterson Glacier
- Soda Springs
- Bailey Bay Hot Springs (or as an RNA)

Response: All these areas are included in the revised Forest Plan as Special Interest Areas, and all but one given a Geological Area classification. Bailey Bay Hot Springs is emphasized for its recreational opportunities.

Comment: (1996) In the section on Special Interest Areas, there is no mention of the FS planned nomination of the Yakutat Forelands as a World Heritage Site. The FS should indicate the status of this nomination in the FEIS.

Response: The Forest Plan Revision did not consider World Heritage Site nominations.

Following are comments on specific areas:

Comment: Blind Slough/Crystal Mountain:

- several comments supported this designation, citing the area's natural values, which include: a warm-water salt chuck estuary, alpine habitat, trumpeter swans, the fishery, and botanical/zoological public interpretive opportunities. Some felt that the area should include Crystal Mountain, Ohmer Creek Campground, Blind Slough and S. Blind Slough; another felt that the entire watershed from Wrangell Narrows to Sumner Strait should be managed as a Special Area.
- one person commented in opposition to a special designation, saying that it is poorly planned, that many other resource values and uses have been overlooked (what will be the effects on personal use woodcutting, ORV uses, existing or potential Special Use Permits and facilities, and future transportation needs?), and that the area should have more detailed study before a decision is made to designate it or not.

Response: The scenic, recreational, botanical and zoological features of this area are well known and documented (see FEIS, Appendix F). The unique combination of special attributes led to the selection of the Special Interest Area land use designation in the revised Forest Plan. Off-road vehicle opportunities and personal use woodcutting are available at many other locations along or accessed by the extensive road system of Mitkof Island. Current management of the area (as a swan wintering area, the recreation sites, and the scenic quality surrounding Blind Slough) will not change in focus, but will be enhanced by the Scenic and Zoological Area classifications. The Special Interest Area designation has considerable public support.

Comment: Blue River Lava Flow - The opportunity for study of recent lava activity is real, but the area is already in Wilderness, and where will the funding come from to study it? Don't see the need.

Response: Classification of the Blue River Lava Flow Geological Area provides recognition for the unique features of this area separate from the National Monument Wilderness designation, which covers a considerably larger area. Whether or not funds are provided for specific studies, the opportunity for such studies, which may be by entities other than the Forest Service, will be available, and the Special Interest Area designation serves to focus on the unique geology and give it wider notice.

Comment: Clear River - The Forest-wide Standards and Guidelines will protect any unique values here adequately without a special designation.

Response: The Forest-wide standards and guidelines do provide for the protection and/or recognition of many resource values, however, they are not designed to address every unique value throughout the Forest. The Special Interest Area LUD is designed to bring together these standards and guidelines, and add additional ones, in an integrated manner that provides for managing certain unique resources recognized by this designation. The botanical and zoological resources of the Clear River area would not otherwise be recognized in this way. The designation also highlights the opportunities for study and research in the area.

Comment: Karst Areas:

- an excellent idea, a resource of world-wide scientific importance, truly outstanding caves. Suggest using the wider boundaries as shown in Alternative A (both Prince of Wales and Dall Island portions). (TCS)
- Include as wide an area as possible around Thunder and El Capitan Mountains; connect Thunder Mountain portion to Salmon Bay LUD II area.
- the unique cave system on north Prince of Wales Island should be managed to protect it from the effects of logging (such as filling in sinkholes). Preserve a land area the size of an average logging unit around any known cave entrance.
- this area contains the finest caves in Alaska, and the deepest chamber yet discovered in the U.S. Suggest establishing a "special caving region" for this area (northwest El Capitan, eastern half of Kosciusko, and Marble Islands) which would emphasize the cave resources and protect them from continued logging and roading.
- the SIA designation is not needed. The Cave Standards and Guidelines, or site-specific "unit release prescriptions," are enough to protect the caves. Leave the areas in TM LUD. (KPC)

Response: The Karst Areas Geological Area classification is being applied in the revised Forest Plan to twelve separate areas on Prince of Wales and Dall Islands with known cave resources. This Special Interest Area land use designation will help to focus opportunities for exploration, interpretation and research of this unique cave resource. The Special Interest Area land use designation is designed to bring together the Forest-wide standards and guidelines, including in this case those for karst and caves, and add additional ones in an integrated manner that provides for managing certain unique resources recognized by this designation. The unique resources of the "Karst Areas" might not otherwise be recognized in this way.

Comment: Mt. Edgecumbe:

- there doesn't seem to be a need for the special designation: what would be the effect on recreation uses?
- there is no justification given for dropping the National Recreation Area proposal for Mt. Edgecumbe. (SEACC) The Special Interest Area recommendation for Mt. Edgecumbe is good, although a "more permanent" designation by the Secretary of the Interior would be preferable. (SCS)

Response: Please see the previous two responses for a discussion of why the Special Interest Area land use designation was developed. The current recreation uses of the Mt. Edgecumbe area will continue to be an emphasis under this designation, including off-road vehicle opportunities, but at the same time the designation will provide recognition of the area's unique geology and opportunities for interpretation, education and research, and the outstanding scenic values of the mountain will also be maintained. The National Recreation Area proposal is no longer being considered since the unique features and values of Mt. Edgecumbe can be adequately protected through a Special Interest Area designation (similar to Mendenhall Glacier or Hubbard Glacier).

Comment: Patterson Glacier - The Tongass has many similar areas already protected: no special reason for this designation.

Response: Patterson Glacier offers the opportunity of easy access to an area with excellent examples of glacial plant succession and other glacial features. The Special Interest Area land use designation provides for the study and interpretation of these features in an integrated manner. The botanical and zoological resources of Patterson Glacier might not otherwise be recognized in this way.

Comment: Pike Lakes - Although a Research Natural Area classification would be preferable, the Special Interest Area proposal for Pike Lakes is good. A boundary change is suggested to include more area important to the unique fish habitat being protected.

Response: The boundary of the Pike Lakes Recreation Area has been expanded in the revised Forest Plan based on the map submitted with this comment.

Comment: Thomas Bay - One commenter proposed Thomas Bay for Special Area status, for its recreation (an important area for hunting, fishing, hiking, cycling) and wildlife (large moose herd) values. Noted also is that the State lands there are dedicated to recreation uses.

Response: Portions of Thomas Bay, including the areas near or adjacent to the State lands, have a road system and recent timber harvesting, and would not be suited for a Special Interest Area designation. Some of the uses mentioned in the comment are associated with the road system, including areas that may receive vegetative treatments for moose habitat enhancement. The area does not present a unique set of undisturbed natural values that would warrant a Special Interest Area designation. The inner portions of Thomas Bay are assigned the Semi-remote Recreation LUD, which will maintain the natural values of that area, and Scenic Viewshed assigned to the roaded portion will help maintain a setting that will not be dominated by management activities to the casual observer.

Subsistence

(See also Fish and Wildlife sections.)

General

Comment: Subsistence means preserving the traditional Native lifestyle. It is much more than just getting food, it includes spiritual, cultural and historical aspects also. (KCA) The destruction of the rain forests means that the Tlingits cannot pass on their ways to their children. The forests that are left must be preserved. (HTC) Subsistence is the way of life for many Native Alaskans; it is "the only way of life that we can live with." Subsistence is their historical and traditional way, their right.

Response: We agree that subsistence is more than just harvesting food. In addition to the economic importance of subsistence resources to rural households, the opportunity to participate in subsistence activities reinforces a variety of cultural and subcultural values in both Native and non-Native communities. For example, distribution of fish and wildlife contributes to the cohesion of kinship groups and to community stability through sharing of resources derived through harvest activities. Subsistence resources provide the foundation for Native culture, ranging from the totemic basis of clan divisions, to norms governing the distribution of wealth in potlatch ceremonies, to reinforcement of basic values of respect for the earth and its resources. These aspects of subsistence are discussed in the FEIS (Chapter 3, “Subsistence”). No land use designation restricts subsistence use. How subsistence uses are provided for is the subject of other responses in this section.

Comment: Incomes are low, and unemployment high, in many Native communities. Subsistence uses are needed to supply many of their basic needs.

Response: We acknowledge the variability of economic development and diversity of Southeast Alaska communities. Some communities have little or no local economy in the conventional sense and rely heavily on subsistence use of local fish and game resources. These considerations are included in the analyses of individual communities in the FEIS (Chapter 3, “Communities”).

Comment: The traditional property rights of Natives are not being respected. (HTC). Native sovereign rights are being ignored.

Response: Traditional Native property rights are discussed in the “Subsistence” section of Chapter 3 of the FEIS. The Revision process has included working with designated subsistence groups and others to identify potential effects on, and provide continued use of, "traditional use areas" (Forest-wide standards and guidelines for Subsistence). Traditional use areas were also important considerations in selecting land use designations (LUD's) for the Forest Plan, and many traditional areas have been assigned non-timber LUD's (such as Semi-remote Recreation) or limited-harvest LUD's (such as Modified Landscape): examples are areas identified as important by the communities of Angoon, Kake and Hydaburg. Traditional use areas associated with riparian habitats or the beach fringe are protected by the Riparian, and Beach and Estuary Fringe standards and guidelines.

Comment: Subsistence users can't meaningfully participate in the planning process: it is too complex, too distant. (SEA) The Forest Service is listening more to transients (the loggers) than to traditional residents. (HTC)

Response: Meetings, open houses, and hearings have been held in each Southeast Alaska community several times since the Revision process began in 1987, including for the identification of public issues, and for discussion of and comments on the 1990 DEIS, the 1991 SDEIS, and the 1996 RSDEIS. Workshops

and presentations have been conducted at the request of many Alaska Native communities, and local Fish and Game Advisory Councils. In addition, District Rangers and Forest Supervisors have periodically met with members of local communities to discuss the TLMP Revision and related topics. Subsistence users have had the opportunity of four written comment periods (issues and three draft EIS's) and three rounds of public hearings to present their ideas and concerns. All comments throughout the Revision process have been analyzed and evaluated, with no preferences given to any type or source of comments at any time.

Comment: (1996) In the Alaska Native Claims Settlement Act of 1971, the United States Congress inadvertently omitted the five villages of Tenakee, Haines, Petersburg, Wrangell and Ketchikan. The Forest Service will repeat the mistake if the Landless Native Issue is not included in the Tongass Land Management Plan Revision.

Response: This is an issue beyond the scope or authority of the Forest Plan. Any amended or new legislation concerning native claims would need to be considered by Congress. We know of nothing in the revised Forest Plan that would preclude such legislation.

Analysis and Effects

Comment: The subsistence deer harvest data needs correcting. Use the TRUCS data, and follow local recommendations for identifying subsistence areas. (C-TS, SSAB) Key information from TRUCS and the Alaska Department of Fish and Game was not used. (SEA, SEACC)

Response: We agree with the first comment. The deer harvest data has been updated. Recent Alaska Department of Fish and Game (ADF&G) deer hunter harvest data has been incorporated in the FEIS. Information from the Tongass Resource Use Cooperative Survey (TRUCS) and ADF&G was used extensively in both the RSDEIS and the FEIS. Prior to initiating the survey, approximately 200 formal and informal community leaders throughout Southeast Alaska were informed about the study objectives and asked for their comments about the way the survey would be conducted. The study design was modified accordingly to minimize response burden on residents and to provide local communities with additional information. This information is used in the analysis of individual communities in the FEIS (Chapter 3, "Communities").

Comment: The Supplement's subsistence conclusions and findings are questionable because TRUCS ("a snap shot in time") is the only data source, and "there has not been sufficient research to be able to adequately determine subsistence use patterns." (SEA, SNSC) The TRUCS data (at least for Angoon) is misleading and use of it underestimates the adverse effects on subsistence. The surveys were done too randomly, often the wrong people were asked, and many people don't want to tell where they traditionally go or how much they harvest. ADF&G use figures are more reliable and should be used.

Response: The TRUCS study was a cooperative effort between the Forest Service and ADF&G. The survey questions, format, community sample sizes, interview techniques, and follow-up was agreed upon by Forest Service and ADF&G researchers. While there is no way to ensure that all interview subjects tell the truth, we believe results of TRUCS are an accurate reflection of where the majority of people in Southeast Alaska go to hunt and fish. While the survey was conducted at a single point in time, we believe that TRUCS is more than just a snap shot in time. One of the questions asked was, "Where have you ever gone in your lifetime to hunt deer?" Answers to that question are most certainly more than a snapshot in time and, in our opinion, do indeed reflect subsistence use patterns. This is the data used for analysis of subsistence in both the RSDEIS and FEIS. The ADF&G Division of Subsistence, in a December 14, 1990 memorandum, agreed that using data from the TRUCS surveys and from Division of Subsistence technical reports to measure subsistence harvest levels is appropriate. In addition, monitoring of deer harvest by each of ADF&G's Wildlife Analysis Areas will continue to provide information to show how subsistence use patterns move over time.

Comment: The Forest Service should work with local Fish & Game Advisory Committees to examine and correct its subsistence deer harvest data and demand projections. (RF&G) Village councils should be consulted in gathering annual information on wildlife populations. (EPA)

Response: TRUCS was a product of a cooperative agreement between the Forest Service and the Institute of Social and Economic Research, and was reviewed by the Alaska Department of Fish and Game Division of Subsistence. The questionnaire used in the survey and a description of the sampling and analysis design were approved by the federal Office of Management and Budget. Prior to initiating the survey, approximately 200 formal and informal community leaders throughout Southeast Alaska were informed about the study objectives and asked for their comments about the way the survey would be conducted. The study design was modified accordingly to minimize response burden on residents and to provide local communities with additional information.

Comment: The DEIS fails to analyze the direct, indirect or cumulative effects of proposed activities on "important subsistence resources." It is not site-specific, and the analysis areas are too large or not meaningful. (SEA) The Supplement needs to clearly describe the long-term cumulative effects of federal timber harvest on subsistence activities rather than stating it is unable to predict the outcome. (SEA, SNSC) The use of Wildlife Analysis Areas (WAA's) fails because the lumping done distorts the actual effects on important use areas, causing the effects to be underestimated. (RF&G) Reporting effects by VCU would be more meaningful.

Response: Considerable concern was expressed upon release of the 1990 DEIS about subsistence analysis areas being too large to be meaningful. In direct response to this concern, the evaluation of likely potential effects of alternatives on subsistence changed from using 51 Geozones averaging 33,000 acres in the DEIS to using ADF&G's 191 Wildlife Analysis Areas (WAA's) averaging 9,000 acres in size in the Supplement, RSDEIS, and FEIS. Analysis on these significantly smaller land units was conducted for each of 33 communities within the Tongass National Forest. This approach was supported by the ADF&G Division of Subsistence (December 14, 1990 memorandum). We believe we can analyze and predict likely potential effects of programmatic alternatives on subsistence and have disclosed the direct, indirect and cumulative effects of proposed activities on deer for each Southeast Alaska community. The RSDEIS and FEIS use a period of 100 years. Additionally, effects of proposed activities were analyzed more generally for other species.

Another aspect of this concern is that the smallest land unit that ADF&G collects hunting data on is the ADF&G Wildlife Analysis Area. Rather than any "lumping being done," using these areas for analysis preserves the integrity of this data. To divide up this unit into still smaller areas (such as Value Comparison Units) would distort the data and likely lead to erroneous conclusions.

Comment: The identification of (and determination of effects on) important subsistence areas is needed. (SEA, SNSC) Use Native groups to help identify subsistence areas when doing timber harvest planning. The Forest Service should work with local Fish & Game Advisory Committees to fund research and monitoring of subsistence impacts. (RF&G)

Response: This was largely addressed by the third response under "General" above. Both RSDEIS and FEIS identify important subsistence areas by community and make a determination of effects on subsistence. Representatives from Native communities helped identify subsistence areas for TRUCS. Site-specific project plans identify specific locations of proposed harvest units, and must evaluate subsistence effects during site-specific analysis (Forest-wide standards and guidelines for subsistence).

Comment: Subsistence effects (on opportunities, by community, to harvest fish and wildlife) are understated. (SEA, SEACC, SNSC)

Response: The subsistence effects by community are based on a long-term, cumulative effects analysis that assumes that the maximum amount of timber harvest allowed by the Forest Plan and alternatives over time will occur. The effects of competition, and use of the same area by different communities, are also evaluated. In these respects, subsistence effects are, if anything overstated. The model used to estimate long-term habitat changes for deer, upon which some of the subsistence effects are based, is limited in its predictive abilities, and this is acknowledged in the documents. However, it is the best model available for the Tongass, and there is no indication that it tends to underestimate effects any more than overestimate them.

Comment: The analysis must look at how subsistence use patterns are changing throughout Southeast Alaska as a result of logging, and analyze the future from this aspect as well. Future population growth wasn't taken into account in estimating effects: more people = more use.

Response: Changing subsistence use patterns, particularly in relation to changes in access opportunities and expansion of the road systems associated with timber harvesting, are discussed under “Subsistence” (Access and Competition) in Chapter 3 of the FEIS. The Subsistence map shows that the road systems are extensively used. As a result of the new road construction, new use patterns are displayed around each of the communities (USFS, TRUCS Draft Maps, 1988). We agree that human population will likely increase and subsistence use could do likewise.

Comment: The Supplement fails to disclose the relative importance of different and specific community use areas on a community-by-community basis (SEACC), or to include a meaningful community-by-community assessment. (SEA, SNSC) (1996) Subsistence was not considered in your socioeconomic analysis. The document is completely inadequate and deficient in its treatment of subsistence.

Response: We disagree. In the Supplement, as well as in the RSDEIS and FEIS, an evaluation of the likely potential effects of management on subsistence and community use areas is displayed for each of 33 Southeast Alaska communities. The most important use areas for subsistence are identified, using deer harvest as the indicator. This information is provided on a community-by-community basis by ADF&G Wildlife Analysis Area.

Comment: The assessment of subsistence wildlife effects should use the "rural determination of Southeast communities made by the Federal Subsistence Board in December of 1990."

Response: According to the Federal Subsistence Board, residents must be from rural areas to qualify for subsistence harvests on federal public lands. The definition of rural is based on population and other socio-economic characteristics. Using the criteria established by the Board, only two Southeast Alaska communities do not qualify as rural: Juneau and Ketchikan. All other communities in Southeast Alaska have been determined by the Federal Subsistence Board to be rural. An assessment of likely potential effects of management activities on subsistence resources was conducted for each of these rural communities, as discussed previously.

Comment: The Supplement does not provide any discussion about the negative impacts that roads have on subsistence plant, fish and wildlife resources. (SEA, SNSC)

Response: Competition in relation to road access is discussed in the “Subsistence” section of Chapter 3 of the FEIS. Considerations include new road construction adjacent to communities with ferry access, and new road construction adjacent to existing road systems where interties between communities exist. The

potential effects of roads on fish and wildlife resources are discussed in Chapter 3 under "Fish" and "Wildlife."

Comment: (1996) The subsistence write-up implies that the main, if not the only, source of increased competition for subsistence users is other subsistence users resulting from an increase in the populations of rural communities. However, in the case of wildlife, increased competition may also come directly from sport hunters and indirectly from timber harvesting. Subsistence users of fisheries resources compete with both sport and commercial users. The FEIS should include this information.

Response: Competition from all direct sources (hunters and fishers) is discussed in the Subsistence section of Chapter 3 of the FEIS, and portrayed, for deer, for each Southeast Alaska community. Increased competition from new roads related to timber harvesting and other projects is discussed in concept, but it is not possible to predict which new roads subsistence users or hunters will choose to use, or how much additional use that will be. This may be possible for site-specific projects once use patterns are established and documented.

Comment: The subsistence analysis (for Hoonah and other areas as well) is not meaningful or adequate because:

- instead of "core subsistence areas," the analysis only used Wildlife Analysis Areas where "some [persons] have hunted at some time"
- there is no discussion of the results of decreases in numbers of deer, such as additional time required for a successful hunt
- effects beyond 50 years aren't discussed, but clearcutting will reduce deer habitat for at least 200 years
- there is no correlation of reduced numbers with increased competition resulting from new roads. (ALS)

Response: Taking these one at a time:

- Wildlife Analysis Areas were used as the unit of analysis since it is the smallest unit of land that ADF&G collects data by. Information from the TRUCS surveys provided additional data and was directly related to use areas and patterns of each community. We believe these information sources and levels of analysis are more than adequate for the decision maker to make a reasoned choice for the Forest Plan. Analysis for site-specific projects will look at "core subsistence areas" (traditional use areas), as specified in the Forest-wide standards and guidelines for subsistence.
- The discussion of decreases in deer for each community focuses on the single most important factor: whether or not community needs for deer will be met or not. Additional time required, as well as the possible need to hunt other areas, are two of several inferences that could be made, but the data for this is lacking. It is not possible to analyze every nuance at the Forest Plan level.
- For wildlife and subsistence effects, the time period most commonly used is 100 years. Discussions under biodiversity and wildlife acknowledge the long-term nature of habitat changes, such as for deer, and the cumulative effects analysis includes this concept, assuming that once habitat is altered or lost, it remains unavailable for the analysis period. This is done to give a long-range picture of effects, although the Forest Plan itself is for a 10- to 15-year period, after which it will be revised.
- Increased competition from new roads related to timber harvesting and other projects is discussed in concept, but it is not possible to predict which new roads subsistence users or hunters will choose to use, or how much additional use that will be. This may be possible for site-specific projects once use patterns are established and documented.

Comment: The subsistence analysis is inadequate because:

- there is no subsistence prescription, nor does subsistence appear to have played a role in formulating alternatives
- there's no clear depiction of where subsistence resources are
- there's no meaningful effects discussion by alternative by community
- ANILCA 810 determinations have not been made
- conclusions are based on suspect FORPLAN and wildlife capability modeling. (WLD)

Response: Taking these one at a time:

- We fail to see how the absence of a subsistence "prescription" affects the subsistence analysis. Subsistence uses and important subsistence use areas were important in making many of the allocations of the land use designations for the alternatives (as discussed previously).
- Subsistence resources are discussed in the Biodiversity, Fish, Subsistence, and Wildlife sections of Chapter 3 of the FEIS. Riparian areas, the beach and estuary fringe, and on existing roads are the primary locations within the Forest that subsistence use occurs. The subsistence map depicts where people go most frequently to hunt deer, which is a good indicator of the location of that particular subsistence resource.
- This was discussed in detail in previous responses.
- ANILCA 810 determinations are made in the Record of Decision.
- The only wildlife capability model still used is the deer model, which was updated for the RSDEIS and FEIS by a deer assessment panel. This was also discussed previously.

Comment: (1996) The TLMP Team should have started with ANILCA. One protects subsistence resources by identifying the key areas. It's up to the Forest Service, under ANILCA Section 810, to provide viable populations and also huntable populations for subsistence, sport and commercial uses of the forests.

Response: Please see the previous two responses.

Comment: (1996) Although it is appropriate to use deer as an indicator species, it would be appropriate to include a second indicator species to reflect the potential impacts of timber operations on fish or marine invertebrates, since they, too, are important subsistence resources.

Response: As discussed under “Subsistence” (FEIS Chapter 3), the primary fish subsistence species which could possibly be affected by forest management are salmon. The FEIS analysis projects no measurable effects to the salmon resource or other fish or marine resources (with the alternatives varying only in the degree of relative risk Forest-wide), and therefore no negative effects to subsistence use of fish are identified.

Comment: No decisions on subsistence should be made until agreement can be reached on defining "customary and traditional use" and "alternative resources."

Response: "Customary and traditional uses" is a term used in ANILCA (Section 803) as part of the definition of subsistence. Many of the specific uses and use categories are then listed, including "personal or family consumption," "the making and selling of handicraft articles," "for barter," and "for customary trade," and examples given. We believe this is adequate information for the decision maker to make a reasoned choice for the Forest Plan. The term "alternate resources" is from Section 804 related to making "priority use" decisions, which is not a decision made in the Forest Plan.

Comment: (1996) The FEIS should include a discussion of subsistence in each of the alternative summaries.

Response: The alternatives all include a subsistence goal, but objectives other than those for the fish and wildlife resources are not specified. These latter are considered to include subsistence resources.

Comment: Tie subsistence outputs to harvestable populations. "Land capability is meaningless to someone interested in food on the table."

Response: Since actual counts for most species are not available and frankly beyond the capability of any known science to predict, and since populations tend to fluctuate year-to-year or cyclically, our wildlife modeling and estimates are based on habitat capability and availability rather than actual numbers. This approach (specifically for deer) is discussed in the "Wildlife" section of Chapter 3.

Comment: Subsistence discussions and data should be updated as a result of needed revisions to the deer habitat capability model (see comment under Wildlife, "Modeling and Analysis"). (APC)

Response: The habitat capability model for deer was revised for the RSDEIS (by a panel of deer experts), and this is also used for the subsistence analysis in the FEIS.

Comment: "The document erroneously asserts ... that game harvest regulations have caused the possibility of a significant restriction of subsistence use of deer." This needs correcting. (RF&G, SEACC) An erroneous assumption is made that regulation of fish and wildlife harvests by the State will mitigate the adverse effects of significant restrictions resulting from Forest Plan actions. (RF&G)

Response: These statements and assumptions (in the DEIS) are no longer being used.

Comment: (1996) For Alternatives 1-9 in Chapter 2, although recreation opportunities are quantified by such measures as numbers of acres devoted to this use, miles of trails, or recreation visitor days, there is no similar quantification of subsistence opportunities and no explanation of which areas would be available for subsistence uses under the different alternatives. Subsistence opportunities should be quantified and included in the FEIS, especially for those alternatives for which subsistence is part of the theme (Alternatives 1-6). Partial measures of subsistence opportunities for the FEIS might include pounds per capita harvest, hunter days, number of hunters, amounts of resources (fish or wildlife populations) available for harvest, or number of acres available for subsistence harvests.

Response: Some of the specific categories mentioned in the comment (as hunter days) are specified by alternative. These include subsistence opportunities. All National Forest acres (unless specifically excluded by ANILCA) are available for subsistence use.

ANILCA Section 810 Evaluation

Comment: The ANILCA Sec. 810 analysis "is deficient and needs to be redone to provide a meaningful examination of significant restrictions on subsistence." (RF&G, SEACC) The ANILCA Sec. 810 evaluation is not adequate (for all the reasons mentioned in their other comments). (SEA, SNSC) No clear 810 determinations have been made: the impacts by community are understated. (ABG)

Response: Clear and specific evaluations and determinations of potential restrictions on subsistence resources are included in the “Subsistence” section of Chapter 3 of the FEIS. The actual 810 determination is made in the Record of Decision. For community impacts, see responses in the previous sub-section.

Comment: Other ANILCA deficiencies are:

- equating "significant restriction" with "substantial or major possibility" is not correct
- no linkages between Regional councils and land management planning have been made. (SEA, SNSC)

Response: Since the Forest Plan is programmatic in nature and does not itself propose specific projects, the subsistence effects (as are all effects) are based on the assumption that all projects will in fact be implemented. This is why we discuss "potential" or "possible" effects, and relate these to the subsistence concept under ANILCA of a "significant restriction." The Forest-wide standards and guidelines provide that "designated subsistence advisory committees and councils shall be consulted," and this requirement applies to all projects. The role of the Regional council during the planning process has been discussed in several previous responses.

Comment: In terms of ANILCA 810 requirements, all alternatives cannot have used "the minimal amount of public lands" relative to subsistence effects. At least one alternative should have been designed to meet the 810 requirement of minimal effect; the Supplement contains none. The Forest Service has made the justification for affecting subsistence resources by claiming it is necessary "in order to best meet the needs of the American people," but no factual support is provided. Congress passed ANILCA, therefore Congress has determined that the protection of subsistence is in the best interests of the American people. The Forest Service should not be second-guessing Congress. (ALS)

Response: ANILCA states in Section 810.(a)(3)(B) that, "No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency determines that ...the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition..." The Forest Plan as a programmatic document does not effect any “withdrawal, reservation, lease, permit, or other use, occupancy or disposition” of national forest lands. An 810 evaluation and determination is included in the FEIS and ROD to facilitate 810 compliance at the project level. Both the Multiple-use Sustained Yield Act, and the National Forest Management Act, define and mandate that National Forests will be managed for multiple resource uses to meet the needs of the American people. These include all renewable resources, such as water, timber, wildlife and wilderness. Furthermore, Congress passed the Tongass Timber Reform Act (date) which amended ANILCA section 705 (d) to read: "..the Secretary shall, to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle." We disagree that there are no Plan alternatives designed to meet the 810 requirements of minimal effect. Rather, we believe that all alternatives are designed to meet the 810 requirements of minimal effect, given the multiple-use role of the National Forests, and the multiple use objectives in each alternative. The factual basis for 810 findings with respect to the Revised Plan are summarized in the ROD.

Comment: The Section 810 findings are inadequate (per City of Tenakee v. Courtright and Hanlon v. Barton). (SEACC)

Response: We do not know what specific criteria you are referring to. A final 810 determination is included in the Record of Decision.

Comment: The priority use guaranteed by ANILCA isn't being recognized. (1996) Subsistence uses by Alaska Native and non-Native rural residents on Federal public lands are protected by Title VIII of Alaska National Interest Lands Conservation Act (ANILCA). The TLMP revision should more explicitly recognize

the subsistence priority, mandated by Congress, in the Tongass National Forest. It should also acknowledge the increasing levels of subsistence harvests by rural residents of Southeast Alaska.

Response: ANILCA Section 804 states: "Except as otherwise provided in the Act and other Federal laws, the taking on public lands of fish and wildlife for nonwasteful subsistence uses shall be accorded priority over the taking of such lands of fish and wildlife for other purposes." We acknowledge that where subsistence and sport demand for subsistence resources exceeds expected supply, sport use may have to be curtailed, and this possibility is provided for in the Forest-wide standards and guidelines for subsistence. This priority applies to the taking of fish and wildlife resources when such resources are limited, but has no wider interpretation at the Forest Plan level. In the FEIS, this discussion can be found under the "competition" subheads of the Subsistence section of Chapter 3.

Policies and Management

Comment: Stop or reduce logging, especially in traditional use areas. Stop or reduce clearcut logging. Logging near streams and bays is detrimental to salmon production (and thus subsistence use) and should not be allowed. (KTC, KTE) Fewer sales and fewer roads will mean less competition for subsistence resources (including from logging camp residents). There should be no increased development (logging, roading, mining) in important subsistence use areas. The best way to assure subsistence opportunities would be to scale back logging, letting the habitats recover and reducing competition (from more roads, logging camps). Eliminate timber harvest from TRUCS and other identified subsistence areas. (SSAB) The Forest Service should work with local Fish & Game Advisory Committees to identify and protect the most important subsistence areas. (RF&G) As a minimum, each rural community's "core subsistence use area" should be assigned a "natural setting" LUD. Failure to do so "fatally flaws the entire subsistence analysis." (ALS) You need to assure subsistence opportunities for local people near their homes. (1996) Logging and its associated activities have negatively impacted subsistence. The annual allowable sale quantity contained in the Preferred Alternative is too high to protect the long-term, sustainable use of fish and wildlife by the people who depend upon these resources for their monetary or non-monetary economic well being.

Response: Traditional subsistence use areas, and other areas with important wildlife resources, were considered in making the land use designation (LUD) allocations. Many areas were assigned either non-development LUD's (such as Semi-remote Recreation) or limited-development LUD's (such as Modified Landscape) where subsistence values were a concern. (Examples are areas important to the communities of Angoon, Kake and Hydaburg.) Salmon production is maintained or enhanced Forest-wide by use of Riparian Area standards and guidelines where less-restrictive management might otherwise occur. However, the Forest Plan has many multiple use goals and objectives, and in many areas timber production is emphasized, with likely affects on other resources. We disagree, however, that natural setting land use designations should always be provided to ensure areas for subsistence use. Much of the subsistence use in the Forest occurs on the road systems. We attempted to minimize effects on subsistence resources and use areas to the maximum extent possible, given the overall multiple-use nature of National Forest management. The 810 determination can be found in the Record of Decision.

Comment: Subsistence use and potential effects must be carefully evaluated before doing any logging in specific areas.

Response: Before implementing individual activities or projects that are permissible under a Forest Plan, further analysis of those proposals must be conducted, as required by the National Environmental Policy Act. The Forest-wide standards and guidelines for subsistence require further analysis of subsistence effects for all site-specific projects.

Comment: Close all roads to prevent adverse impacts to subsistence use. Roads increase competition for subsistence resources. Close logging roads to hunters.

Response: While the Forest Plan does not identify specific roads to be closed, Forest-wide standards and guidelines include requirements for considering the effects of roads and for road management at the project level. Mitigation could include seasonal or permanent closures for wildlife management and associated subsistence use. As noted in previous responses, the road system is one of the most important and heavily-used areas for subsistence purposes.

Comment: Roaded access (but not unlimited access) is good for subsistence users. Many subsistence users prefer roaded access, and like new areas "opened up."

Response: The changing pattern of subsistence use as roads are developed has been discussed previously. Road management objectives including road closures are discussed in the previous response.

Comment: "Gathering" should be added to the Subsistence standards and guidelines. (EPA)

Response: The concept of "gathering" is one of several included in the umbrella term "customary and traditional uses." These are provided for in the forest-wide standards and guidelines for subsistence.

Comment: Firewood is an important subsistence resource that should be recognized.

Response: The Forest-wide standards and guidelines provide for subsistence use of wood and other customary and traditional subsistence resources. ANILCA includes "fuel" as one of the customary and traditional uses. In addition, the subsistence gathering of wood (including firewood) is provided for by the standards and guidelines for most land use designations where firewood gathering would otherwise be restricted or not allowed (such as in Wilderness).

Comment: (1996) The FEIS should address the issue that, although sea otters are not used as a food resource by Alaska Natives, they are harvested for subsistence use to create handicrafts for sale and trade. Subsistence use may include parkas, gloves. hats. and other items.

Response: Sea otters have not been identified as a species likely to be affected by Tongass National Forest management. The Wildlife Forest-wide standards and guidelines include measures to protect marine mammal habitats.

Comment: (1996) The information presented on the importance of shellfish to subsistence users provides additional impetus to include consideration of the effects of the timber operations on shellfisheries and shellfish habitat in the FEIS. Although section D on page 4-94 states that habitats of subsistence species should be managed "to minimize the likelihood of significant short-term and irreversible or long-term effects," it is unclear whether this includes marine and coastal subsistence resources, since they are not emphasized in the effects analysis. Marine and coastal subsistence resources should be fully addressed.

Response: The only potential effect to shellfish and related marine species habitats from Tongass National Forest management identified relates to log transfer facilities. Such effects are discussed in detail in the Transportation section of FEIS Chapter 3.

Comment: There's no indication of standards and guidelines for identifying and protecting important plant resources for subsistence needs. (SEA, SNSC)

Response: There is no specific mention of plant resources in the Subsistence standards and guidelines, but they would be included in such terms as "other renewable resources," "customary and traditional subsistence resources," and "identified subsistence uses." All of these are recognized or provided for in the Forest-wide standards and guidelines.

Comment: The "Priority of Direction" section of the Plan indicates that management prescriptions take precedence over forest-wide direction. Therefore, intensive development LUD's can override Subsistence standards and guidelines, providing no protection for subsistence uses. (SEA, SNSC)

Response: This section has been rewritten to clarify the intent. It is only within a particular component of the management direction that the land use designation (LUD) standards and guidelines (or "prescription") would take precedence over the Forest-wides. The components are the separate resource categories for which Forest-wide standards and guidelines are written. (For example, within a particular LUD, the direction for Visual Resource might specify that only one of the visual quality objectives included in the Forest-wide standards and guidelines for Visual Resource will apply.) In addition, a table in each LUD prescription specifies which of the Forest-wide standards and guidelines for each resource applies within that LUD. For subsistence, except for two specialized LUD's, Research Natural Area and Municipal Watershed, <u>all</u> of the Forest-wide standards and guidelines apply to every LUD. Some LUD's also provide additional subsistence considerations, such as those for firewood discussed two responses back. Intensive development LUD's can never override the Forest-wide standards and guidelines for subsistence.

Comment: The alternatives fail to recognize and address subsistence as a "legitimate and protected use of the resources," or to give it equal weight. There is no "active management" of subsistence. (SEA, SNSC) There appears to be no meaningful commitment to subsistence. (SEACC) The DEIS doesn't properly address subsistence as a "top priority issue": subsistence is unrepresented.

Response: Subsistence has been one of the ten major public issues since the issues were identified in 1988. It has been the focus of considerable analysis throughout the process, some of which has been discussed in detail in previous responses. Alaska Native groups, Fish and Game advisories and councils, and the ADF&G Division of Subsistence have been consulted and used in identifying subsistence areas, collecting data, and reviewing the analysis. The Forest-wide standards and guidelines for Subsistence ensure that all ANILCA requirements will be followed, and that subsistence resources and uses will be fully considered, when planning and implementing all projects. (These have also been discussed at length in previous responses.) The discussion of subsistence effects by community is as detailed as any other community-related effects discussions in the EIS.

Comment: The subsistence goal needs to go beyond providing opportunities: the goal should be to meet the *actual* subsistence needs of rural residents. Maintaining viable populations forest-wide has no meaning for subsistence users. The needs of each rural community relative to their customary and traditional harvest areas must be provided for. (RF&G)

Response: ANILCA Section 802 (1) states, in part: "...consistent with management of fish and wildlife in accordance with recognized scientific principles and the purposes for each unit established, designated, or expanded by or pursuant to titles II through VII of this Act, the purposes of this title is to provide the opportunity for rural residents engaged in a subsistence way of life to do so." We believe the Forest-wide standards and guidelines and other provisions of the Revised Plan are fully consistent with section 802 and seeking to meet subsistence needs within the context of multiple use national forest management.

Comment: (1996) A stated common goal of all alternatives is to provide for the continuation of customary and traditional subsistence uses for all rural Alaskans. However, the alternatives do not uniformly provide for the continuation of subsistence opportunities. For example, the alternatives vary greatly in the amount of habitat protection for deer or fish, which in turn affects subsistence opportunities. A more detailed description of how each alternative would provide for the continuation of customary and traditional subsistence uses should be included in the Final EIS.

Response: This is a part of the FEIS analysis. See “Subsistence” in Chapter 3 of the FEIS, and the Record of Decision.

Comment: The TTRA requirement for providing for the sustained yield of all renewable resources includes subsistence. (ALS, SEACC)

Response: Subsistence is treated as an activity rather than a resource. The resources harvested in subsistence uses are treated as resources. Sustained yields of these resources are provided for by the Forest Plan.

Comment: The assumption that designated wilderness can provide all the habitat needed to support resources used for subsistence is incorrect. (RF&G)

Response: We make no assumption that designated Wilderness can provide all habitat needed to support resources used for subsistence.

Comment: (1996) The “deer habitat protection standard” should be reinstated and modified to meet current and future increases in demand for deer by subsistence hunters.

Response: Specific measures for deer habitat are included in the Wildlife Forest-wide standards and guidelines of the Forest Plan.

Comment: Second-growth management (pre-commercial thinning) must be done with subsistence requirements in mind: to provide future habitat for all subsistence species, not just to manage for commercial timber harvest. (RF&G)

Response: Second-growth management for wildlife purposes (to promote wildlife habitat) is provided for by the Forest-wide standards and guidelines for Wildlife.

Comment: Either "disclose the specific potential impacts" to subsistence areas and resources, or use a subsistence prescription to protect them. (SEA) A separate LUD for subsistence is needed, one which is "tailored to protecting those irreplaceable resources as required by law." Such a LUD meets the criteria discussed on page 2-5 of the Supplement, and is required by ANILCA, Title VIII. There is no reason not to include a subsistence LUD: even a minerals LUD is included! (ALS)

Response: Several Native organizations and Alaska Department of Fish and Game Division of Subsistence have suggested that a separate prescription or LUD (land use designation) be developed for subsistence. However, no Native organizations nor ADF&G have suggested what the prescription should consist of. The Forest Service did not develop such a prescription because subsistence use is available on every acre of Federal land. Forest-wide direction is to provide for subsistence opportunities, and this applies to all land use designations (as discussed previously). Many LUD's (and the majority of Forest acres) provide essentially natural settings for subsistence resources and opportunities for those who prefer

that type of setting. The Riparian Area, and Beach and Estuary Fringe, standards and guidelines assure protection of the important stream and beach fringe subsistence areas.

Comment: Regardless of the statement that "no irretrievable commitments of resources" are made by LUD designations, such designations do commit the agency to future actions (especially timber sales in certain LUD's). This will mean that important subsistence resources will take a backseat to timber harvest. (ALS, SEA, SNSC) This is even admitted by the Forest Service (court case-related examples are given). The Forest Service needs to clarify its intent here, that a LUD allocation is not a justification that a subsistence restriction under ANILCA is "necessary." (ALS)

Response: The ANILCA 810 determination related to potential significant restrictions is included in the Record of Decision. Estimates of potential effects to subsistence are made on the assumption that allowed projects and activities will in fact take place. The Forest-wide standards and guidelines for subsistence apply to all LUDs, as previously discussed.

Comment: The Forest Service looks at its subsistence obligation as merely procedural, thus nothing is done to avoid or minimize the adverse effects to subsistence resources that are predicted. This is an arbitrary action and not in accordance with law. (ALS, SEA) There is no evidence that any of the subsistence data was used to change or mitigate any proposed management action, even though significant adverse effects are disclosed. (RF&G)

Response: The importance that the subsistence, sport and commercial consumptive uses and resources of the Tongass played in shaping the Forest Plan and alternatives is displayed and analyzed throughout the EIS. All land use designations, both those not allowing timber harvest and those allowing harvest, protect and provide for subsistence opportunities. The designations not allowing timber harvest provide habitat for resources in the present condition which is predominantly pristine in nature. See also previous responses.

Comment: The Forest Service has made no effort to accommodate and be sensitive to traditional clan boundaries as part of the resource allocation and land management planning process. (SEA, SNSC)

Response: We did take into account the needs of subsistence communities, and the location of many traditional use areas, in assigning the land use designations. More explicit accommodations of traditional clan boundaries is a political issue outside the scope of the Forest Plan.

Comment: (1996) Regarding page 4-94, 1, the forest-wide standards state that in cooperation with the appropriate State and Federal agencies, [FS will] maintain a subsistence research program and data base. The lack of recent harvest survey data suggests that the subsistence research program is not adequately, supported. This program should be elevated to a higher priority.

Response: Updating subsistence information and monitoring subsistence use is identified as one of the priority research needs in the revised Forest Plan (Appendix B, Information Needs, “3. Determine subsistence resource patterns in Southeast Alaska”).

Timber

Goals and Objectives

Comment: A timber management goal of "maximum" production appears to dominate the Plan, leaving far less consideration for other resources. The timber goal should be the TTRA requirement of seeking to meet market demand rather than maximizing timber production. (SCS) Substitute the TTRA language of being responsive to annual market demand for the timber goal rather than the stated "maximum production" goal. Proportional harvest forest-wide should be a specifically stated management goal, as should the requirement that timber sales be above cost. (GP)

Response: We disagree that there is far less consideration for other resources. The revised Forest Plan provides for 78 percent of the Forest to be either in legislated areas or natural setting land use designations.

The goal and objective statements have been expanded in the FEIS and Forest Plan. The Tongass Timber Reform Act provision (Sec. 101) regarding seeking to provide a supply of timber from the Forest which meets annual market demand and meets the market demand for each planning cycle consistent with providing for multiple use and sustained yield of all renewable forest resources has been incorporated in the goal statements for those Land Use Designations that permit timber harvest (Timber Production, Scenic Viewshed, Modified Landscape, Recreational River and Scenic River).

Comment: The Timber Production LUD goal should be to "optimize" rather than "promote." (EPA)

The phrase in the preferred alternative timber goal, "capability of the land," is not defined. (SCS)

Response: We believe the goal statement includes the concept of "optimization." To meet the intent of the law, (seeking to provide a supply of timber to meet market demand (TTRA, Section 101)) we believe indicates that some lands should be managed primarily to promote sustained yield wood production. Therefore we believe the goal statement is appropriate for this particular land use designation.

The revised Forest Plan goal statement for timber management has been changed. "Capability of the land" is wording no longer being used. See Forest Plan, page 2-4.

Comment: Under the Tongass Timber Reform Act the role of the FS "is now clear. It is to seek to manage the remaining land to best sustain and encourage growth of the timber industry." "The reasons behind the development of a timber industry are still true today: the establishment of a large-scale timber industry to solve political, social and economic problems in the region." (KCC) The Plan goal should be to maximize the ASQ on the "remaining commercial forest land." Allow the forest industry to continue to prosper. (GOLD) A continuous supply of timber to maintain the livelihoods of many Southeast Alaska communities (Ketchikan and on Prince of Wales Island) is needed. (KPC) The revised plan should have a goal of "no net loss" of suitable, available timber. (KPC)

Response: Our policy is to manage the Forest to promote community stability in an environmentally sound manner. Providing a mix of goods and services that maximize net public benefit is the goal. In addition to seeking to provide a supply of timber that meets the annual market demand and meets the market demand for each planning cycle, the supply provided must be consistent with multiple-use and the sustained yield of all renewable forest resources (TTRA, Section 101).

Comment: The Forest Service seems to imply an obligation to fulfill installed Southeast Alaska saw and pulpmill capacity. Pages 3-334 and 3-340 of the Supplement state or imply that the Tongass must supply as

much timber as is needed to maintain current Southeast Alaska harvest levels, even though regional levels are way up because of private corporations liquidating their holdings at unsustainable rates. (SEACC)

Response: The Tongass Timber Reform Act, provides for seeking to provide a supply of timber that meets annual market demand and meets the demand for each planning cycle (Sec. 101) consistent with other resource values. In addition, we are to seek to provide a supply of timber from the Tongass National Forest to those purchasers qualifying as small business concerns. (Sec. 105). Existing mill capacity and historic harvest levels are indicators of potential demand and useful for evaluating potential effects of alternatives, but are not the only measures or stated as an obligation.

Comment: "I find it disturbing that the Forest Service feels an obligation to furnish timber to the Native corporations that have cut over their land as rapidly as possible with not even a pretense of sustained yield."

Response: The Forest Service has no contractual obligation to furnish timber to the Native corporations. However, the Native Corporations are still entitled to select acres of National Forest land as provided to them under legislation (ANSCA, ANILCA etc.). In addition, the Native Corporations are not prevented from bidding on Forest Service Independent sale offerings. Any Forest Service sales purchased by the Native Corporations would be subject to the export restrictions contained in the Federal Regulations (36 CFR 223.161) and other provisions of the timber sale contract.

Comment: Reduce old growth harvest to a goal of "no annual loss of old growth volume, no change in timber acreage."

Response: The Tongass National Forest is predominantly an old-growth forest with little second-growth. The forested land base is about 10 million acres and second-growth represents about 600 thousand acres. Second-growth stands are not expected to be ready for harvest for about another 70 years. This proposal would effectively reduce the allowable sale quantity to zero. This is not reasonable, considering multiple-use and the requirements of the Tongass Timber Reform Act that in part state we are to seek to provide a timber supply that meets annual market demand for timber and market demand for the planning cycle. Timber market demand studies indicate that market demand for the coming 10 to 15 years will likely be in the range of 330 to 600 MMBF (although pulp mill closure could reduce this amount) (Haynes/Brooks, August 1992, Irland, May, 1992, Brooks and Haynes, 1994).

Comment: The draft doesn't have "New Perspectives as a guide." What happened to new perspectives? The alternatives show a lack of New Perspectives concepts: there is no real attempt at integration of resource management - all is portrayed as a choice between timber and other resource outputs. Although discussed (page 2-4) in concept, there is little inclusion of New Perspectives principles anywhere in the documents. (WLS)

Response: New Perspectives has evolved into new direction on stand and landscape management called ecosystem management. Many ecosystem management concepts are incorporated in the standard and guidelines in the Forest Plan.

In addition, many of the Land Use Designations incorporate these concepts. For some, it is the preservation of large contiguous areas (such as wilderness); for others, it is the maintenance of a particular ecosystem (such as the Old-growth Habitat). Others include Research Natural Areas, Remote Recreation, Land Use Designation II, Special Interest Areas, and Wild, Scenic and Recreational Rivers.

Comment: A new management prescription called "sustainable perspectives" is proposed, which would have the following criteria:

- view the land as a forest, not a collection of trees
- a 400-800 year rotation will be used
- each volume class will be harvested with even flow sustained yield
- nutrient depletion of the forest will be analyzed and prevented
- there will be a goal of zero degradation of wildlife habitat, water quality and air quality
- the program will not run on government subsidy
- industry and forest uses will be developed to maintain indefinitely a higher ratio of jobs per acre than the current average

"Let's give it a try!"

Response: Over 84 percent of the forested land base in all alternatives is not available for timber production. These lands are set aside for wilderness, semi-primitive and primitive recreation, riparian areas, research natural areas, special areas, recommendations for wild rivers, beach fringe, national monuments, stream buffers, old-growth reserves, and legislated LUD II areas. Extended rotations of 400 to 800 years would not be capable of providing a viable timber program on the land base available for timber production. The allowable sale quantity would probably be about 40 to 60 MMBF, provided we could carry the stand 400 to 800 years. Hemlock height growth virtually ceases after 300 years and the maximum age is somewhere between 400 to 500 years. Trees like all living things will eventually die. Extended rotations would also produce trees of low quality because of the amount of defect that accrues with age. This size program would not enable the Forest Service to meet its remaining long-term contract obligations or meet the provision in the Tongass Timber Reform Act to seek to provide a supply timber which meets the annual market demand for timber (consistent with providing for the multiple use and sustained yield of all renewable forest resources). Timber market demand studies indicate that market demand for the coming 10 to 15 years will likely be in the range of 330 to 600 MMBF (although pulp mill closure could reduce this amount) (Haynes/Brooks, August 1992,; Irland, May, 1992, Brooks and Haynes, 1994).

Comment: (1996) There is too much dependence on one mill, resulting in a timber supply monopoly that affects the viability of small, locally owned sawmills.

Response: To facilitate the development of competitive enterprises and markets for timber resources, the Forest Service and Small Business Administration, in 1995, agreed to an annual set aside goal of approximately 100 MMBF for the Tongass NF. Mills qualifying for the Small Business Administration are distributed throughout Southeast Alaska.

Comment: (1996) The Ketchikan Pulp Corporation Contract needs to be extended another 15 years for community sustainability. Too many people will be put out of a job if the Mill closes. (1996) Because of past mismanagement, misdemeanors and felony convictions, the Ketchikan Pulp Corporation Contract should not be extended.

Response: Policy issues on contract term extensions are beyond the scope of the forest planning process. The purpose of the forest Plan is to direct all resource management activities on the Tongass National Forest. The Forest Plan provides programmatic direction in the form of multiple-use goals and objectives, land allocations, and management direction to make site-specific project decisions in an environmentally and economically efficient manner.

Comment: (1996) Both the Sitka and Wrangell Contracts should be reinstated to help revitalize those communities.

Response: See previous response.

Comment: (1996) The exporting of logs should be banned from all U.S. ports. Exporting valuable resources increases prices by eliminating local jobs, promoting overharvest and decreasing supply availability for US consumption.

Response: This is a policy issue outside the scope of the Forest Plan. See previous response.

Comment: (1996) More emphasis should be placed on promotion of the value added industries. There are more economic benefits, such as jobs per board foot, with value added processing than pulp operations. Such industries as log home building, furniture manufacturing, laminated beams, etc. should be promoted in the Forest Plan.

Response: This is a policy issue outside the scope of the Forest Plan. See previous response.

Harvest Methods and Locations

Comment: Concentrate timber harvest more on slopes, and less on valley bottoms:

- use group selection or partial cutting for valley-bottom harvest
- 100-115 year rotations are too short: use 200 years for stands in valley bottoms.

Response: Construction difficulty and erosion hazard increase rapidly when roads are pushed into steep terrain and cut into erosive soils or unstable slopes. The site-specific location of harvest units and road locations is done at the project design level not at the programmatic forest plan level. The Forest Plan provides direction in the form of standards and guidelines and management prescriptions that will guide project level design.

Selection by the Forest Service of an appropriate silvicultural system occurs at both the National Forest land management planning level and Ranger District project level. The basis for the Forest's selection is a broad match of silvicultural systems with the ecological characteristics of the vegetation and the overall planning objectives of broadly defined Land Use Designations. No single silvicultural system can produce all desired combinations of products and amenities from a particular stand. A good silvicultural system is a solution to a specific set of circumstances, and it should fit logically into the overall management plan for the Forest. The system must provide for the control of damaging agents and provide adequate resistance to the same. A silvicultural system develops from a specific analysis that considers such issues as worker safety, logging systems layout, pathogen and insect effects, animal populations, stand development and yield, and economics.

Stream courses and their associated riparian areas in valley bottoms have specific standards and guidelines. Many situations for particular stream process groups will likely lead to group selection harvest methods as you recommend.

Comment: The lower volume, lower grade stands should make up a larger proportion of the harvest (than currently).

Response: These stands are contributing towards the allowable sale quantity.

Comment: Increase non-roading harvest methods. Concentrate harvest in already-roaded areas. Concentrate on already-logged areas; log from ridges (road these); use long-span systems; and no more A-frame logging.

Response: Specific harvest locations and methods are done at the site-specific project level, not at the programmatic or Forest Plan level. The Forest Plan provides direction in the form of standards and guidelines and management prescriptions that will guide project level design. The appropriate selection may be based on economics, topography, necessary resource protection requirements, best management practices, and the silvicultural prescription. Many conditions will warrant the use of helicopter and long span skyline harvest methods.

The amount of volume that is expected to be harvested by helicopter is expected to increase. About 30 percent of the suitable forest lands available for timber harvest are composed stands that are difficult or even isolated from access. Long span skyline and helicopter systems will likely often be needed to make these areas accessible. Concentrating harvest in areas already roaded could lead to adverse cumulative watershed effects, wildlife effects and or visual effects thus dispersion of harvest units has to be considered at the project design stage.

Comment: To respond to the major public issue of eliminating clearcutting, the Forest should move to selection, group selection and shelterwood cutting systems. These will still meet management objectives (see Table G-1, pg. G-6). (SEACC) Give consideration to "selective or diversified cutting methods to replace at least some clearcutting on selected watersheds." Put more emphasis on selective harvest methods: don't foreclose that option. (TAKU) Tree selection is the only alternative method to clearcutting used, and only on a small percentage of the acres. What about the use of stripcuts as an alternative to clearcuts? - they can reduce blowdown and have many other advantages to clearcutting. (1996) Selective cutting should completely replace clearcutting. The Preferred Alternative provides too much lee-way for clearcutting. Selective harvest should be used more than clearcutting. The Tongass National Forest should cease clearcutting. Scenery and the tourist industry are being affected. Clearcutting should not be allowed because of adverse effects on water quality and the fish industry.

Response: Uneven-aged, two-aged, and even-aged methods are all available for selection at the site specific project level. The basis for the selection for a given harvest unit is based on a broad match of silvicultural systems with the ecological characteristics of the vegetation and the overall planning objectives of broadly defined Land Use Designations. No single silvicultural system can produce all desired combinations of products and amenities from a particular stand. A good silvicultural system is a solution to a specific set of circumstances, and it should fit logically into the overall management plan for the Forest. The system must provide for the control of damaging agents and provide adequate resistance to the same. A silvicultural system develops from a specific analysis that considers such issues as worker safety, logging systems layout, pathogen and insect effects, animal populations, stand development and yield, watershed effects, and economics. The Region's ecosystem strategy encourages the testing of alternative silvicultural systems in cooperation with local industry.

Comment: (1996) In the RSDEIS (Chapter 2) only three alternative silvicultural methods for timber harvest used in the forest plan alternatives are mentioned. Other methods such as shelterwood, seed tree, and overstory removal should be used as permitted in the Standards and Guidelines. All the appropriate methods should be available (considered) at the project level based upon site specific analysis done by the interdisciplinary team.

Response: See previous response.

Comment: (1996) Clearcutting was identified as one of the five major issues of the TLMP revision. Yet it appears that the Preferred Alternative proposed to implement only limited uneven-aged and two-aged management silvicultural prescriptions. It is not clear what is meant by the term "where site-specific conditions permit." Unless there is some direction to apply silvicultural alternatives, there may be no departure from harvesting trees under the traditional, yet controversial, clearcut prescription. The selected alternative should include direction for applying more and different types of silvicultural alternatives.

Response: See previous response

Comment: Yard through stream buffers only with a "tower equipped with lateral yarding carriage." Use more sophisticated logging systems: long span skyline instead of "archaic" highlead.

Response: The determination of logging methods is determined at the site-specific project level. The appropriate selection may be based on economics, topography, necessary resource protection requirements, best management practices, the silvicultural prescription, and the standards and guidelines in the Forest Plan. The Forest Plan provides programmatic direction in the form of multiple-use goals and objectives, land allocations, and management direction in the form of standards and guidelines. The Forest Plan does not make site-specific decisions, but provides the direction necessary to make those decisions in both an environmental and economically sound manner.

Comment: Use selective logging, "leaving 15-20 percent of the trees intact": this will reduce impacts, and the timber industry can still make a profit.

Response: This system has not been formally tested in southeast Alaska. However, all silvicultural systems are available for site-specific project level design and analysis. Certified silviculturists usually make the site-specific project level selection of silvicultural systems, which are evaluated through the NEPA process. The choices are dependent on matching the attributes of the silvicultural systems with specific management objectives, the ecological characteristics for specific stands and species, and policy direction. The Forest Plan provides direction on the appropriateness of some of the silvicultural systems for specific Land Use Designations or provides standards or guidelines modifying size, location and so forth of harvest units. The selection of an appropriate method depends on a number of factors, which may include: 1) the physical limitations of the sites, 2) the species involved, and 3) other resource considerations. The Region's Ecosystem policy encourages the Administrative Areas to cooperate with the local timber industry and test alternative silvicultural systems and monitor the results.

Comment: Uneven-aged systems should be treated more positively, reflecting recent research on maintaining the character of old growth. The draft fails to compare adequately the advantages of selection management over even-age management. Why is clearcutting still the preferred method? It impacts streams, breaks up wildlife corridors, destroys biodiversity, and promotes monoculture.

Response: We do not agree. Appendix G documents both the advantages and disadvantages of selection systems as well as many other systems. Uneven-aged management has not been formally tested in southeast Alaska, but based on the silvical characteristics the method may have some merit. However, there are some problems with uneven-aged systems as well. These problems include economics, stand damage, and mistletoe problems. Further administrative studies through demonstration projects and research are needed to better assess the benefits and consequences associated with uneven-aged management on a large scale.

At the project level, it is likely that clearcutting will generally be found to be the optimum method because it provides excellent regeneration of desired species, effective tree disease control, viable harvest economics, compatibility with the use of standard logging systems, and minimizes windthrow problems. Most any regeneration system can cause the impacts listed; it is not the method in itself but the manner in which the method is used that can cause the impacts. It is not fair to blame clearcutting for these kind of impacts, because if improperly applied, other methods could cause most of the same impacts that seemed to be associated with just clearcutting. However, more use of alternative methods to clearcutting is expected under the Revised Plan then has occurred in the past.

Comment: Clearcutting has not been shown to be the optimum harvest method, which is an NFMA requirement. To credit clearcutting with reducing the need for roads is absurd, since clearcuts have the same negative impacts as roads do. Your analysis (appendix) ignores the negative effects of clearcutting.

Response: We do not agree. Appendix G documents both the advantages and disadvantages of clearcutting as well as many other systems. The clearcutting method provides excellent regeneration of desired species, effective tree disease control, viable harvest economics, and compatibility with the use of standard logging systems. We do not agree that clearcuts would necessarily have the same negative impacts as roads. The amount of stream sedimentation resulting from timber harvesting depends largely on the amount of disturbance occurring during logging and subsequent erosion. Soil disturbance is more related to type of logging operation than to silvicultural system. Sediment from road construction can be extremely variable depending on slope, aspect, and soil conditions. The determination of which silvicultural method is optimum for application in a particular area is made at the project level.

Comment: You state that clearcutting favors spruce over hemlock, but why is this desirable? You should be perpetuating the natural mix of tree species. Also, look for other methods to control dwarf-mistletoe than clearcutting.

Response: Spruce is desirable for a number of reasons. Spruce adds vegetative diversity to the site. In addition, mixed stands of spruce and hemlock usually have higher yields per acre than pure stands of either species and spruce usually commands a higher value in terms of market price. Presently, clearcutting is the most effective control of dwarf mistletoe. Chemical and biological controls are still in the research stage.

Comment: (1996) Clearcutting is beneficial for wildlife foraging areas. Open areas provide the fodder needed for ungulates to thrive.

Response: We agree. These areas provide summer forage and winter forage during mild winters. However, their value decrease when the stand reaches the stem exclusion stage and shades out the understory vegetation around age 35 to 40 years.

Comment: Group selection harvest is impractical and uneconomic, and will only add to the blowdown problem (KPC)

Response: Uneven-aged management has not been formally tested in southeast Alaska, but based on the silvical characteristics the method may have some merit. We agree testing is needed to determine the magnitude of likely economics, stand damage, and mistletoe problems. We hope to be working with industry through demonstration and other projects during the plan period to perform testing and monitoring.

Comment: Try more new perspectives approaches (such as: by removing only 2/3 of the trees in a unit, it will have old-growth characteristics in 25 years). Use "new forestry" principles such as partial clear cuts, helicopter and small-operator logging (boat logging), and more intensive second-growth management to reduce impacts yet allow harvest of the timber resource.

Response: New Perspectives has evolved into new direction on stand and landscape management called ecosystem management. Many ecosystem management concepts are incorporated in the standard and guidelines in the Forest Plan. In addition, many of the Land Use Designations incorporate these concepts. For some, it is the preservation of large contiguous areas (such as wilderness); for others, it is the maintenance of a particular ecosystem (such as Old-growth Habitat). Others include Research Natural Areas, Remote Recreation, Land Use Designation II, Special Interest Areas, and Wild, Scenic and Recreational Rivers.

The Forest Plan does not constrain the application of alternative systems at the project level. The Region's Ecosystem policy encourages cooperation with the local timber industry for testing alternative silvicultural systems and monitoring the results.

The region has initiated a Second Growth Management Program. Cooperators include the Forestry Sciences Laboratory and State and Private Forestry. The objectives are an increase multiple resource outputs from second-growth forests with primary emphasis on production of wood fiber and Sitka black-tailed deer habitat. An additional project was developed to determine fish habitat relations in second-growth forests.

Comment: Use a 20-acre maximum clearcut size, with a minimum of ten leave trees per acre.

Response: Leaving green trees is not appropriate in areas susceptible to windthrow and where the trees are infected with dwarf mistletoe. Arbitrarily restricting unit size forest wide reduces the flexibility of locating windfirm boundaries, small harvest units may increase habitat fragmentation, and will usually be more susceptible to mistletoe infection from adjacent stands and certainly more susceptible from the 10 trees left standing per acre.

Comment: There's too much unnecessary avoidance of "dry" streams, leading to breaking the trees.

Response: Avoidance or harvest along these types of channels is determined using site-specific best management practices at the project level. Factors that may be considered at the project level when considering harvest strategies include: 1) too much disturbance in "dry" streams can lead to increased sediment loads which maybe flushed down into lower stream reaches during rainfall events when the streams are "wet", 2) the contribution of woody debris from upstream normally dry stream segments to down stream reaches with fish habitat, and 3) the potential for seasonal use of "dry" streambeds as protected hiding areas for fish during flood events in adjacent "wet" streams.

Comment: Salvage the "clearcut leavings." (KGB)

Response: The determination of specific salvage sales is determined at the site-specific project level. The Forest Plan provides guidance and direction on where salvage is compatible or not compatible. Salvage logging is fully compatible with a number of Land Use Designations. These designations include scenic viewshed, modified landscape, timber production, riparian area, and some recommended scenic and recreational rivers. For most other land use designations, tree use is limited to subsistence use, beach log recovery only, personal use only or no use at all.

Comment: Consider substituting mule- and horse-team logging for tractors and skidders. This lowers the negative effects and is cheaper for the loggers.

Response: The determination of logging methods is determined at the site-specific project level. The appropriate selection may be based on economics, necessary resource protection requirements, best management practices, and the silvicultural prescription. The Forest Plan does not make site-specific decisions, but provides the direction necessary to make those decisions at the project level, in an environmentally sound and economically efficient manner.

Comment: The adjacency rule of five-foot height arises from silvicultural considerations rather than ecological; ecology is far more important. A clearcut should remain considered a clearcut until the stand substantially reaches old growth stature again. (GP)

Response: National Forest Management Act implementing regulations (36 CFR 219.27(d)(1)) direct that as a minimum, openings in forest stands are no longer considered openings once a new forest is established. A new forest is considered established when openings are adequately stocked, and the trees are approximately 5 feet in height (Alaska Regional Guide). Forest plans may set forth variations to this minimum based on site-specific requirements for achieving multiple-use objectives.

Alternatives and Allocations

Comment: The EIS should evaluate an alternative that offers (various responses): no timber harvest, or no clearcutting, or no increase in harvest from the 1980's levels.

Response: The EIS evaluated a range of alternatives that vary from no scheduled harvest to an alternative that would have an ASQ of over 600 MMBF. Five of the ten alternatives have ASQ's less then the 1980's average harvest level. In addition, some alternatives would have no clearcutting.

Comment: Don't limit the upper range of suitable land available for harvest. (AJF)

Response: We are required by law and the implementing regulations to identify lands suitable for timber production. The criteria to determine tentatively suitable forest lands are contained in 36 CFR 219.14(a)(1). In addition, the National Forests are managed for other resources other than timber. Tentatively suitable lands identified as not appropriate for timber production are allocated to other multiple-use objectives where management requirements set forth in 36 CFR 219.27 cannot be met or preclude timber production . The alternatives under consideration represent a range of themes from an emphasis on amenity values to an emphasis on commodity production. The amenity emphasis alternatives will have more land identified as not appropriate for timber production as compared to the commodity alternatives.

Designation in the plan of lands not suited for timber production shall be reviewed at least every 10 years (36 CFR 214.14(d). Such lands may be reviewed and redesignated as suited for timber production due to changed conditions at any timber. Changes in the suitability classification will require an amendment or revision of the Forest Plan.

Comment: Per Judge Sherman Finesilver's ruling on the Rio Grande LRMP, the Tongass must have an alternative which contemplates timber harvesting at a profitable level. Randall O'Toole has shown none of the Tongass alternatives to be profitable. Since TTRA requires meeting market demand, the Tongass is obligated to only show profitable alternatives (GP)

Response: We do not agree. The Tongass Timber Reform Act provides for the Secretary of Agriculture to "seek" to provide a supply of timber that will meet the annual market demand for timber and meets the market demand for each planning cycle (Sec. 101). In addition, Sec. 102 of the Act directed that the Secretary need not consider economic factors in the identification of lands not suited for timber production. Given the direction in the Act, the goal of the Forest Plan is to seek to provide a supply of timber that meets the annual market demand and the demand for the planning cycle (Sec. 101) and seek to provide a supply of timber to those purchasers qualifying as small business concerns under the Small Business Act as amended consistent with providing for multiple use and sustained yield of all renewable Forest resources. Several of the alternatives considered including the preferred alternative have the potential to provide for harvest at a "profitable" level.

Comment: The range of alternatives is inadequate since alternatives for resolving the long-standing issues of timber harvest economics, long-term contracts, and coordination with other ownerships are not included. A departure alternative (for the preferred) was not evaluated. (WLD) The alternative of canceling, or not renewing, the long-term contracts should have been included.

Response: We do not agree. The passage of the Tongass Timber Reform Act addressed many issues. The Act has provisions that address timber supply, identification of lands unsuitable for timber production, fisheries protection, small business set-aside programs, additional LUD II management areas, additional wilderness designations, Kadashan Study, and modifications of the Long-term timber sale contracts. Since TTRA enactment, one long-term contract has been terminated and the remaining contract could be terminated as a result of the Ketchikan pulp mill closure or otherwise. However, the range of alternatives considered in the RSDEIS and the FEIS in particular has not been constrained by long-term contract considerations in any case.

Timber harvest economics, and planning and management on other ownerships, have been addressed in the EIS process.

Comment: An alternative needs to be developed that would show the maximum allowable sale quantity outside of legislated areas. An ASQ of 554 (Gruenfeld Associates study) plus an implementation factor for site-specific project "falldown" needs to be addressed (APC)

Response: The Tongass Timber Reform Act Section 101 provide for the Secretary of Agriculture to seek to meet annual and long term market demand. To address this issue, Alaska Forestry Association independently contracted the services of Gruenfeld and Associates to perform a demand study. In addition, the Forest Service contracted with Richard Haynes at Pacific Northwest Experiment Station and with an independent contractor, Lloyd Irland to separately address the same issue. Based on the findings from the three demand studies, we believe Richard Haynes (Haynes/Brooks, June 1994) to be the most plausible scenario for the coming 10 to 15 years. A monitoring item is part of the Forest Plan (Chapter 6) to annually assess the market situation to determine if the predictions are being borne out. Haynes predictions for the coming 10-15 years are less than 500 MMBF per year.

Section 301(e) of the Tongass Timber Reform Act directed the Secretary to do a study of the attainability of volumes committed under the two long-term contracts and the likely effects of eliminating the boundaries defining the long-term contract areas. The results of that study addressed the concept of an implementation factor. As a result of the study, the incorporation of an "implementation factor" is a part of the revised TLMP (see Appendix B and Chapter 3 of the FEIS).

Comment: The State requests additional analysis and an additional alternative that:

- reclassifies suitable forest lands in the Primitive and Semi-primitive LUD's to the Moderate Development LUD
- has an allowable sale quantity of 520 MMBF (net sawlog volume) to support current mill capacity. (STATE)

Response: This comment was made by the previous administration (Hickel Administration). State proposals made by previous Administrations are discussed in Chapter 2 of the FEIS

Comment: An alternative must be provided that modifies Alternative D to "seek to meet" predicted market demand. (AFA, STATE) Alternative P contains about 100 MMBF of non-economic volume (isolated and difficult operability) and about 30 MMBF in encumbered lands. The new alternative should provide economic volume so that market demand can be met. (AFA)

Response: We have undertaken further research through the Pacific Northwest Experiment Station (Richard Haynes and David Brooks) and through an independent contract (Lloyd Irland). The Alaska Forest Association also independently undertook a study which was completed by Gruenfeld and Associates. After review of the findings of each of these studies, we believe the predictions made by Brooks and Haynes, 1997 (draft) are the most plausible for the coming 10 to 15 years (life of the Plan).

Lands classified as isolated or difficult in operability are currently considered generally not economic under most market conditions. We have partitioned the allowable sale quantity (ASQ) into two noninterchangeable components. One component of the ASQ is from lands which are considered generally economic using traditional timber harvest methods. The other component of the ASQ is from lands which are considered difficult to access or are economically and technologically marginal. The purposes of partitioning are to (1) maintain the economic sustainability of the timber resource by preventing the over harvest of the best operable ground and (2) identify that portion of the timber supply that is at risk of attainment because of marginal economic conditions. (See Chapter 3 of the FEIS).

The FORPLAN analysis for each alternative for the FEIS had the encumbered lands removed from the available forest lands and thus did not contribute to the ASQ calculation.

Comment: The plan fails to consider a reasonable and representative range of alternatives. The following timber issues are not resolved or addressed by alternatives:

- terminating the pulp contracts
- adopting a harvest system other than clearcutting
- harvesting timber proportional to each volume class
- having a cutoff of old growth harvest at some point in the future
- reducing ASQ in conjunction with incentives to focus on value-added wood products
- scheduling timber harvest so that annual revenues do not decline over time
- focusing on existing roaded areas for timber harvest. (SEACC)

Response: An alternative canceling the long-term contracts has not been necessary to address to reach a reasonable decision regarding a final Revised Plan (see previous response).

The FEIS discusses all the appropriate silvicultural systems for use in the timber types on the Forest (Appendix G, FEIS). All silvicultural systems are considered. The selection of the most appropriate system is done at the site-specific project level. For planning purposes and programmatic effect's analysis, the Alaska Region made an estimate of the most likely regeneration methods that Land Managers may employ during the plan period. This determination allows the Forest Service to project alternative impacts and predict costs and yields for the revised Forest Plan and alternatives. All silvicultural systems and associated harvest methods are appropriate for use on the Forest. Each are appropriate for use after considering the specific physical limitations of the sites, the species involved, and other resource considerations. The selection of any silvicultural treatment for a specific area is determined by a certified silviculturist and evaluated through the NEPA process. Treatments are proposed only following an on-the-ground examination of the site and completion of a silvicultural prescription that explores alternative treatments.

Unlike the 1991 Draft supplement, the FEIS does not provide for specific constraints to directly calculate TTRA Proportionality. TTRA Proportionality is an implementation requirement for the KPC long-term contract and is not necessary to further address in the Forest plan (see Chapter 3 of the FEIS). Concerns about harvest of high-volume old-growth have been addressed by many other provisions of the revised plan, including Old-growth LUD's and Riparian and Beach and Estuary Fringe standards and guidelines. As displayed in the FEIS, the harvest of old-growth is expected to continue for about 70-80 years and then second-growth stands will be available for harvest.

An alternative that focused harvest just on roaded areas is not reasonable. About one third of the tentatively suitable land base is roaded. Focusing harvest on just these acres would effectively reduce the land base by 2/3's, with much of it already harvested for the first rotation. This land base would not provide a viable timber sale program that would meet remaining long-term contract obligations and the Tongass Timber Reform Act direction to seek to provide a supply of timber that meets annual market demand and the market demand for the planning cycle to the extent consistent with multiple use and sustained yield of all removable resources. There could be cumulative watershed, visual, and other resource problems with such an alternative.

All alternatives in the FEIS had a non-declining revenue constraint; Appendix B documents the constraints used in the FORPLAN model for the alternatives.

Costs and Values

Comment: The mid-market average used in the timber economics modeling should include 1990, to include the latest possible information on pond log value. (KPC) Stumpage rates, sale values and cost data for 1990 should be included in the analysis. Because of the changes that have occurred in management over the past five years, the 1979-1984 data should be dropped. (AFA)

Response: The economics (costs and prices) have been updated to reflect 1995 values.

Comment: Timber prices are overstated. (SEACC) Timber values are over-estimated (by at least 100 percent) and costs are under-estimated (by 40-50 percent). The analysis has left out many "costs" (such as payments to the State and purchaser road credits): these aren't covered by revenues, thus the whole timber program is losing money. Eighty to ninety percent of Tongass sales are below cost. The "real" dollar costs of the timber sale economics issue haven't been disclosed. (WLD) Concerns with the timber data: timber values are too high, and the costs aren't realistic, leading to an overestimate of timber availability and economy. (SEA) The timber values are too high: should be @ $40/MMBF.

The FORPLAN model uses an average of $146/MMBF while purchasers have only paid $44/MMBF during the high market years of 1988-1990 and the EIS assumes that the timber is worth $90/MMBF. Purchaser road credit was counted on the receipts side of the ledger but not the cost side. Using an over-estimated average timber value ($146/MMBF), and not counting purchaser road credit as a cost, lead to the erroneous conclusion that the net profit would be positive in the preferred alternative. (CHEC)

Response: Prices and costs have been updated since the DEIS (6/90) and the SDEIS (8/91) and are based on standard Forest Service appraisal data. Purchaser road credit is not included in the revenues in the FORPLAN model; they are on the cost side. Net revenues in the FORPLAN model are computed by taking pond log value minus logging costs, haul & maintenance costs, road construction and reconstruction costs (purchaser credit), profit and risk, and Forest Service costs.

Payments to States are Congressional entitlements in the form of a revenue sharing process in which the federal government provides dollars to the local governments based upon the National Forest acres within a county's jurisdiction and the annual income derived from the National Forest. The value of the payment is determined by taking 25% of the gross receipts, including all timber sale revenues (NFF, KV collection, and Purchaser Road Credits). In accordance with Federal and State laws, these funds generally are expended for schools and county roads in the counties in which the National Forest is situated.

The Forest Service and the GAO disagree on how to account for these payments to the states. These payments are similar to "Payments in Lieu of Taxes(PILT)", as described in the PILT Act of 1976. As the reduction or elimination of the timber sale program would not eliminate payments to the states due to the PILT Act, timber sale receipt funds provide an offset to the Congressional responsibility to appropriate funds to the states in lieu of taxes and, hence, should not be reflected as a cost of the timber sale program. However, the GAO believes the 25% fund is a cost of timber operations as these entitlement payments are in fact made by the U.S. Treasury from timber sale revenues. For that reason, the Forest Service shows two "bottom line" figures in the TSPIRS report on the statement of revenues and expenses, a gain/cost before payments to states and a gain/cost after payments to the states.

Policies and Practices

Comment: Since the harvest of old growth is not sustainable, "the question of how to move the timber industry into a mode where a fixed area of land is farmed for timber" needs to be addressed. The challenge now is for the timber industry to convert to a second-growth industry: "The end of the high-volume old growth is in sight." The timber industry needs to adapt to the use of 2nd-growth timber.

Response: The harvesting of old-growth is expected to continue for another 70 to 80 years on the Tongass, at which time second-growth will become available for harvest.

Comment: Enhance opportunities for small timber operators by reducing the acres and volume available to the large corporations. Offer more small sales "at prices that small mills and logging outfits can afford." There are many U.S. markets for Tongass wood products (spruce for musical instruments, cedar for shakes and shingles, spruce and hemlock for framing timber - all of these have been made from logs rejected by the Japanese): give local loggers access to good logs.

Response: The revised Plan will allow a reasonable opportunity for a range of timber sale sizes, including more small sales.

The 1990 Farm Bill (Subtitle G of Chapter 2) known as National Forest-Dependent Rural Communities Diversification) provides opportunities for rural communities to request assistance from the Forest Service to form action teams which will develop and implement economic revitalization action plans. The first step in implementing the rural development program at the local level will be to meet with local leaders and individuals to establish action teams which will review (develop where none exists) the local economic development plan and recommend priority action items which the Forest Service can participate. Projects identified through this process will be incorporated into the budget process for funding consideration.

Forest-wide standards and guidelines in the revised Forest Plan under Rural Development includes "consider[ing] where resources could be redirected to respond to local needs and opportunities for rural development."

In addition, the State and Private Forestry Branch of the Forest Service offers assistance under various programs. PL 95-313 Cooperative Assistance Programs includes a Marketing and Utilization Program which provides technical assistance to harvesters and processors to improve the efficiency of operations and extend the wood supply.

Comment: Put more emphasis on "value-added" wood products and industries, such as cedar and spruce for boatbuilding, cabinet making, etc. (SC-J) Support locally-manufactured wood products that require quality old growth timber: the same number of people as are currently employed could be employed in this way while harvesting less timber. The small-scale use of old growth for specialized products, locally manufactured, should be clearly defined and planned for. There are local people who want to run these kinds of businesses but can't get the few trees they need due to long-term contract priorities. (C-TS) Give a preference in bidding to timber purchasers who will refine their timber into dimensional lumber or finished products (here in Alaska).

Response: Refer to previous response.

Comment: Require secondary or tertiary manufacturing, not just the production of cants. Require all wood removed to be used to "maximize the usefulness of the products produced." Every timber sale analysis should demonstrate "that the benefits of cutting these unique forests could not be met in some other less destructive way or by cutting timber in another part of the country or world."

Response: Cants, by regulation (36 CFR 223.160), are defined as meeting processing requirements. The Forest Plan is not the vehicle for requiring further processing.. Our timber sale contracts require the removal of products that meet minimum utilization standards. The Standards and Guidelines in the Forest Plan (Timber) provide for improvements in utilization through sale preparation, appraisals, contract administration, and dissemination of research information. Secondary and tertiary manufacturing of wood is occurring in southeast Alaska. We believe that Alaska operates in a competitive market; therefore, we assume that if industry could be competitive producing “value-added” products, they would do so.

A site-specific analysis is done for every proposed timber sale, as required by the National Environmental Policy Act and its implementing regulations. This analysis documents both beneficial and adverse identified impacts.

Comment: Round log export of cedar should not be allowed. (GP) The Forest Service should ban the export "in the round" of yellow cedar, and promote a value-added cedar industry in Southeast (also for red cedar). No more timber exports: leave harvest to the discretion of the local land users "for a holistic bioregional propagation and harvest."

Response: Policy issues on round log export are beyond the scope of the forest planning process, and are not necessary to address to complete revision of Forest Plan multiple-use goals, and objectives, land allocations, and other plan directions. Cedar round log export policy may be further addressed under existing regulations (36 CFR 223.161; 223.20).

The 1990 Farm Bill (Subtitle G of Chapter 2) known as National Forest-Dependent Rural Communities Diversification) provides opportunities for rural communities to request assistance from the Forest Service to form action teams which will develop and implement economic revitalization action plans. The first step in implementing the rural development program at the local level will be to meet with local leaders and individuals to establish action teams which will review (develop where none exists) the local economic development plan and recommend priority action items which the Forest Service can participate. Projects identified through this process will be incorporated into the budget process for funding consideration. Projects can consist of various value-added product industries.

Comment: The Forest Service should provide more assistance to operators in getting Federal and State permits, and technical assistance for mill-related problems (such as disposal of mill wastes). The smaller operators need your help.

Response: The State and Private Forestry Branch of the Forest Service offers assistance under various programs. PL 95-313 Cooperative Assistance Programs includes a Marketing and Utilization Program which provides technical assistance to harvesters and processors to improve the efficiency of operations and extend the wood supply.

Comment: For the next ten years, limit logging to already logged and roaded areas and don't exceed the past five years average cut. During this period, and before any more unroaded areas are entered, do more study of wildlife habitat and ecosystem needs.

Response: About one third of the tentatively suitable land is roaded and about 13 percent of the total forested land base is roaded. Considering the land base available in the "already logged" areas and the other resource values, this alternative would not provide sufficient volume to meet Tongass Timber Reform act direction regarding seeking to provide a supply of timber to meet the market demand and for a small business program. In addition, there could be cumulative watershed, visual, and other resource problems with such an alternative.

The planning effort is using the best available information in determining the effects on various resources. During the life of the plan (10 to 15 years), only about 1 percent of the suitable available forest lands are expected to be harvested under the Revised Plan.

Comment: A policy is needed to keep the long-term contract holders from benefiting from SBA sales that go unbid, since these sales would then be available to the contract holders but would not have to have met the proportionality requirement. (TCS)

Response: Policy issues such as this are beyond the scope of this programmatic planning process. The Forest Plan provides programmatic direction in the form of multiple-use goals and objectives, land allocations (called Land Use Designations), and management direction in the form of standards and guidelines. Determination of whether particular sales are made available to large business or small business can be addressed through timber sale program administration within the framework of the Revised Plan.

Comment: After the long-term contracts run out, then stop harvesting timber on the Tongass (after 35 years of subsidy, they are still having problems). The independent timber sale program should be abandoned to reduce the impacts of timber harvest on other resources; the 50-year contracts should also be terminated. The APC contract area should not be expanded; instead, the volume commitment should be reduced if it's not available within the original contract area. (GP) The independent sale program should be terminated, and the long-term contract area should not be expanded. (SCS)

Response: See previous responses regarding long-term contract termination. Abandoning or terminating the independent sale program is not considered reasonable under the TTRA, NFMA, or the Multiple Use-Sustained Yield Act.

Comment: Reserve salvage logging for "truly cataclysmic situations" - don't salvage small blowdown patches (this just causes more blowdown).

Response: The Forest Plan designates areas where timber harvest is allowed and defines broad classes of suitable regeneration methods such as selection, even-aged or two-aged methods. The appropriateness and suitability of site specific methods will be done at the project level and evaluated through the NEPA process.

Comment: Why aren't utility logs charged for? If the companies profit from them, they should pay for them.

Response: The companies do pay for utility logs. However, they do not necessarily profit from them.

Modeling and Yields

Comment: in the SV and ML LUD's, clearcuts must have the flexibility of being 10 acres or larger, and the height to adjacent mature stands should be decreased to 25 percent. If these changes are not made, the yield predictions used in the analysis process will not be achieved.

Response: Unit sizes in the SV and ML land use designations will likely vary from group selection to clearcuts of 40 acres or more. Height to adjacent mature stands is estimated at from 20 to 50 percent. The unit size and adjacency requirement is dependent on specific project design in meeting the adopted visual quality objective. These are only guidelines and not the landscape analysis that will occur at the site

specific level to determine how and if adopted visual quality objectives are being met. Yield predictions for small group cuts have been reduced to account for edge effect.

Comment: As a result of the proportionality requirement of TTRA, species composition of the remaining suitable-available forest lands is different, and this will affect cost and revenue variables. The inventory should be analyzed for this fact and adjustments made accordingly in the analysis process.

Response: Species composition is a factor in the analysis process. Pond log values are computed by species for each Strata and Administrative Area. Strata pond log values are weighted averages using the species composition for each strata. Species composition comes from the timber inventory data.

Comment: An acreage reduction should have been applied to the yield tables rather than the volume reduction of 11.4 percent. Taylor's 1934 study may not have any bearing on current conditions. (APC) Acreage reduction rather than volume reduction should have been used in the yield tables. (AFA)

Response: This concept was tested and rejected. Using a maximum timber benchmark, yield tables were increased by 11.4 percent. No acreage adjustments were made. There was a 1.7% increase in the ASQ prior to any acreage reductions. The results show that the amount of existing old-growth forest is the binding constraint when calculating an ASQ under a non declining flow policy. The remaining old-growth must be able to supply timber for the next 60 to 80 years until the second growth becomes available. A simple increase in second-growth yields will not change the first decade ASQ.

Comment: TTRA buffers should be considered in the calculation of proportionality and dispersion as reserve areas. (AFA)

Response: The area covered by the Riparian Forest-wide standards and guidelines, including the TTRA buffer widths, would be included in the portion of the management area considered as “reserve” for purposes of dispersion. Treatment of TTRA buffers for calculation of proportionality is addressed in the Forest Service handbook.

Comment: The faster growth rates and higher yields of second-growth are discussed, but not the reduced quality of the wood (a Forest Service study supporting this is mentioned). With few second-growth trees of sawlog quality, there might not be a net gain.

Response: The Region is currently working with the Pacific Northwest Experiment Station to conduct a young-growth product recovery study on Southeast Alaska young growth. (See information needs section of Forest plan.)

Comment: Display volume classes in and outside Wilderness for comparative purposes.

Response: The TIMTYP maps are not considered very reliable in predicting the occurrence of volume classes 4, 5, 6 and 7. The Region has created a more statistically valid map that displays high, medium, and low volume strata. (See Chapter 3 of the FEIS.) However, this stratification includes soils information as a criteria, and this information is not available for most Tongass wilderness.

Comment: There are several problems with the timber yield projections shown in Appendix H:

- the accuracy of the GIS soils inventory which drives the site index is not disclosed
- all indices are lumped into only three categories
- SEAPROG uses a Douglas Fir equation from the Pacific Northwest for hemlock and spruce calculations on the Tongass: there is no verification of SEAPROG itself
- there is wide variation in plot results (SEAPROG varies from underestimating by 15% to overestimating by 20% from actual plots taken)
- six plots is an inadequate sample size. (SEACC)

Response: The young-growth yield tables are no longer in Appendix H but are in the planning record. An assessment of the reliability and suitability of young-growth yield tables on the calculations of ASQ was completed as part of this assessment. The conclusion is that young-growth yields (for a given rotation age) have little influence on the ASQ calculations because the ASQ is dictated by the current standing old-growth volume. The rotation age of young-growth is more important than the yield per acre. The rotation age of the young-growth dictates the period the existing old-growth must be “metered” out.

Comment: FORPLAN modeling should have used a "more prudent" 17 percent/decade harvest rate rather than 50 percent/30 years, to better account for the effects of unit size and dispersion. (WLD)

Response: Dispersion constraints are incorporated into the models to ensure that FORPLAN "meters out" timber harvest over an analysis area. The dispersion limits are taken directly out of the visual forest-wide Standards and Guidelines. The visual guidelines predict how much of a viewshed can be disturbed at any one time and still meet the adopted visual quality objectives of the area. They also specify the length of time before harvest of adjacent units and maximum size of units. Modeling the Standards and Guidelines required the development of what are known as Regulation Classes in the FORPLAN models. In order to effectively model the timber resource and the forest-wide standards and guidelines, four regulation classes were developed. These classes group lands that allow similar clearcut size, visual disturbance, and re-entry times within the proposed standards and guidelines.

Comment: The calculation of past harvest of volume class 7 is understated because historic average volume harvested is closer to 50 MMBF/acre rather than the 39 MMBF/acre stated in the Supplement. (SEACC)

Response: Since 1980 the average volume harvested has been 32 MMBF/acre (sawlog, scale basis). (No reliable volume class information is available for harvesting prior to 1980.) One common error is combining inventory volume with scale volume. The volume strata are based on inventory volume - net sawlog. Inventory volume is based on 16-foot logs and scale volume uses 32-foot log volumes. The different is significant due to the amount of taper in the log being scaled. The equivalent inventory volume is 37 MMBF/acre.

Suitability and Sustained Yield

Comment: The determination of economically suitable timberlands was not done properly: too much averaging across broad areas. (WLS)

Response: Section 102 of the Tongass Timber Reform Act states that the Secretary need not consider economic factors on the Tongass National Forest in the identification of lands not suited for timber production. However, since economics is an issue, economic analysis was performed. FORPLAN used 4,290 unique analysis areas and literally hundreds of combinations of logging and road-building costs and revenues for different species composition to address this issue. The results are displayed in the FEIS, Appendix B.

Comment: The ASQ for all alternatives is overstated due to the inclusion of State of Alaska and Native corporation encumbered lands. (STATE) Leave the ANCSA Native selections out of the timber base calculations. Leave the lands (State and Native) selected but not yet conveyed out of the timber base.

Response: For the FEIS, the FORPLAN model was adjusted to remove the tentatively suitable forest lands within encumbered lands from the allowable sale quantity calculation (discussed in FEIS Appendix B).

Comment: Including volume class 4, which won't be harvested, in the suitable timber base results in over-stating the ASQ and will allow high-grading to continue. If you aren't going to harvest volume class 4 proportionately, then it shouldn't be included in the suitable timber base. Recent sales (Starfish, Bohemia) largely avoid volume class 4 - so why is it still in the timber base? Take it out of the suitable base.

Response: In the 1991 SDEIS the productive old-growth forest was divided in four volume classes. Recent examination of the timber inventory and court decisions have questioned the accuracy of this final breakdown. The volume classes have been redefined for the FEIS. (See Chapter 3 of the FEIS). Statistical analysis indicates that three classes of productive old-growth forest can be distinguished using the existing timber inventory with additional information on soils and slope. The three new strata are high, medium, and low volumes. For cost efficiency reasons, there is no scheduled harvest in the low and medium volume strata - isolated operability, and the low volume strata - difficult operability.

Comment: The timber suitability is not in compliance with the Chief's 1/12/87 policy regarding the NFMA suitability requirement. Transportation and marginal timber information were not used, nor was a non-interchangeable component (to address varying market conditions) identified. (WLD)

Response: Section 102 of the Tongass Timber Reform Act exempts the Secretary of Agriculture from using economic factors in the identification of lands not suited for timber production. For the FEIS the allowable sale quantity (ASQ) is partitioned into two noninterchangeable components (NIC's). One component of the ASQ is from lands which are considered generally economic using traditional timber harvest methods. The other component of the ASQ is from land which are considered difficult to oversee or are economically and technologically marginal.

Comment: Before you take more lands out of the timber base, get better information on the effects of harvest on other resources.

Response: Lands that become unavailable to timber management are dependent on other Multiple-use values, generally not for lack of information on the effects of harvest on other resources. The lands that are available to timber management vary by the theme of the alternative. Alternative 1, which has an amenity emphasis, has fewer acres available for timber management than Alternative 7 (commodity emphasis), which has considerable more acres available for timber management. Lands identified as not suited for

timber production shall be reviewed at least every 10 years. Such lands may be reviewed at any time according to the criteria contained in 36 CFR 216.14(a)(c). Any changes will be documented in an amendment or revision to the plan.

Comment: (1996) Increasing the width of the stream buffers will lead to a reduction in the timber base.

Response: We agree. In addition to the direct loss of acres there is an indirect effect on the remaining acres. Stream buffers increase the complexity of logging and roading the affected landscape often isolating stands and making them uneconomic to harvest.

Comment: No information is disclosed or discussed that supports the determination that lands can be restocked within five years. Of particular concern are lands above 800 feet in elevation. No procedure to implement technology to assure restocking is provided: follow-up surveys after the 1st, 3rd and 7th years do not insure restocking. (SEACC) What about the long-term effects on forest regeneration of global warming, acid rain, pollution, and biomass removal?

Response: As documented on page 3-319 of the SEIS and in Appendix G in the FEIS, natural regeneration is generally adequate or overly abundant. Experience with clearcutting since the 1950's has shown that, except for certain situations, attaining natural regeneration is not a serious problem on the Tongass National Forest. Stocking control is usually necessary between the ages of 15 and 20; almost all sites require some degree of stocking control. Natural regeneration is abundant. Stocking can vary from 3,000 to 14,000 stems per acre. In southeast Alaska, artificial regeneration by seeding or planting is only used in special situations. These situations can consist of 1) to increase the proportion of spruce , 2) in situations where sites are not expected to regenerate naturally within five years, and 3) in situations to supplement existing stocking. Inadequate stocking can occur on streamside alluvial terrace sites where salmonberry and alder are significant competitors. Control of competing vegetation may be necessary in site-specific locations. A query of the GIS data base indicates that there are no acres currently non-stocked on land above 800 feet in elevation and where harvesting is over 5 years of age.

If global warming takes place, plant species are expected to shift northward and upward in elevation in response to warming. Some models have predicted that the yearly temperature change will be the equivalent of a shift of several thousand meters southward in latitude. Disturbances such as insect infestations, wildfires, and windstorms are predicted to increase in frequency and severity and will exacerbate direct climatic stresses. Forest management practices that incorporate ecosystem concepts that ease the transition from one vegetation type to another, protect the soil, maintain or increase biological and genetic diversity, and stabilize ecosystems will provide some degree of insurance and ecosystem resilience to allow ecosystems to better respond and adjust in the face of the uncertainty regarding global warming (Perry and Borchers, 1990). The Region has developed an ecosystem policy and strategy and the Forest Plan contains many ecosystem concepts.

Comment: NFMA and the implementing regulations require identification and a map of the entire suitable timber base by alternative, not just the suitable and available. (SEACC)

Response: The regulations require the identification lands not suited for timber production in accordance with the criteria in paragraphs (a) through (d) of 36 CFR 216.14. The land identified as tentatively suitable using the criteria in paragraph (a) is identified in the GIS database and documented in Appendix A of the Forest Plan. The regulations specifically do not require a map. However, we do have the capability of creating a map of the tentatively suitable land base and the breakout by regulation class. A map is located in the planning record. There are four regulation classes. These classes group lands that allow similar clearcut size, visual disturbance, and re-entry times within the proposed standards and guides. Tentatively suitable lands identified as not appropriate for timber management because of the criteria in 36 CFR 219.14 (c) are listed in Appendix A of the Forest Plan for the Preferred Alternative and listed in Chapter 3 of the FEIS for all alternatives. These tentatively suitable lands are generally classified as regulation class 0.

Comment: All alternatives use a sustained-yield Allowable Sale Quantity (ASQ) except Alt. C, which uses the old timber target: alt. C's sustained yield is much higher (around 570 MMBF). Show both the sustained yield and the targeted ASQ for each alternative. All alternatives should use the same method for determining the ASQ, either PNV or pre-set, otherwise the comparisons won't be compatible.

Response: The ASQ and sustained yield numbers are shown for all alternatives in Chapter 3 of the FEIS. All alternatives have the same sets of constraints (refer to Appendix B).

Comment: Compute sustained yield by drainage (rather than using a forest-wide average): otherwise a drainage's ability "to support biodiversity" may be adversely affected.

Response: The Forest Plan provides direction and guidance for maintaining and managing biodiversity. Long-term sustained yield, by regulation, is calculated for a Forest as a whole.

Comment: Measure non-declining even flow in board feet, otherwise high-grading will be masked (but will continue). It is misleading to show sustained yield as being met using cubic feet, since outputs decline in board feet. (NMFS, WLS) Since the Tongass sells timber in board feet, and the National Forest Management Act states that the "sale of timber," not volume cut, is to be sustained, the non-declining, even-flow policy is being violated since board feet decline over time. (CHEC) The Supplement fails to follow the non-declining, even-flow policy by using cubic feet rather than board feet (which is how the Forest sells timber) to calculate long-term sustained yield. (SEACC)

Response: The cubic foot unit is considered to be a very accurate method of measurement. The accuracy of the cubic foot lies in the fact that it is a measure of the actual solid wood content of the log, and the volume outside the normal scaling cylinder is included. The unit does not allow for sawkerf, slab edgings, shrinkage, bark, sawing method or 16 foot logs vs. 32 foot logs. The U.S. Forest Service is working toward conversion to the cunit (100 cubic feet) as the standard unit of measure of timber convertible to wood products. Forest Service policy (WO Amendment 2400-92-4) states that timber prepared for sale be capable of being measured and reported in cubic measurement units. National direction is to show the ASQ and long-term sustained yield in cubic foot terms (FSH 2409.13, Timber Resource Planning Handbook). The board foot measure expresses the commercial contents of a log in terms of the finished product-lumber; it is a very poor measure of chip yield or peeled log yield. The primary timber product produced on the Tongass is pulpwood.

Comment: You do not give convincing arguments for sustainability: future timber supplies are questionable. For example, after 35 years of logging most of the "valuable" timber on North Prince of Wales is gone.

Response: Most of the existing timber stands (about 92 percent) on the Tongass are beyond culmination of mean annual increment (CMAI). Timber stands which exceed CMAI are not growing at optimal rates for their site's potential productivity. Tongass Timber stands are capable of producing prodigious amounts of wood. On a site typical of those currently harvested (Taylor Site Index 120, Yield of Second-Growth Western Hemlock-Sitka Spruce Stands in Southeastern Alaska), a normally stocked stand 30 years old would be expected to contain 197 square feet of basal area and 3,800 cubic feet of wood per acre. By age 50, basal area will increase to 248 square feet and volume to 7,275 cubic feet. The age of merchantable CMAI would be around 100 years with a mean annual increment of 137 cubic feet/acre/year. The yield per acre in board feet (International rule (1/8-inch kerf)) would be about 91 MMBF (7 inch and more in diameter at breast height). Yields from two-aged silvicultural systems would be significantly less (Alternatives 3, 4, 5, 6, and 10) but still significantly higher than existing old-growth stands.

As a greater proportion of the forest is converted from slower growing, highly-defective stands to stands well-stocked with vigorously growing conifers, total forest growth would increase. Because of higher volumes and lower defect, managed young-growth would be able to provide significantly higher harvests on the same land base or support the same harvest on a smaller land base. Under a 100-year rotation only about 2/3 of the current timber base would be needed to provide the ASQ. The remaining 1/3 of the timber base could revert to some other land use and be available to provide the old-growth habitat.

Comment: You aren't providing for long-term timber jobs: continued over-cutting and high-grading will result in a big industry bust before too long. The future of logging is not being assured: present profitability is based on high-value old growth, whereas second growth may not be economically viable (based on the economic conditions that exist for the region).

Response: See previous response. The harvest of old-growth on suitable-available lands is expected to occur for another 70 years; harvest from second-growth stands is then expected to start. By the time second-growth harvest starts, the road infrastructure will be in place. In addition, the volume per acre is expected to be higher--see previous comment--than the old-growth of today, and there will be a more uniform piece size and less defect. The yarding equipment needed to yard second-growth is expected to be smaller and less expensive. These factors are expected to improve the economics of future second-growth harvesting.

Comment: There appears to be a total disregard for the sustained-yield principle, and the general practices of forest rotation, in the timber harvest proposed for portions of Prince of Wales Island and the nearby western islands. By the year 2004, 50 percent of the standing timber will have been offered for sale. This will also seriously affect jobs in the future. (PWC)

Response: See previous response.

TTRA Implementation

Comment: Sec. 301(c) of TTRA states that volume classes 6 and 7 shall be harvested proportional to occurrence "over the rotation." Over the rotation means high grading should be eliminated forest-wide for the planning horizon, not just for the remaining life of the long term sales. Proportional timber harvest should be forest-wide over the rotation, and should be for volume class 6 and 7 separately, not combined. (GP) A full disclosure of the Forest Service's interpretation and proposed implementation of the TTRA proportionality provision must be included in the FEIS. (STATE)

Response: Litigation regarding TTRA proportional harvest methodology has recently been settled, with issuance of an updated Forest Service Handbook supplement. The updated Handbook provides the disclosure you request and is incorporated by reference here. The Handbook is available from the Forest Service Regional Office in Juneau.

Unlike the 1991 Draft Supplement, this Supplement does not provide for specific constraints to directly calculate TTRA Proportionality. TTRA Proportionality is an implementation requirement for the KPC long-term contract and is beyond the scope of the Forest Plan. To insure that implementation can take place, the yield calculations for each alternative were based on scheduling the high, medium, and low old-growth volume classes evenly over the planning horizon. While this does not meet a strict interpretation of scheduling the volume harvested from volume classes 6 and 7 proportional to the high volume within each contiguous TLMP management area, it does provide enough flexibility in the amount of high and low volume scheduled to implement the TTRA proportional harvest requirement in any management area where KPC long-term contract harvest may occur.

Comment: (1996) On page 4-102 (Timber Resource Planning) a Standard and Guideline should be added to this section that directs project planners to inventory and maintain existing Volume Class 7 stands.

Response: It would be impossible to "maintain" existing volume class 7 stands. You make the assumption that forests are stable in species composition and structure and develop according to preset patterns across large areas. These assumptions have generally been based on observations of short duration and small areas. In fact, forests constantly and dramatically change in both time and space. Because of disturbances, species migrations, climate variations, and other factors, a forest of a given structure and species composition exists at only one time and in one place. Natural disturbances are not completely controllable. A disturbance - large or small, frequent or infrequent - both alters the existing stand and establishes the pattern for development of future stands. In fact, very old stands in the cold climate of Alaska may develop into organic bogs if they persist without disturbances. Substantial volume Class 7 and other productive old-growth is protected from harvest under the land use designations and other direction in the Revised Plan.

Comment: (1996) The RSDEIS suggests that the proportionality rule directed by the Tongass Timber Reform Act Section 301 (c)(2) would be implemented at the project level. However, the Timber standards and guidelines do not address compliance with the proportionality rule or include identification of Volume Classes 6 and 7 during the resource inventory stage at the project planning level. The liquidation of a disproportionate amount of higher volume old-growth timber, especially Volume Classes 6 and 7 may occur because the timber database has not been completely field verified and the geographic information system (GIS) lacks precision in differentiating volume class characteristics or placement. Guidelines should be added providing direction to conduct inventories and the FS should continue to revise and standardize the application of the timber database. Also, the proportionality requirement should be applied to independent sales.

Response: The TTRA long-term contract proportional harvest requirement is in the Timber Standards and Guidelines - Timber Sale Preparation, Item X. See previous response on proportionality.

Comment: The Plan is in direct conflict with TTRA by:

- having a preferred that is a significant increase over historic harvest levels
- having no alternative that would provide a level of harvest lower than historic levels
- expanding the APC contract area without looking at alternatives or impacts
- failing to adequately implement the changes to the pulp contracts and eliminate the practice of high-grading. (SEACC)

Response: The Tongass Timber Reform Act specifically does not prohibit the Forest Service from having a preferred alternative over historic harvest levels. The RSDEIS and FEIS in particular include a range of alternatives both below and above historic levels.

The Alaska Pulp Corporation closed their Sitka pulp mill in 1993, and the contract has been terminated. The issue of whether you believe the TTRA contract modifications have been adequately implemented is not an issue that should be handled in the Forest planning process. The Forest Plan provides programmatic direction in the form of multiple-use goals and objectives, and land allocations (called Land Use Designations), and programmatic management direction in the form of standards and guidelines. See previous response regarding proportional harvest.

Comment: Lack of a "genuine" timber demand study, exaggerated timber prices, and ignoring purchaser road credit are not consistent with TTRA. The unilateral changes to the two long-term pulp contracts are not sufficient to be consistent with TTRA. (SEACC)

Response: We do not agree. We have undertaken further research through the Pacific Northwest Experiment Station (Richard Haynes and David Brooks) and through an independent contract (Lloyd Irland).

The Alaska Forest Association also independently undertook a study which was completed by Gruenfeld and Associates. After review of the findings of each of these studies, we have elected to utilize the predictions made by Brooks and Haynes, 1997 (draft). Those predictions looked at both price and cost projections for the coming 20 years. The Forest Plan includes a monitoring and evaluation plan, used to measure the progress and results of implementation. We will be monitoring annual market demand. Specific recommendations for corrective action may consist of no action, additional monitoring, changing project schedules, amending the Plan, or revising the Plan.

Your claim of exaggerated timber prices and ignoring purchaser road credit do not appear to be a Tongass Timber Reform Act issue. The issue of whether you believe the TTRA contract modifications are sufficient is not an issue that should be handled in the land use planning process. The Forest Plan provides programmatic direction in the form of multiple-use goals and objectives, land allocations (called Land Use Designations), and management direction in the form of standards and guidelines.

Comment: The unilateral contract modifications made to comply with TTRA were not displayed in the Supplement, should be in the FEIS. (SEA, SNSC)

Response: There is no need to display these detailed contract text revisions in the EIS for Forest Plan revision proposals. These modifications are otherwise readily available in the public record.

Comment: Supplement Table 3-137 shows that Volume Class 6 will be harvested at a rate of 136 percent of its occurrence and Volume Class 7 at twice its occurrence in the first decade, thus in violation of TTRA. (SEACC) Contrary to TTRA, high-grading appears to be continuing. (ABG, TCS) North Prince of Wales (Province 14 on page 3-188) is showing a disproportionately high change for stratum D. (TCS) High-grading continues: with classes 6 & 7 combined, you can wipe out all the class 7 and still "maintain" proportionality. Also, since it's calculated only for the end of the 50-year contracts, high-grading can continue for the next 10-15 years. And, independent sales occurring within the long-term contract boundaries won't be counted. (WLS)

Response: See previous responses on proportionality and provisions in the Revised Plan which will maintain substantial high volume old-growth across the Forest.

Comment: All alternatives must conform to the TTRA proportionality requirement. This is not clearly shown in the EIS. Alternative A, which only provides for the two long-term contracts, doesn't meet the TTRA requirement for small businesses and therefore isn't a viable alternative.

Response: All alternatives provide for meeting the TTRA long-term contract proportional harvest requirement. See previous responses and FEIS Chapter 3.

Comment: A number of general comments on proportionality were made: it should apply to all sales; it should apply over the rotation; it should always apply, everywhere.

Response: See pervious responses for proportionality and provisions in the Revised Plan which will maintain substantial high-volume old-growth across the Forest.

Comment: Within each management area, what percent of timber, by volume class, has been harvested to date? How much will remain, by volume class, in each management area? (PWC)

Response: Please see the previous four responses.

The Allowable Sale Quantity (ASQ) and Scheduling

Comment: There are many imbalances in the way timber harvesting is scheduled in FORPLAN: (CHEC)

- the Plan calls for taking 40 percent of volume class 7, and over 50 percent of volume class 5, in the first 20 years in normal operability, then shifting to difficult and isolated operability afterwards
- the Plan calls for harvesting 60 percent of the timber from roaded areas the first 20 years, then shifting to 80 percent from roadless areas after 20 years
- the Plan calls for building over 4,000 miles of roads in the first 20 years but defers much of the harvest until after 20 years.

Response: Constraints that distributed operability class harvest were included in all the FEIS alternatives by the use of noninterchangeable components, which require harvest of difficult and isolated operability lands for the full ASQ to be met (see Chapter 2 and Appendix B of the FEIS).

Some would call the building of roads early in the planning horizon an investment in the infrastructure development of the forest. Investments in infrastructure can improve the economics of future stands that are economically marginal today.

Comment: A full disclosure of logging and roadbuilding plans for the next 10-15 years is needed (SCS, SEACC, TCS, WLS); for the next 15-20 years (APC). Display on maps the location of the long-term sale areas and the areas dedicated to SBA sales. (AFA) The VCU's in which these projects will occur are not listed, nor is an LTF construction schedule provided. (SEACC)

Response: The Forest Plan does not make site-specific decisions, but provides the direction necessary to make those decisions at the project level, in an environmentally sound and economically efficient manner; it includes a monitoring and evaluation plan, used to measure the progress and results of implementation.

Comment: The sale schedules in the Plan and on the Long-term Contracts Map are not consistent. (KPC) The Plan and Long-Term Contracts Map depict different timber sale schedules. (SEACC)

Response: The FEIS no longer includes this kind of detailed information. See also previous response.

Comment: The acres of suitable and available timber lands that are not scheduled by FORPLAN need to be identified as not suitable in order to meet NFMA requirements. (CHEC)

Response: This is done in the FEIS for all alternatives.

Comment: Only two timber harvest methods, both featuring clearcutting, are offered in the timber harvest schedule shown by FORPLAN. (SEACC)

Response: All silvicultural systems are available for selection within the Forest's suitable land base. Selection by the Forest Service of an appropriate silvicultural system or systems occurs at both the National Forest land management planning level and project level. The basis for the Forest's selection is a broad match of silvicultural systems with the ecological characteristics of the vegetation and the overall planning objectives of broadly defined Land Use Designations. Examples of Land Use Designations that allow timber harvest are Timber Production, Modified Landscapes, Scenic Viewsheds, and Riparian Areas. An estimate of the most likely regeneration methods that land managers may use on the Forest was made to project the effects and predict costs and yields for the Plan revision. The Forest Service requires that Certified silviculturists make or approve the site-specific project level selection of appropriate silvicultural systems. The selection is evaluated through the NEPA process. The choices are dependent on matching the

attributes of the silvicultural system with specific management objectives, the ecological characteristics for specific stands and species, and policy direction.

Comment: The process to develop the 10-year timber harvest schedule which was imposed as a constraint in FORPLAN is not disclosed. (SEACC)

Response: FORPLAN does not use a harvest-schedule constraint such as this.

Comment: "Base sale schedules" for alternatives A, B, C and D are not disclosed. (SEACC)

Response: This information is included for all alternatives in the Timber section of FEIS Chapter 3.

Comment: The Forest Service imposed a 240 MMBF/year minimum harvest available for APC through 1995 in their 2/27/91 unilateral contract changes at BO.65. The Timber Sale Schedule in the SDEIS and the Long Term Contracts Map does not attain this level nor will it attain the 360 MMBF/year available by 1/1/96 as stated at BO.65. (APC) The Alaska Pulp Corporation portion of the long-term sales should be modeled at 130 MMBF. (APC)

Response: The Alaska Pulp Corporation closed their Sitka pulp mill in 1993, and the contract was subsequently terminated by the Forest Service.

Comment: FORPLAN shows that an ASQ of 420 MMBF is not achievable; realistically, even 280 may be optimistic: it just isn't there. So stop fooling the public, let them know it's not there. (1996) Considering the harvest level/ASQ ratio of 68%, the real harvest level under the proposed ASQ, in the preferred alternative, would not be enough to maintain a sustainable timber industry in Southeast Alaska.

Response: The Forest-wide estimates used to develop the ASQ considered some of the factors contributing to differences between ASQ's and timber sales. Taken into account were those factors that affect the suitability determination of forest lands and usually encountered in on-the-ground examinations (e.g., sale reconnaissance, stand exams, layout, and sale preparation). For each alternative, acres were set aside (not scheduled for harvest) to allow for those factors most often encountered. Data from previous case studies, monitoring, site visits, inventory data, the GIS database, and the new timber type map were used to develop the acreage estimates (see Appendix B for more information).

Comment: It should be acknowledged that an 'implementation falldown' from subsequent NEPA reviews will affect the ASQ. (AFA) The FEIS must address the fact that subsequent site-specific NEPA documents are likely to further affect the ASQ. (APC)

Response: Chapter 3 and Appendix B display "model implementation reduction factors" to allow for implementation falldown.

Comment: The over-simplified FORPLAN model, which only calculates timber schedules, exaggerates ASQ calculations. (WLD)

Response: Given the constraints that are imposed on the model, the calculated value is a maximum allowable sale quantity that cannot be exceeded by the end of the decade. Individual years may exceed the average annual allowable sale quantity. However, the amount actually offered is determined by the amount of funding received from Congress, among other factors. See previous response.

Comment: Reduce the ASQ to 273 MMBF: this is the amount "chosen by the Tongass Forest Supervisors as the most realistic and attainable ASQ for the Forest." (AFSE)

Response: The ASQ for the Revised Plan is 267 MMBF. The reasons for selecting this alternative are summarized in the ROD.

Comment: (1996) The ASQ is way too high, too much timber has been harvested already to sustain viability of species and biodiversity. To achieve such a high ASQ, too many old-growth stands would have to be removed.

Response: The range of alternatives in the FEIS display a wide range of ASQ's that range from 0 to over 600 MMBF.

Comment: Beach log salvage should count toward the ASQ. (SEACC) If a salvaged tree is a commercial species over 12" DBH it should be counted as part of the ASQ.

Response: The allowable sale quantity includes only those volumes used in the yield projections calculation for lands suitable for timber production (FSH 2409.13, Timber Resource Planning Handbook). Beach fringe is classified as not suitable for timber production. ASQ is defined in the regulations (36 CFR 219.3) as the quantity of timber that may be sold from the area of suitable land covered by the forest plan for a time period specified by the plan.

Comment: (1996) The ASQ for the Chatham Area was exceeded during the last planning period. The current Preferred Alternative is planning for an increased harvest for this area over what was planned in the 1979 TLMP. This level of harvest is not sustainable.

Response: ASQ's and LTSY are not calculated by Administrative Area. The only legal ASQ is the value calculated for the Tongass National Forest as a whole.

Data and Inventory

Comment: By your own admission, the current timber inventory is not accurate enough to apply to small areas (i.e., management areas). Thus it can't be used to assess the proportionality requirement, and a new, ground-verified inventory is needed to do this (and meet TTRA). (WLS) The abundance and distribution of high-volume old growth cannot be ascertained without re-doing the timber inventory, thus the effects of future timber harvest cannot be fully disclosed. (SEACC) The timber inventory is flawed for two reasons:

- it can't be used to estimate site-specific or cumulative effects
- since the poor timber is averaged with the good, it will result in "sloppy timber accounting."

Response: Site-specific analysis of the individual projects will be done at the project or Administrative Area level. The Plan revision is a programmatic document and is not the function of the Revision process to analyze the site-specific effects of individual projects. The Forest Plan does not make site-specific decisions, but provides the direction necessary to make those decisions at the project level, in an environmentally sound and economically efficient manner; it includes a monitoring and evaluation plan, used to measure the progress and results of implementation.

Litigation concerning use of the timber inventory in TTRA proportional harvest has been recently settled with issuance of an updated Forest Service Handbook. The timber inventory and soil and slope information have been used to develop an improved volume class map for forest planning purposes.

Unlike the 1991 Draft Supplement, this Supplement does not provide for specific constraints to directly calculate TTRA Proportionality. TTRA Proportionality is an implementation requirement for the KPC long-term contract and is beyond the scope of the Forest Plan. To insure that implementation can take place, the yield calculations for each alternative were based on scheduling the high, medium, and low old-growth volume classes evenly over the planning horizon (see Figure 305). While this does not meet a strict interpretation of scheduling the volume harvested from volume classes 6 and 7 proportional to the high volume within each contiguous TLMP management area, it does provide enough flexibility in the amount of high and low volume scheduled to implement the TTRA proportional harvest requirement in any management area where KPC long-term contract harvest may occur.

Comment: The timber re-inventory called for in the Plan (page 4-72) should be expanded to discuss: what the objectives are of the inventory; degree of resolution; reliability; how it will be structured; and how it will ensure gathering the needed information to meet the proportionality requirements for Volume Class 6 and 7. Until reliable timber data on a spatial basis is obtained, the harvest of volume class 7 should stop and the harvest of volume class 6 should be minimal. (GP)

Response: There will not be another timber re-inventory designed that is limited to collecting only specific timber volume estimates. An integrated resource inventory (IRI) will be used for future data collection. Resource information, such as timber volume estimates or wildlife habitat values will be products of the inventory. The Region is actively engaged in developing the IRI.

Comment: Better sources of vegetative information are available than the timber type maps to use in evaluating timber harvest options and effects. These include stand examinations, plant associations, and LANDSAT imagery, and should have been used to meet the "best available information" requirement of NEPA. (WLD)

Response: Other sources of vegetative information were considered. An evaluation of the data available for the Revision was completed in June 1987 (Revised Forest Plan - Tongass National Forest - Timber Resource Inventory). The timber type map - timber inventory, LANDSAT, area analysis inventories, stand examination, the original TLMP photo point inventory, and a combination of inventories were evaluated. An assessment of the alternatives indicate that the timber type map information provides the most reliable information for the entire Tongass National Forest. The three Forest Supervisors on the Forest agreed with

the analysis prior to using the type maps as the source for the Revision's timber resource data. In the 1991 SDEIS the productive old-growth forest was divided in four volume classes. Recent examination of the timber inventory and court decision have questioned the accuracy of this breakdown. The volume classes have been redefined for the RSDEIS and FEIS. (See Chapter 3 of the FEIS.) Statistical analysis indicated that three classes of productive old-growth forest can be distinguished using the existing timber inventory with additional information on soils and slope. The three new strata are high, medium, and low volume.

Comment: The Forest Service ignored the findings of the Brickell Report relative to the timber inventory. (WLD)

Response: We have used the Brickell report and the analysis to improve the information used for the RSDEIS and FEIS. See previous response on the timber type map.

Comment: 36 CFR 219.12(d) has been violated because species composition can not be extracted accurately from the current inventory data to use in scheduling proportional timber harvests or producing accurate economic analysis. (AFA)

Response: Proportional timber harvest is based on the proportion of volume classes 6 and 7 present in management areas where long-term contract harvest occurs, not species composition.

The inventory is an area wide inventory meant to provide extensive area wide information for programmatic planning. The values are area wide averages that are suitable for programmatic planning. 36 CFR 219.12(d) provides for the best available data to be used. The forest inventory meets this requirement. Goals for the design sampling errors were met (PNW-RB-186, 185 & 184, 1992).

Comment: TLMP I timber data appears to be more useful, because of it's spatial resolution, than the timber type maps and re-inventory used in the Revision. Other incomplete information includes no spatial location or characteristics of timber types. (SEACC)

Response: The original TLMP photo point data base is not more useful than the timber type map and timber re-inventory for several reasons. Each of the more than 210,000 photo points represented about 80 acres; the type maps are 100% mapped. The photo points were designed to give average VCU values at best; the timber type map extensively mapped each photo interpreted polygon. Both inventories were based on aerial photo interpretation with very little field verification. With the decision to use GIS, there was no doubt that the timber type maps had to be more spatially accurate than an inventory based on a grid of one acre for each 80 acres. Our evaluation of the two sources overwhelmingly concluded that the type map was far superior to the photo points.

Comment: More detailed timber harvest info is needed to be able to analyze effects (SEA, SEACC, others). The timber sale map is too vague as to location: a more detailed map must be included. (NCC)

Response: Site-specific analysis of the individual projects will be done at the project level. The Plan revision is a programmatic document and it is not the function of the Revision process to analyze the site-specific effects of individual projects. The Forest Plan does not make site-specific decisions, but provides the direction necessary to make those decisions at the project level, in an environmentally sound and economically efficient manner; it includes a monitoring and evaluation plan, used to measure the progress and results of implementation.

Comment: Include a map showing what areas have already been harvested, and what areas are unusable. Include a map showing logged areas and their stage of regeneration.

Response: There is a map in the map package with the SEIS that is entitled Land and Timber Type; it is also included with the FEIS. In addition to the old-growth, this map displays the second-growth; most of this second-growth is on previously logged areas.

Comment: The Forest Service species composition and grade information used in the analysis process on the Chatham and Stikine Areas is not accurate according to APC's past experience. Alaska yellow cedar and spruce components are too high on the Chatham Area and the hemlock component is too low on the Stikine Area. (See letter for details and cruise information.) (APC)

Response: We feel the species composition and grade information is adequate for a programmatic forest plan. There is no intent to appraise timber values on the characteristics included in the plan.

Comment: On-the-ground monitoring of the commercial forest land is needed now. Over-estimating the timber volumes may mean an inability to harvest profitably.

Response: Chapter 6 of the Forest Plan includes a monitoring and evaluation plan. Monitoring items for timber consist of:

1. Are timber activities adhering to applicable timber management standards and guidelines as prescribed in the Forest Plan?
2. Are the effects of timber management activities on other resources consistent with expectations in the Forest Plan?
3. Are harvested forest lands restocked with five years following harvest?
4. Is the allowable sale quantity and programmed harvest quantity projected in the Forest Plan based on valid assumptions?
5. Does the timber supply meet annual market demand, provide a supply of timber for purchasers qualifying as "small business" under the Small Business Act (SBA), and meet the predicted market demand for the planning cycle?
6. Are old-growth forests being maintained in the amount anticipated in the Forest Plan?

Specific recommendations for corrective action may consist of no action, additional monitoring, changing project schedules, amending the Plan, or revising the Plan.

Transportation and Utilities

(See also Socioeconomic, Minerals and Recreation sections.)

Roads

Comment: Roads should be encouraged where they benefit communities, economic growth and long-term management (such as on Prince of Wales Island). Don't impede future road development and access opportunities. (AMC)

Response: A range of alternatives were provided through the DEIS, SDEIS, RSDEIS, and now the FEIS with differing themes to address the issue of access opportunities.

Alternatives 2-7, 10 & 11 of the FEIS, and the revised Forest Plan include themes and resource objectives which support and include most of the State's transportation and utility corridor network as part of the Transportation and Utility Systems Land Use Designation (see Chapter 4 of both the RSDEIS and the FEIS Forest Plan document). This land use designation, which emphasizes the development of transportation

and utility infrastructure on the Tongass, overlays an “initial” land use designation and is activated whenever a transportation or utility system is constructed. In addition, Title XI of ANILCA allows for transportation or utility systems throughout the Forest, subject to Congressional and Presidential approval.

The Forest is currently 85 percent roadless outside of legislated areas. Future road construction is primarily associated with timber harvest because of the need for roads to access the sale area and the resource to support the cost associated with the construction. At the end of ten years of Forest Plan implementation, alternatives 7,9,2,6,10,11 (final Forest Plan), 3,4,5, and 1, in order, would offer the greatest number of new road access opportunities at the rate of 1 mile of new road construction for about every 2.5 million board feet of timber harvest.

Comment: Timber planning should include the idea of a "Southeast Alaska infrastructure [for transportation]. This could be accomplished through selected road building and [location of] harvest areas." (KCC) When developing timber sales, the Forest Service should consider the development of an "inter- and intra-island road system." (KGB)

Response: Alternatives 2-7, 10 & 11 and the revised Forest Plan included themes and resource objectives which support and include most of the State's transportation and utility corridor network as land use designations (see previous response).

As timber sale projects are planned, enhancement of the transportation infrastructure of Southeast Alaska will be considered as it relates to the overall State transportation and utility corridor infrastructure plan by considering timber harvest access roads on alignments within the corridors (see Transportation Forest-wide Standards & Guidelines).

In addition, road management objectives are a part of transportation planning at the project level which include consideration of whether or not to make road connections and their relationship to communities and other affected agencies and individuals (see the Transportation Forest-wide Standards and guidelines).

Comment: Leave roads open: they provide access for scenic and wildlife viewing, fishing and hunting, and recreation. Closed roads keep many people from being able to enjoy the forest. Keep all mainline logging roads open for public use. (AMC) Keep roads near towns open: these benefit the people the most. Don't close roads: they encourage tourism and recreation uses, and are valuable for promoting a "great recreation economy" (people getting out and spending money in the smaller communities). Many of the wilderness and primitive areas, and recreation cabins, are very expensive to get to: we need easier access, with more roads left open. (1996) More roads should be left open, for better access to the forest. Subsistence rights will be violated if access is restricted. There is no solid evidence that road closures protect wildlife.

Response: The Transportation Forest-wide Standards & Guidelines provide for road management objectives to be determined at the project level. Included in the determination of objectives is consideration of whether or not individual roads should be: 1) kept open for public motorized use; 2) seasonally closed to provide for wildlife, water/soil protection, safety hazard or other appropriate resource, economic or public safety related issue; 3) restricted to public use by temporary closure primarily because of resource, safety, or economic reasons, or finally, 4) permanently closed because of unsafe conditions, use conflicts, unacceptable damage to soil or water and similar concerns. Use of roads for the harvesting of customary and traditional subsistence resources is also considered during the development of road management objectives. Appendix I of the Forest Plan (resource schedules) identifies the need to re-look at road management objectives across the Forest based on the effects of the revised Forest Plan’s land allocations.

The sections on wolf and brown bear in the Wildlife portion of the Environmental Impact Statement discusses the effects of roads (through hunting or trapping) on wolf and brown bear populations. This section, based on the results of the recent Wolf Conservation Assessment (Person et al, 1996) and brown bear scientific data, shows that wolf and brown bear populations are sensitive to open roads.

Comment: Maintain and upgrade the Prince of Wales Island road system: the roads are needed to provide for better community services. Reduce the standards for mainline and spur logging roads: too much is spent on "over-built roads for temporary access limited to timber harvest." Maintain and keep open all present roads, but don't pave them (this changes the use). The present system, well maintained, will adequately serve Prince of Wales residents.

Response: The Forest-wide Transportation Standards and guidelines provide for the specific concerns raised through the individual road management objectives which include road design standards. Standards for intended uses of roads consider 1) cost of the facility including annual maintenance, 2) public safety, 3) intended purpose as it relates to ecological objectives, and 4) impacts on land and resources on both local and landscape points of view (see previous response too).

Regarding "over-built" roads for timber access, the Region has a standing committee with the timber industry, which meets as needed or requested by either party. The committee is designed to address the issues of road standards and specifications and conducts on-the-ground reviews to address the issue of whether or not "over-built" design criteria are being used.

Comment: Roads should be closed to public motorized use unless a need is demonstrated to keep them open. (WLS) Close most roads, but leave the system roads between communities open, and a few leading to subsistence areas.

Response: The Transportation Forest-wide Standards and guidelines provide for individual road management objectives to be determined at the project level. Those objectives include whether or not roads should be open or closed to public motorized use. Part of the determination includes the affects on wildlife (see previous two answers, too).

Appendix L of the Forest Plan (resource schedules) identifies the need to re-look at road management objectives across the Forest based on the effects of the revised Forest Plan's land allocations.

Comment: Many of the proposed 200+ miles of new roads (first decade) are being built far in advance of when they'll be needed. (GP, SEACC) The Tongass has historically been building roads at the rate of 86 miles per year, but the Plan calls for an unrealistic increase to over 200 miles per year for the next 20 years. (CHEC)

Response: New road construction is primarily associated with the rate of timber harvest. The Current Plan estimated that 295 miles per year of new road would be needed the first decade if the allowable sale quantity of 4.5 billion board feet were attained (1979 TLMP FEIS, page 200). This estimate assumed it would take about one mile of new road construction for every 1.5 million board feet harvested.

Over the last several years, review of timber sale projects has shown that roughly 2 million or so board feet per mile of new road construction is common. About 2.5 million board feet per mile of new road construction was assumed to be a reasonable estimate of the likely level of road construction for the coming 10 to 15 years. If an allowable sale quantity of about 270 million board feet per year was attained, around 110 miles of new road construction per year is a reasonable expectation. If the timber is not harvested at that level, a corresponding decrease in the amount of new road construction would also be anticipated.

Comment: (1996) Existing and future logging roads are detrimental to wildlife, fisheries, and drinking water. Roads are eroding faster than repairs can be made and yet new roads are still being built.

Response: Numerous places in the EIS (e.g., the Transportation, Fish and Wildlife Sections) acknowledge that roads are one of the greatest risk factors to fish habitat, water quality, and to some wildlife species. In

order to minimize the potential effects of roads on fish and water quality, the plan requires the use of Best Management Practices. Best Management Practices, as documented in Appendix C of the Forest Plan and in Forest Service Handbook 2509.22, are designed to protect the beneficial uses of water from non-point sources of pollution (such as roads and timber harvest areas). Beneficial uses include fish rearing and drinking water.

Erosion is a natural geomorphic process. All areas of the Forest are being eroded, over the long-term. Erosion does not necessarily require that repairs be made. Best Management Practices (see previous paragraph) include practices relating to road maintenance.

Comment: Road costs are under-estimated, or not even included. Marginal roading costs are understated.

Response: Road costs have been updated in the FEIS. Road cost coefficients used in FORPLAN to estimate harvest/transportation costs in the future now range from $256,000 to $512,000 per mile which includes the engineering necessary to locate, survey, design and administer construction. For more information on roads, see Appendix B.

Comment: Are purchaser road credits counted as costs, or subtracted from benefits, or included at all (pp. B-33 to B-39)? Make this clear.

Response: All anticipated road costs for new construction, reconstruction, and road maintenance during the 15 decade planning horizon are accounted for in the FORPLAN model as costs. Net timber benefits used in the FORPLAN model are derived from selling values minus logging and timber haul costs. Purchaser credit as well as capital investment road costs are included in the road cost calculations.

Comment: (1996) Taxpayers should not have to pay for road building for the timber industry.

Response: The question of who should pay for road building is outside the scope of this planning document. Policies for assessing costs are set at the National level and by Congress.

Comment: The cumulative effects of the extensive amount of road construction haven't been discussed. (GP, SEACC) (1996) Additional information should be added to the Transportation section to better describe the environment that would be affected by the road system. The Transportation section should be expanded to include more discussion of the effects roads have on wildlife. Some subsections in the Wildlife section briefly discuss the influence of roads on wildlife, but this issue should be discussed further in the Transportation, Environmental Consequences section.

Response: The cumulative effects on other resources of the likely transportation system that would be in place 150 years from now is discussed in the Transportation “Consequences” section of Chapter 3 of the EIS. There are also extensive discussions on the effects of roads in the recreation & tourism, fish, soil & water, wildlife, and scenery sections; we believe these analyses sufficiently consider the effects of roads. There is no reason that all effects of roads must be discussed specifically in the Transportation section of the EIS.

Comment: (1996) The revised Supplement states (at 3-191) that roads "are constructed to provide access to National Forest lands, and are included in the Forest Development Transportation Plan." The relevant standards and guidelines in the RFP (at 4-116) "direct the orderly development and management of the transportation system and ensure the documentation of decision affecting the system." However, the revised Supplement fails to provide an adequate description, or impact analysis, of the road networks presently existing on the Tongass or proposed for the future. The revised Supplement's treatment of the

Forest Development Transportation Plan falls far short of the requirements of NEPA, the Regional or Area Guides.

Response: Numerous sections of the plan discuss roads. The transportation section of Chapter 3 of the EIS discusses the overall current and proposed road system on the Tongass. Impacts of roads are discussed in the transportation section, as well as in the fish, soils & water, recreation & tourism, scenery, and wildlife sections. Decisions to build specific road segments are project plans, and, as such, must be considered at the project level of NEPA analysis and documentation. We believe that this plan, in conjunction with analysis and documentation at the project level, adequately meets the requirements of NEPA and Regional direction.

Comment: There are no maps showing the locations of the proposed new road construction. (GP, SEACC) No transportation plan maps have been disclosed even though a set of maps showing probable locations was used for the Revision process. (SEACC) (1996) The region-wide impacts of constructing an interconnected system of road networks on the scattered islands and the mainland of the Tongass National Forest are potentially profound. Yet, the revised Supplement does not even include a map showing existing and planned transportation networks. The overall forest-wide impacts of the revised Supplement's program for road construction on the Tongass must be addressed.

Response: Existing roads were shown on the back of the current Plan map in the map packet in the DEIS. Potential new road miles are estimated in the Transportation section of the EIS. Their location roughly correlates to the areas in development Land Use Designations for each alternative (e.g., Timber Production, Modified Landscape, Scenic Viewshed, and Recreational River). Additional roads could be anticipated along the corridors allocated to the Transportation and Utility Systems Land Use Designation. These are road systems identified by the State of Alaska as priority potential routes. The overall effects of the road system on other resources are discussed in the transportation, recreation & tourism, fish, wildlife, roadless, soil & water, and scenery sections of the EIS.

It's true that no new road construction maps have been disclosed showing "probable" locations because that would be inappropriate at the programmatic plan level of the planning process. Specific locations of potential future roads is left to the project level for site-specific analysis when projects are identified and proposed.

Comment: (1996) On page 4-115 (Transportation) it is unclear how the potential impacts of fuel transport, storage, and handling would be considered and evaluated, particularly for the marine environment. These topics need to be fully addressed in all aspects of the Forest Plan.

Response: The transportation and storage of fuels, both in the marine environment and on land, are regulated by State and federal law. The effects of fuel transport, storage, and handling are also not anticipated to change significantly, Forest-wide, between alternatives.

Comment: There are an excessive number of borrow pits, as many as two per mile: why are so many needed, and why aren't more being reclaimed? There should be fewer rock pits (one every 10 miles instead of 1-2 per mile): "Rock pits are ugly and take land permanently out of production." ... "dump trucks have wheels." A procedure for reclaiming borrow and quarry sites ("a ghastly sight") is needed.

Response: The Transportation Forest-wide Standards & Guidelines provide direction to consider other resource effects in the location and design of quarries and borrow sites. Sensitivity to visual concerns is part of the process. Rock pits are designed to meet the Visual Quality Objective of the specific location (see the individual prescriptions in Chapter 3 of the Forest Plan and the Scenery Forest-wide Standards & Guidelines in Chapter 4 of the Forest Plan). Quarries are often found every two miles or so primarily because of the economics of truck haul. Where other resource factors outweigh the economic benefits, a

longer spacing can be considered during the site-specific project analysis. Costs of fully reclaiming a quarry usually outweigh the benefits.

Transportation and Utility Corridors

Comment: Transportation and utility corridors should receive special attention, including energy inter-tie systems throughout Southeast and linked to Canada. Hydroelectric power sites should be clearly identified. (AJF) Provide transportation corridors between Southeast and Canada (in particular, east of Ketchikan, Wrangell and Juneau): rail and ship transportation are efficient movers of ores and other commodities. Major transportation and utility corridors are needed. (AMC, KCC) Define transportation and utility corridors for all areas not in Wilderness or Legislated LUD II. (AMA)

Response: Most of the State's Southeast Alaska transportation and utility corridor plans are included in Alternatives 2-7, 10 & 11 and in the revised Forest Plan as specific land use designations (see discussion in the Transportation section of the FEIS). Potential hydroelectric sites have been identified by Alaska Energy Authority. We believe the infrastructure associated with the State's transportation and utility intertie corridors provides for the most likely opportunities for development in the near term.

Comment: Maintain maximum access [opportunities] for transportation and utility corridors. (HCC) Don't preclude any transportation and utility corridors through restrictive designations. (AMC) The Plan must recognize and preserve opportunities for regional transportation corridors, including developed road access to Canada, and the orderly, cost-effective electrical generation and transmission for communities and load centers within the planning area. (STATE) Assign development-oriented LUD's adjacent to all proposed corridors and routes to assist in establishing initial access. (AFA)

Response: Resource values adjacent to the State's transportation and utility corridors were investigated consistent with the theme of the alternative.

In commodity oriented alternatives, where development oriented resource values outweighed other resource values consistent with the theme and objectives of the alternative, development oriented land use designations were generally applied adjacent to the corridors. In some instances, however, there were few if any development oriented resource opportunities to warrant assigning a development oriented land use designation.

Most of the State's transportation and utility corridors in alternatives 2-7, 10 & 11 of the FEIS, and the revised Forest Plan were assigned a land use designation (Transportation and Utility Systems) with the objective to facilitate development of that road or utility. Outside of legislated areas, only Research Natural Areas, Municipal Watersheds, Wild Rivers, Old-Growth Habitat, and Remote Recreation Land Use Designations generally do not support development of a road through the area (although there are exceptions allowing transportation and utility systems throughout the Forest, as allowed by Title XI of ANILCA). All other land use designations either would allow with stipulations or facilitate development of the road or utility.

In many areas, timber harvest land use designations apply. These LUD’s could provide road construction along State-proposed corridors, facilitating initial access which could eventually lead to upgrading to State standards.

Comment: A few site-specific concerns (see also area-specific comments):

- it is important that the plan does not restrict a potential Taku River transportation route
- the potential road and/or power developments in the Bradfield Canal and Eagle River areas, and the Tyee/Swan Lake intertie project, must not be restricted or precluded. (C-P, KCC, KGB)
- there should be no road, or transportation or utility corridor, through the Kadashan LUD II area

- add the Unuk River to the transportation and utility corridors map
- the potential connections to British Columbia are of special interest (the Taku, Whiting, Stikine and Unuk Rivers). (BC)

Response: The revised Forest Plan allocates land to the Transportation and Utility Systems Land Use Designation (TUS LUD) along both the north and south shore proposed transportation routes. The TUS LUD, from a land allocation perspective, facilitates the placement of a Taku transportation route.

Alternatives 2-7, & 10 allocate lands to the Transportation and Utility Systems Land Use Designation (TUS LUD) for the Bradfield Canal/Eagle River areas and the Tyee/Swan Lake intertie project. The revised Forest Plan (alternative 11) allocates the Tyee/Swan Lake intertie, but not the Bradfield Canal road corridor. The Bradfield was not allocated because of the low probability of construction and the potential environmental consequences of the road corridor. However, if at some point in the future the Bradfield proposed corridor became feasible and desirable, the Forest Plan and ANILCA would allow the construction of the route.

The State indicates through a 1987 study by Harza Engineering, Inc. that a power line intertie Sitka-Tenakee Springs-Hoonah would best be served by a power line through the Kadashan valley. The Legislated LUD II designation in Kadashan does not preclude this type of development. Before the development would ever occur, however, site specific environmental assessment of alternative routes would be considered before a final route would be selected. At this time, there is no funding for either further study or construction of this portion of the intertie network. One of the EIS appendices includes a report which considers the need and options for a road through the Kadashan watershed in fulfillment of the requirements of section 203 of the Tongass Timber Reform Act. No recommendations are made by the report; the TUS LUD is not allocated in the Kadashan watershed for the construction of a road.

The potential Unuk River corridor is protected by statute should the State ever wish to pursue that corridor for a transportation route. Alaska Energy Authority has not to date identified the Unuk River as a potential utility intertie corridor.

The Taku River potential transportation route to Canada is allocated in Alternatives 2-7, 10 & 11, and the revised Forest Plan to the Transportation and Utility Systems Land Use Designation (see above). The Stikine River has not been allocated to the TUS LUD because of the inconsistency of this LUD with Wilderness designation (although Title XI of ANILCA allows the construction of transportation and utility systems through conservation areas with review of both Congress and the President). The Unuk River, as mentioned above, is provided for through statute should the State ever wish to pursue it. The Whiting River has not been identified in the State's Transportation Corridor routes, however, the revised Forest Plan allocates the entire area to the Semi-Remote Recreation Land Use Designation. This land use designation could allow road access through the area should it ever be pursued by the State.

Comment: The introduction of transportation and utility corridors into the Supplement is insufficiently discussed or documented. (C-TS) Where do the routes come from?: there's no discussion in the narrative. The locations seem arbitrary, as many other opportunities exist in drainages with development-oriented LUD's. The utility and road corridors are only weakly justified, with no realistic needs identified. "A road by any other name is still a road." (C-TS) The "massive road and power line construction plan" being proposed is not supported. (NCC)

Response: Narrative has been added to the EIS to more explicitly disclose the State of Alaska Department of Transportation and Public Facilities' Southeast Alaska Transportation Plan corridors and the State of Alaska Energy Authority's utility intertie network of corridors. The supporting State of Alaska studies are the 1986 Southeast Alaska Transportation Plan (ADOTPF, 1986) and a 1987 study performed by Harza Engineering, Inc. (Harza, 1987) for Alaska Energy Authority.

It's true that other opportunities for both transportation and utility intertie corridors exist different from the corridors shown on Alternatives 2-7, 10 & 11 of the FEIS, and the revised Forest Plan. The corridors shown

are from independent studies done by the Alaska Department of Transportation and Alaska Energy Authority. Several alternative routes to each transportation and utility intertie corridor were considered in these independent studies. The route for each segment that appeared to be feasible in terms of physically on-the-ground, practical from a development standpoint, and economically attractive were primary criteria in suggesting a preferred route.

If and when the State of Alaska pursues any given segment of a transportation or utility route, assessment of the site-specific potential environmental impacts of alternatives in the corridor area, along with detailed feasibility and financial analysis would be performed with public involvement.

The need and support for a network of transportation and utility intertie corridors throughout Southeast Alaska has been expressed by the Governor of the State of Alaska in the State's comments on the SDEIS in a letter dated December 6, 1991. The State believes that cost effective electrical generation and transmission for communities is important to the people of Alaska. Part of the Forest Service's goals and objectives for the Tongass National Forest include emphasizing opportunities for resource uses that contribute to the local and regional economies of Southeast Alaska which includes transportation and utility systems. Further, it's the policy of the Forest Service to contribute to local community stability where possible in a manner consistent with good land stewardship.

Comment: ANILCA Sec. 1104 requires that the agency make specific findings regarding the feasibility, prudence and impacts of identified transportation and utility corridors. Specific standards and guidelines should be disclosed to guide implementation of this requirement. (SEACC) The Forest Service must provide a "clear management intent" for transportation and utility systems consistent with ANILCA and "congressional mandates." (STATE)

Response: The technical and economic feasibility of each segment of the State's transportation and utility corridor network was disclosed in the Southeast Alaska Transportation Plan (ADOTPF, 1986) and the Harza Engineering study of utility corridors (Harza, 1987).

Specific standards and guidelines, to guide implementation of further site-specific analysis pursuant to developing one or more segments of the State's transportation or utility system corridor network, are provided in Chapter 3 of the revised Forest Plan under the Transportation and Utility Systems land use designation.

Any pursuit to consider development of a State transportation or utility corridor involves site-specific analysis of alternative routes and the associated impacts through another environmental document consistent with the language contained in Section 1104 of ANILCA.

Log Transfer Facilities (LTF's)

Comment: The Plan does not demonstrate adequate commitment to the LTF [log transfer facility] siting, construction, operation and monitoring/reporting guidelines (ATTF), because the term "consideration" is used rather than the term "adoption." The Plan also fails to include all the elements of the ATTF guidelines, or they are altered, specifically: solid waste management, bark accumulation, control of hydrocarbons, onshore log storage, and facility maintenance and reclamation. (EPA)

Response: Correspondence dated January 16, 1992 from the Forest Service to EPA clarifies the use of the term "consideration" versus "adoption" and whether or not all the guidelines were disclosed and made a part of the Plan. The Plan now includes, verbatim, the 1985 The Alaska Timber Task Force (ATTF) Siting Guidelines (see Appendix G of the Plan).

Comment: The Plan gives special consideration to visual impacts above other LTF concerns. Consideration of visual impacts is appropriate only when all original ATTF guidelines are adhered to. (EPA)

Response: The 1985 The Alaska Timber Task Force (ATTF) Siting Guidelines are provided in Appendix G of the Plan. The ATTF guidelines are to be used when proposing new facility sites. Further, the Forest-wide Standards and guidelines provide additional site selection criteria to be "considered" in the facility site evaluation. These additional site selection criteria include visual sensitivity and impact of a proposed structure on the landscape. There is no "special" treatment of the visual resource above other LTF concerns in the standards and guidelines.

The application of all of the guidelines in siting log transfer facility locations are provided to assist the project level environmental analysis process.

Comment: (1996) The Alaska Timber Task Force (ATTF) Log Transfer Facility Siting, Construction, Operation and Monitoring/Reporting Guidelines should be included in the plan. Forest Plan Appendix G, Log Transfer Facility Guidelines, needs updating. (See EPA letter for specifics.)

Response: The appropriate changes have been made, in consultation with EPA, to alleviate the Environmental Protection Agency's concerns.

Comment: The effects of LTF's on crab and shrimp habitat have not been adequately disclosed. (C-TS) An in-depth analysis of shellfish effects is needed. What about bark deposition and the chemical depletion of oxygen? (1996) The revised Supplement fails to adequately disclose and consider adverse impacts from the "98 to 176 new log transfer facilities" which are expected to be built over the next 30 years. No effort is made to identify where these "new" LTF's will be constructed or what effect they will have on other uses, notably the availability of safe boat anchorages associated with fishing, tourism and recreation.

Response: The EIS discloses that Faris and Vaughan (1985) examined the extent of likely effects to marine benthic habitat for log transfer facilities. The total impact of all permitted and proposed log transfer facility sites indicate an impact of 317 acres which is less than one tenth of one percent of the estuarine area less than 60 feet deep in Southeast Alaska.

The EIS also discloses that bark deposition is likely to affect little neck clams and bay mussels (Freese and O'Clair, 1987) and mollusks and several marine worms (Conlan and Ellis, 1979) and is assumed, therefore, to likely affect other plants and animals that live in the marine benthic environment.

The EIS further discloses that toxic substances occurring as leachates precipitate in saltwater and therefore, do not appear to be a measurable effect in open water or where good water circulation exists (Sedell and Duval, 1985).

From a programmatic plan analysis, we do not believe that less than one tenth of one percent of the estuarine area less than 60 feet deep in Southeast Alaska to be an affect that warrants further analysis than that provided above and in the EIS. Individual projects will consider these potential impacts in greater detail through alternative siting locations and alternative structure types to minimize impacts. This additional analysis will be performed in compliance with the National Environmental Policy Act and also includes cooperating with State and Federal Agencies, including EPA, to assemble appropriate data and evaluate alternative siting locations. Effects on the availability of specific safe boat anchorages associated with fishing, tourism and recreation will also be considered during any additional analysis.

Comment: (1996) The discussion of the environmental consequences of log transfer facilities and log rafts on the intertidal and subtidal environment is incomplete. The direct impacts are discussed very briefly, and no discussion is provided on the indirect and potential cumulative effects on species that forage in intertidal

and subtidal areas including sea otters, harlequin ducks, pigeon guillemots, river otters, bald eagles, and other species. A comprehensive discussion on the environmental consequences of these activities on intertidal and subtidal communities and habitats should be included in the FEIS.

Response: See previous response.

Comment: (1996) The lack of specific information in the revised Supplement for where Log Transfer Facilities will be located, in addition to the non-disclosure of monitoring information regarding past operation of previously permitted facilities, prevents the public, EPA, or the decision maker from making a reasoned decision regarding cumulative and reasonably foreseeable impacts to the marine environment and associated uses.

Response: See previous response.

Comment: The current Regional Guide says no more than one LTF/bay, yet you show more than that in several bays. Port Houghton has four LTF's! (NCC)

Response: The FEIS and the revised Forest Plan do not show any proposed locations of LTF's. The actual determination of number, type and location of log transfer sites in any given locale will be determined on a project basis with appropriate site-specific environmental analysis, public involvement and disclosure. In addition, there is no explicit direction in the Southeast Area Guide, Regional Guide, Tongass Land Management Plan or Proposed revised Forest Plan that limits the number of log transfer facilities to one per bay.

In 1977, the Southeast Area Guide (page 99) did provide selection criteria to assist the interdisciplinary process in the choice of locations for log transfer and log storage sites in estuarine areas. That direction stated "the number of active log transfer sites and storage areas in any given bay or bay complex will be minimized . . . ."

In 1985 The Alaska Timber Task Force (ATTF) Siting Guidelines were developed and are currently in practice today to assist in determining new log transfer facility sites. Again, these guidelines, similar to the Southeast Area Guide, suggest "minimize" the number of log transfer facilities but does not set a limit. These guidelines are located in Appendix G of the Forest Plan..

Comment: Silver Bay is dead, and this can be anticipated in other areas from LTF's: therefore, the importance of minimizing them is clear. (NCC) Minimize LTF's; make sure they are properly located by consulting with locals and the State. (ATA)

Response: The 1985 The Alaska Timber Task Force (ATTF) Siting Guidelines specifically direct siting of log transfer facilities in locations which will best avoid or minimize potential impacts on water quality, aquatic habitat and other related resources. These guidelines are located in Appendix G of the Forest Plan.

Further analysis at the project level, in compliance with the National Environmental Policy Act, provides the means for local interested individuals to express concerns they may have for any individual log transfer facility siting location.

Comment: Table 3-144 indicates 98 to 176 new log transfer facilities, but the long-term contracts map shows less than 50. (SEACC)

Response: A long-term contract map is no longer included with the FEIS. The 1991 SDEIS projected the number of new log transfer facilities (LTF's) estimated to be needed by alternative (from 98 to 176 new log

transfer facilities over the next 30 years). For the FEIS, the computer model does not separate LTF costs from other transportation costs for the future, and thus a numeral estimate cannot be made of new LTF's. The number of new LTF's anticipated with implementation of the final alternative (Alt. 11) is anticipated to be no more than 176 (the high number in the SDEIS).

Wild and Scenic Rivers

(For comments on specific rivers, see Appendix E.)

Allocations/Recommendations

Comment: All rivers should be made a part of a "National Watershed Preservation System."

Response: Rivers are evaluated based on the Wild and Scenic Rivers Act passed by Congress in 1968. All rivers on the Tongass were assessed based on this Act and the Forest Service Land and Resource Management Planning Handbook (FSH 1909.12), Chapter 8, Wild and Scenic River Evaluation. To date no legislation exists for a National Watershed Preservation System, and hence no analysis conducted.

Comment: Recommending only 24 rivers falls short of the Forest's opportunity to contribute significantly to the Wild and Scenic Rivers System by adding "ecosystems or features not represented by existing components of the National Wild and Scenic Rivers System" (DEIS, 3-482). (AMR) All eligible rivers (or all rivers in Alternative A) should be recommended for designation in the preferred alternative. (1996) 112 rivers should be designated as "wild and scenic."

Response: The recommended rivers in the revised Forest Plan provide representation of ecosystems and features not represented by existing components of the National System. Examples include glaciers, muskegs, salt chucks, plant associations for the temperate rainforest, and unsurpassed examples of wildlife and anadromous fisheries. In addition, the recommended rivers provide representation for the six of the seven Geographic Provinces of Southeast Alaska (the Yakutat Province is not represented because of local opposition to Wild and Scenic River designation.) Since this comment was made, 4 more rivers are being recommended. The 28 recommended rivers account for an addition of 484 miles to the national system. This is a significant addition to the Wild and Scenic Rivers System, recommending an increase in excess of 10 percent of the total miles of river currently in the national system.

The Wild and Scenic Rivers Act and subsequent guidelines do not identify any national objectives for representation. That act established a policy of balancing the development of rivers in the United States with a system of rivers protected from development. In Alaska, few rivers have been subject to any development while the reverse is typical in the lower 48 states. The balance is incomplete because many necessary and predictable developments are yet to occur. The 28 recommended rivers will, in the long run, achieve the balance of protection and development opportunities, while contributing significantly to the Wild and Scenic Rivers System.

Comment: (1996) The Southeast Alaska Conservation Coalition's Transition Alternative, which proposes that 67 rivers be designated as "wild and scenic" with one-half mile corridors instead of one-quarter mile corridors, should be adopted.

Response: In the RSDEIS preferred alternative (alternative 10), 12 of the 67 rivers proposed in SEACC's transition alternative were found suitable. In response to the above comment, five more of SEACC's proposed rivers were added to the list of recommended rivers, so that seventeen of these rivers were found suitable in Alternative 11, the preferred alternative. Twenty-three of the rivers in SEACC's Transition Alternative were found ineligible during the Forest Service eligibility process. Of the other 27 rivers that are

eligible but not found suitable, 18 are totally or partially within non-development land use designations. For the other nine rivers, it was determined that other resource values were more important for those river areas (see response above also.) In determining what corridor width to use, we are following the Wild and Scenic Rivers Act (Section 4(d), 1986) and Forest Service Handbook (FSH 1909.12, Chapter 8.13) direction to consider a minimum of ¼ mile from each bank of the river (which totals over a ½ mile corridor.)

Comment: No rivers should be designated Wild and Scenic. (SEA) No timberlands should be included in any Wild and Scenic proposals. (GOLD) (1996) Designating 25 rivers as “wild and scenic” is too many. Their designation will harm the economy. Additional land should not be locked up through the designation of additional “wild and scenic” river designation. (1996) Additional “wild and scenic” rivers should only be designated if they are surrounded by designated wilderness areas, and they do not contribute to a reduction in the timber base to less than 2.2 million acres.

Response: See response above. The suitability analysis for each river considered many factors, including opportunities for timber production. Designation as a Scenic or Recreation River classification does not preclude harvest if the lands adjacent to the river are in a LUD allowing timber harvest. In some cases rivers were not deemed suitable partly due to timber values, and in some cases recommended rivers reflect a classification that permits timber harvest, such as Kadake Creek.

Comment: The Forest Service has sufficient administrative tools to manage, with greater multiple-use benefit, river-oriented recreation and resources on National Forest lands without a Wild and Scenic River designation. (STATE) Most proposed Wild and Scenic Rivers are in already protected areas: we don't need any more protection, any Wild and Scenic Rivers.

Response: The Forest Service is obligated to analyze and make recommendations regarding additions to the Wild and Scenic Rivers System. Designation under the Wild and Scenic Rivers Act requires congressional action, and also requires similar action to rescind designation. Forest Service administrative tools could accomplish similar objectives as the Act, however, are relatively short term in nature and subject to periodic changes, such as Forest Plan revisions. Designation under the Wild and Scenic Rivers Act elevates the significance of the river to a National level, and provides an added management emphasis for the outstandingly remarkable features of a selected river. Protection ensures the free flowing characteristics and outstandingly remarkable values are maintained over time. Often these values are found outside of Wilderness or LUD II's.

Of the 28 rivers recommended for designation in Alternative 11, 11 are entirely or mostly in legislated areas, such as Wilderness and LUD II areas. Thirteen of the rivers are in land use designations emphasizing natural conditions, though these are subject to periodic reviews such as forest plan revisions. Designation under the Wild and Scenic Rivers Act provides an added degree of protection, even for the rivers in Wilderness. In Wilderness, the President could authorize a water resource development project; as a Wild and Scenic River it would require an act of Congress.

Comment: Navigable waters (which include navigable rivers) and their management are the responsibility of the State, not the Forest Service. The Forest Service shouldn't be imposing management restrictions on navigable rivers. (STATE) No navigable waterways should be considered for Wild and Scenic designation unless the "owners of that river" (the State) concur. (PLF)

Response: The Forest Service has no intent in the Forest Plan to impose management restrictions on navigable waters that are determined to be under the jurisdiction of the State. The Forest Service role generally is management of the shoreline and land adjacent to the river where the U.S. does not own the riverbed. Where private land may be involved, their role is to coordinate with the private landowner to provide awareness of the outstandingly remarkable river values and promote maintaining those values. The Wild and Scenic Rivers Act recognizes the rights of private landowners and the state.

Comment: Only rivers already in designated Wilderness and which are not State-owned navigable waterways should be recommended to Congress for Wild, Scenic or Recreation River designations.

Response: See the immediate two responses above.

Comment: A single map showing all the Wild and Scenic recommendations is needed. (AMA)

Response: The map of Alternative 1 (FEIS map packet) displays all 112 of the eligible Wild and Scenic Rivers. The map for the revised Forest Plan displays the 28 rivers recommended for designation.

The Process

Comment: The Alaska National Interest Lands Conservation Act (ANILCA) precludes doing any more studies for Wild and Scenic Rivers. (AFA, AMA, APC, PLF) The State agrees with the recent Bureau of Land Management decision not to do any more Wild and Scenic River studies in Alaska, as being contrary to the intent of ANILCA. This position must be made a part of the FEIS. (STATE)

Response: ANILCA states in Title XIII, Section 1326 (b):

> "No further studies of Federal lands in the State of Alaska for the single purpose of considering the establishment of a conservation system unit, national recreation area, national conservation area, or for related or similar purposes shall be conducted unless authorized by this Act or further Act of Congress."

The Forest Service is keenly aware of this provision in ANILCA, and has considered this along with other existing laws, mainly the National Forest Management Act (NFMA), National Environmental Policy Act (NEPA), Tongass Timber Reform Act (TTRA), particularly Section 5(d) of the Wild and Scenic Rivers Act, and their legislative histories. The Wild and Scenic rivers studies being done as part of the forest plan revision are appropriate and in conformance with these laws. The forest plan revision is a comprehensive land use study of all resources and their values. Part of this comprehensive look is the consideration of potential Wild and Scenic rivers, which has never been done for the Tongass. Thus these studies are not conducted "for the single purpose" of establishing conservation system units, but are part of a much broader examination in accordance with NFMA and Section 5(d) of the Wild and Scenic Rivers Act.

Comment: The consideration of Wild and Scenic Rivers should be done outside the TLMP process. Other laws are involved than those concerning TLMP, there should be an opportunity to consider other alternatives for protecting rivers and allowing access (other than Wild, Scenic or Recreation designations), and the issue of subsistence access needs more study. (RF&G) Defer Wild and Scenic planning: let the communities be an "intimate" part of planning for their rivers and deciding which ones to designate. (C-Y)

Response: See response above. The Tongass Land Management Plan revision is the appropriate place for a comprehensive look for considering Wild and Scenic Rivers. Alternatives to designation are one of the factors in the suitability analysis. Suitability involves examining the various resources and values of the eligible rivers, as well as public comment to the DEIS, SDEIS, and RSDEIS.

Upon designation by Congress, a management plan will be developed for each river. The plan will address specific concerns for the river, such as access, subsistence, and community needs and uses.

Community involvement has been (through the DEIS, SDEIS, and RSDEIS of the TLMP Revision) and will continue to be an integral part in development of Wild, Scenic and Recreational River recommendations and management.

Comment: The segmentation of rivers and the eligibility determination, have no consistent rationale or explanation, leading to the conclusion that these were arbitrary, or at least inconsistent decisions. (NCC)

Response: A variety of criteria was used in the eligibility and segmenting process. Some of the values , such as fisheries or historic sites, can be fairly well defined, and thus consistently addressed. Other values such as scenery and recreation are more difficult because of the subjective nature of these values. Guidelines for Wild and Scenic Rivers acknowledge a degree of "professional judgment" in regards to determining the occurrence of outstandingly remarkable values. In addition, the scope of the study involved hundreds of rivers on over 17 million acres, conducted by three administrative areas with numerous concerns and opportunities. When subjectivity is part of any analysis process, and clearly is in the case of determinations of outstandingly remarkable features and the associated segmenting and eligibility determinations, the perception of inconsistency is to be expected. However, we believe the eligibility determinations and suitability studies and analysis follow a similar framework that meets the intent of the Wild and Scenic Rivers Act, subsequent guidelines, and agency policy (FSH 1909.12, Chapter 8).

Comment: No reasons are given as to why rivers, found ineligible for Wild status due to a road crossing, would not be eligible as Scenic or Recreation rivers. (SEACC)

Response: The eligibility process is independent of classification; it relies on the presence of one or more outstandingly remarkable values and a free flowing condition. We assume this question is related to classification and suitability, which is the appropriate place to view alternative classifications and factors such as transportation systems.

Generally several factors come into play when determining whether a river is suitable or not suitable for designation. These include roads, powerlines, public support, timber and mining opportunities and others. Sometimes these issues and concerns can be resolved through alternative classifications. At times however, it becomes obvious the foregone opportunity or concern can not be easily resolved simply by changing the classification. Thus in some instances, a river may only be considered under one classification. An attempt has been made to further clarify the rationale for suitability in the FEIS.

Comment: Congress specifically included "tributary" within the definition of "river (16 U.S.C. 1286(a)); in many cases headwaters and tributaries contribute significantly to the outstandingly remarkable feature present in the main stem of a river; this is particularly important for those eligible rivers on the Forest with downstream fisheries values. The eligibility determinations were inconsistent in the determination of whether or not the headwaters and/or tributary(s) should be included (examples given), and no explanation is provided for these inconsistencies. There is no reasoned justification for excluding headwaters or tributaries. (AMR)

Response: As acknowledged previously, a certain degree of subjectivity is involved when identifying outstandingly remarkable values such as scenery or recreation; it is recognized in the guidelines. In a rain forest setting hundreds of tributaries can contribute significantly to downstream values, such as fisheries or recreation values. Thus only those rivers, segments, and tributaries which contain the outstandingly remarkable value(s) are identified as eligible. Tributaries and headwaters which contribute to the downstream outstandingly remarkable values are protected by the standards and guidelines in this plan, primarily in the riparian, fisheries and watershed sections.

Identification of eligible segments focused on the outstandingly remarkable values. For instance tributaries of the Kadashan River such as Tonalite and Hook Creeks were considered, but no outstandingly remarkable value was identified and thus were not deemed eligible. The one glacier recommended, the Le Conte, was identified as outstandingly remarkable because it is the southern most tidewater glacier on the continent, and the spectacular scenery is easily accessible. Glaciers are relatively common features in southeast

Alaska and many of them are pretty to look at. Many were considered during the eligibility process, and those or portions thereof which possessed at least one outstandingly remarkable value were deemed eligible.

Comment: Whole river systems should have been evaluated rather than just river segments. (SEACC)

Response: Whole river systems were evaluated for outstandingly remarkable values. Some that were eligible and suitable for recommendation include: Aarons, Oerns and Berg Creeks; Gokachin, Mirror, Fish and Low Creeks; Thorne River and Hatchery Creek (Honker Divide), Lost River and Tawah Creek; Irish and Keku Creeks.

Comment: Each river suitability analysis is "wholly inadequate." No rationale is provided for why any particular stream was included in any of the alternatives. Packaging assorted groups of rivers within alternatives rather than critically assessing the suitability of any particular river is a flaw in the analysis. (AMR) None of the river discussions contain a conclusion as to why any particular river was determined not suitable. (SEACC) There are numerous examples of "inadequate, erroneous, and simply bad explanations" of certain suitability factors. The rationale for any particular decision that an eligible river is unsuitable is often inadequate, or it's difficult or impossible to tell what the rationale is. (AMR)

Response: The suitability analysis for each river was improved substantially between the DEIS and SDEIS. Additional information based on public comment has been added to the suitability studies in Appendix E of the FEIS. Further explanation of the rationale for selected rivers and further explanations of alternative themes is also part of the FEIS.

Packaging assorted rivers within the alternatives reflects the themes of the alternatives. Considering each of the 112 rivers has several segments and several options on classification, hundreds of alternatives exist on how they might have been displayed. The display in the various alternatives provides a broad range of options. Each river was critically assessed as to its suitability in formulating the rivers shown in each alternative. This ultimately led to the recommendations in the revised Forest Plan which sought to provide representation of Geographic Provinces and a balance of uses.

Comment: Eligible rivers or segments thereof subject to transportation and/or utility corridors (e.g. Antler, Berners) were deemed not suitable. No rationale is provided for this determination in the individual suitability studies. These rivers or river segments affected by a potential transportation or utility corridor should have been deemed suitable as a scenic or recreation river, and should be included in at least one alternative. (See U.S. Dept. of Interior and Agriculture, National Wild and Scenic Rivers System; Final Revised Guidelines for Eligibility, Classification, and Management of River Areas ("Interagency Guidelines"), 47 Fed. Reg. 39454, 38458 (1982)). (AMR)

Response: We have added additional rationale in the FEIS for those rivers considered suitable for recommendation as additions to the Wild and Scenic Rivers System. Some of the rivers recommended do involve state transportation and utility corridors, such as Virginia River and Lake, where a classification which permits development was used. Rivers determined not suitable generally have a number of values and concerns which led to the determination. In some cases it was apparent these values and concerns were great enough to not consider alternative classifications, especially when other rivers were present in the Geographic Province with similar outstandingly remarkable values and thus could provide representation.

Comment: The EIS needs to provide facts and resource tradeoffs so the decision-maker can make a reasoned choice rather than speculating that a suitability determination of a river would possibly affect a

road opportunity which "could be viewed as a federal interference in a local and state government issue" (App. E, Antler River). (AMR)

Response: This reference has been removed. Public response to the SDEIS has been added to this section of the suitability studies.

Comment: Recommending rivers with lower classifications than they are eligible for should only be done for existing "authorized" projects (47 FR 39458), otherwise such underclassifications could permit future development. (NCC)

Response: The guidelines address alternative classifications for eligible rivers with authorized projects. They do not make any reference to classifications for recommended rivers which have previously authorized projects. This is the role of the suitability studies; to identify opportunities and tradeoffs of various alternatives. This in turn leads to a decision of whether the river is suitable or not, and if so, at which classification.

Effects

Comment: The descriptions of the environmental consequences are extremely general and do not provide the detailed analysis of environmental effects that is required by NEPA. The planning documents must assess the potential environmental impacts of any decision not to recommend suitable rivers for inclusion in the national rivers system. (AMR, NCC)

Response: We believe the descriptions of the environmental consequences, both in the FEIS and in the individual suitability studies in Appendix E, provide a sufficient level of analysis to meet the intent of NEPA, the Wild and Scenic Rivers Act, and associated guidelines and policies for the level of decision made in a programmatic plan. The depth of the studies is related to the regional condition and current level of development which, unlike similar studies in other parts of the country, is relatively natural with simple ownership patterns. The studies provide information on the environmental effects which is more than sufficient for the decision to be made. We have added additional information in the FEIS Appendix E study reports concerning the potential impacts of non-designation, such as the adjacent land use designation objectives.

Comment: The Supplement gives only minimal analysis of the effects on the suitable timber lands within the 112 eligible rivers (only 124,000 acres including adjacent land use designations (Supplement, p. 3-456)) in comparison to the public interest in "protecting superlative examples of natural American Rivers for future generations." (AMR)

Response: The discussion on suitable timber lands is expanded in the FEIS in response to this comment.

Comment: A discussion of the specific effects of development activities on the values of particular rivers, as laid out in FSH 1909.12, ch. 8.23, is lacking. There's inadequate analysis of the values which could be foreclosed or diminished if a particular river corridor is not protected (FSH 1909.12, ch. 8.23(3)). The suitability discussion should include a detailed evaluation of the environmental impacts of appropriate alternatives, including designation of all eligible segments, nondesignation of all or portions of eligible segments, designation with alternative classifications, other possible means of protection, and no action (FSH 1909.12, Ch. 8.33g). (AMR)

Response: The suitability studies improved significantly between the DEIS and SDEIS. In addition we have expanded the analysis in some of the suitability reports for the FEIS in response to this comment.

Comment: List each river proposed under each alternative separately, showing acres (as well as miles) of designations and also what the adjacent LUD classifications would be.

Response: The FEIS (pages 3-XXX to 3-XXX) lists the rivers by alternative along with their miles. The acreages for each river can be found in the Appendix E suitability reports, and are collectively discussed in the FEIS by alternative. The suitability reports are expanded in the FEIS to ensure an adequate discussion of the adjacent land use designations by alternative. This information can also be found on the alternative maps (FEIS map packet).

Comment: (1996) Current visitors are causing negative impacts to the Thorne River. They could cause additional impacts to the recreational experience if tourism is expanded, and resource development is phased out.

Response: As with all recreation areas, the Thorne River will be monitored and managed to avoid negative impacts to the river and the recreation experience of residents and visitors, and to maintain the outstandingly remarkable values.

Standards and Guidelines

Comment: The Wild and Scenic Rivers Act, sec. 10(a), has been interpreted as a nondegradation and enhancement policy for all designated river areas (Interagency Guidelines, 47 Fed. Reg. 39454, 39458). FSH 1909.12, ch. 8.12, gives direction on the protection that management prescriptions should provide. The proposed Wild, Scenic and Recreational River management prescriptions fail to explicitly prohibit development of hydroelectric projects (FSH, Chp. 8.2), or new water supply or flood control dams (FSH, Chp. 8.2). (AMR)

Response: We have reviewed the Forest Plan Standards and Guidelines and made a few minor changes to ensure consistency with the interagency guidelines and Forest Service Handbook direction.

Comment: A "modification" visual quality objective (VQO) within a recreational river corridor is inconsistent with Forest Service policy. (AMR) Wild Rivers should have a VQO of "preservation," and Scenic Rivers a VQO of "retention." (SEACC)

Response: The visual quality objective (VQO) in the Recreational River land use designation is partial retention in areas viewed from the river, roads, and recreational facilities. Modification VQO is acceptable in other areas, and is consistent with Forest Service policy and guidelines for recreational rivers, which allow for development activities to be considered. The VQO for Wild Rivers remains as retention to allow for subsistence uses and to be consistent with the ANILCA Wilderness visual quality objective of retention. The VQO for Scenic Rivers is retention and partial retention in areas viewed from the river, travelways and recreation sites, and is modification in other areas. We believe these VQO's are consistent with handbook direction to provide special emphasis to visual quality on Scenic Rivers.

Comment: The Plan should state that the Forest Service will oppose FERC permits and will refuse to grant special use permits within river corridors pending final decision upon their status. (AMR)

Response: The prescriptions for Wild, Scenic, and Recreation Rivers state the Forest Service will not permit water supply dams and major diversions which are FERC exempt, and will recommend to FERC that other projects not be licensed. Special-use permits will be evaluated on a case by case basis for consistency with the recommended level of eligible classification, and may be permitted if compatible.

Comment: The Plan should incorporate the upcoming Chief's policy on fish rehab, restoration and enhancement as it relates to Wild, Scenic and Recreation river corridors. (AMR)

Response: The policy has been incorporated into Forest Service Manual direction which applies in addition to Forest Plan direction.

Comment: ANILCA provided specifically that Wild and Scenic River corridors in Alaska should be 1/2 mile wide, not 1/4 mile (ANILCA, Sec. 606(a). (AMR, SEACC)

Response: We do not find any language in Section 606(a) of ANILCA that directs minimum 1/2 mile wide corridors for eligibility and suitability determinations of Wild, Scenic and Recreation Rivers in Southeast Alaska that occur after the passage of ANILCA. Therefore, we are following the Wild and Scenic Rivers Act (Section 4(d), 1986) and Forest Service Handbook (FSH 1909.12, Chapter 8.13) direction to consider a minimum of 1/4 mile from each bank of the river.

Comment: More stringent interim protection measures for potential Wild, Scenic and Recreation Rivers are needed. (SEACC)

Response: Rivers recommended for designation as Wild and Scenic Rivers are maintained and managed as if they were components of the system, until they are addressed by Congress. Rivers considered but not recommended under the revised Forest Plan are managed according to the land use designation in which they lie.

Wildlife

Modeling and Analysis

Comment: You have no data on wildlife numbers (particular, brown bears), don't know if any populations are currently below viable numbers (or what that number is), or whether populations are increasing or decreasing: how can you make decisions to destroy more wildlife habitat (old growth), or monitor changes in the forest, without this baseline data? Many statements in the Supplement indicate your limited knowledge of wildlife needs and wildlife habitats (such as: "not well understood," "no research," etc.). Given this admitted lack of data and research, it is inappropriate to schedule the level of old growth harvest that you propose.

Response: Although precise numbers of wildlife, for most species, will probably never be known, there is considerable data on wildlife numbers, for certain species, either in the form of actual counts or extrapolated estimates. For instance, we know that approximately 1,330 brown bear (about one per square mile) inhabit the National Monument portion of Admiralty Island, and that approximately 6,000 brown bear inhabit the Tongass National Forest today. Scientific research, field counts, and hunting data are all sources of this information. However, since actual counts for most species are not available, and since populations tend to fluctuate year-to-year or cyclically, most of our wildlife modeling and population estimates are based on habitat capability rather than actual numbers. This approach (and the use of management indicator species) is discussed in the "Wildlife" section of Chapter 3 of the EIS. Continuing work to field-validate these models helps to refine them. Also, since we know where and roughly how much timber harvest has historically occurred on the Tongass, and making the assumption that habitat changes are largely the result of timber harvest, we can draw some reasonable estimates of what the likely carrying capacities were prior to any large-scale habitat changes (using the year 1954 as the benchmark). We can also estimate trends from 1954 to the present, and can estimate further changes to habitat capability (and thus have an indicator of carrying capacity trends) in the future, based on Forest Plan alternatives.

To reduce the risk of management activities to wildlife habitats, we have further implemented a system of old-growth reserves in most alternatives. The preferred alternative has fully implemented an old-growth reserve system and has dramatically reduced by over 50% the level of allowable timber harvest over the current plan to address wildlife habitat issues and other concerns (also see responses to viability comments). Further reducing risk relative to these important issues is one approach to dealing with uncertainty, and maintaining a well-distributed system of reserves protects management options in the face of imperfect knowledge.

Comment: Using percents of wildlife habitat gives a false picture of the validity of your analysis; in fact, your modeling is quite unreliable and cannot predict changes with this accuracy. A warning to that effect should be included.

Response: We agree with the limitations in model use and clearly discuss these in Chapter 3 under Wildlife. Further, we have reduced the total number of wildlife habitat capability models used in the effects analysis to one (Sitka black-tailed deer). The deer model has received the greatest level of verification, has had the benefit of a panel review (all see the Wildlife section in Chapter 3) and subsequent interagency (FS, FWS, and ADF&G) review during May 1996 between the RSDEIS and FEIS. There are three ways to estimate numerical changes related to wildlife and wildlife habitat: raw acres, percentages of acres, or wildlife (species) numbers. All have been used in wildlife analyses, but to varying degrees. Since our modeling is based on habitat capability, and habitat is usually measured in acres, acres or percents of acres are more reliable than population numbers since they (population numbers) fluctuate from year to year depending on weather, hunting/trapping pressure, prey abundance, etc. Acre-change estimates themselves are only estimates, and using raw acres tends to give the impression of more accuracy than we actually have. Using percents of acres, which are expressed as whole numbers and thus are rounded off, seemed to give the best "averaged" picture and have the least pretense of precision and accuracy. Since our

percentages are based on numbers which are usually in the thousands or more, there is more room for error while still having a valid comparative measure. Percentages of habitat, rather than raw acres, are also easier to quickly "take in" and use in comparing alternatives.

Comment: Your FEIS should include data on the number of wildlife by species, and the impacts by alternative on these numbers. Tie wildlife outputs to harvestable populations. "Land capability is meaningless to someone interested in food on the table."

Response: See the previous two responses concerning the limitations of predicting actual wildlife population changes. Since reporting numbers of wildlife can be misleading we have avoided doing so, except in the case of deer. To evaluate alternatives for potential impacts to deer hunting, the FEIS displays potential population numbers (habitat capability) and average deer harvest for each WAA.

Comment: The deer hunting data is not accurate and needs improvement. (SSAB) ADF&G sport hunting information was not used. (SEACC) The best available area-specific information for "the production, and human use, of wildlife" was not used. (RF&G, SEACC)

Response: Most of the information on the consumptive use of wildlife is from the Alaska Department of Fish and Game (ADF&G). Some adjustments for recent years had to be made since ADF&G changed the boundaries of some areas used to collect data. We have tried to use the best and latest information available at the time of publication. The FEIS has updated all of the wildlife information that was made available to us by ADF&G up through 1996.

Comment: Critical winter habitat for deer is not identified. (SEACC)

Response: In the FEIS we used a habitat capability model to identify deer winter habitat. All estimates of past, current and future habitat capability are based on this model. The model and important components are discussed in detail in the Wildlife Section of Chapter 3 of the EIS. Winter habitat includes considerations of elevation, aspect, vegetation, and winter snow depths. A table in the Wildlife Section of Chapter 3 of the EIS tracks how much of the highest value deer winter range is not available for timber harvest in each alternative. The Wildlife Forest-wide Standards & Guidelines contain direction for identifying and considering important deer winter range in project environmental analyses.

Comment: The Forest Service should work with the local and regional Fish and Game Advisories to identify important recreational hunting and sport fishing areas. (RF&G)

Response: The identification of important recreational hunting and sport fishing areas was primarily based on information from the Alaska Department of Fish and Game (including hunter access maps and use statistics by wildlife analysis area), and on information from outfitter services, local fish and game biologists, and recreation specialists. Local Fish and Game Advisory Boards indirectly accounted for some of this information. The Recreation Section of Chapter 3 of the EIS explains the identification and use of "recreation places." Hunting and sportfishing are two of the major activities associated with recreation places, and important in the identification of such places. In addition, for each alternative, we have displayed how deer habitat relates to the 100 year timber base by WAA and have highlighted ADF&G's "Highest Value Community VCU's" relative to deer habitat capability and the estimated effects of alternatives on deer habitat in the Wildlife Section of Chapter 3 of the EIS.

Comment: Has the harvested private land been removed from the post-1954 habitat capability base? (TCS) You have not adequately modeled the effects of past management (they have been underestimated).

Response: Our inventories do not generally track the condition of non-federal lands and the extent of timber harvest. We have displayed non-federal acres by WAA in the wildlife sections relative to the old growth strategy and deer habitat capability on non-federal lands also in the Wildlife Section of Chapter 3 of the EIS. To be conservative, we did not include habitat capability from non-federal lands when estimating how each alternative will meet current and future human deer demand (see the Communities Section of the Economic and Social Environment in Chapter 3 of the EIS). Using this approach we have somewhat understated future habitat capability from these lands. We did however, use the total deer harvest from all lands (federal and non-federal) to obtain an estimate of total deer "demand." Activities on non-federal lands were considered by the Wildlife Viability Panels in their deliberations on the alternatives. Generally, activities on these lands had a significant influence how the panels rated the likelihood on long-term persistence old-growth associated species.

Comment: The Cleveland Peninsula would be a good place to defer harvest on and do baseline studies of wildlife (old-growth) habitat.

Response: In the alternatives we have considered placing varying amounts of the Cleveland Peninsula in old-growth habitat and other non-development LUD's that maintain the integrity of the old-growth ecosystem. In the preferred alternative (see map package) we have placed over ½ of the Cleveland Peninsula in natural setting LUD's. Baseline studies of wildlife habitats are permitted in these LUD's, however we currently to not have a research program planned specifically for the Cleveland Peninsula (there have been numerous "baseline" studies on wildlife habitat conducted throughout Southeast).

Comment: Equating high- and low-volume timber strata classes directly to high- and low-value wildlife habitat is incorrect. (WLD)

Response: We agree. Volume class is often a poor surrogate for habitat quality, although it is one component used to model habitat and is available in our resource inventory. The habitat needs for wildlife management indicator species (MIS) are discussed in the Wildlife Section of Chapter 3, pages 3-351. By our design, species that tend to be more numerous, at least seasonally, in old-growth forests were selected to be MIS. However many other habitat considerations are used to identify habitat quality for MIS; these include elevation, aspect, vegetation, forest type, successional stage of vegetation development, travel corridors, landscape position (beach, riparian, and estuary), human influences, and other factors. In the comparison of alternatives, MIS are used to track changes in habitat quality in the productive old-growth component of the forest.

Comment: There are several problems with your wildlife models:

- no population objectives
- no verification done
- analysis areas are too large
- too much averaging of effects. (WLS)

Response: In the FEIS we have reduced the use of wildlife habitat models. We have relied more heavily on conservation assessments, expert opinion, and panel assessments. We have used a deer habitat capability model developed over a several-year period; it is a joint effort of biologists from the Forest Service, the U.S. Fish and Wildlife Service, the Alaska Department of Fish and Game and a Deer Panel Evaluation (See responses above). It is based on a compilation of available scientific literature and the knowledge of biologists familiar with the wildlife of Southeast Alaska. It is continuing to be updated and field-verified through interagency reviews; as this process goes on, adjustments are made as needed to improve their predictive usefulness. This model has already been adjusted several times to better reflect known information about habitat relationships on-the-ground. Population objectives are not a part of the modeling process. The models are primarily intended to provide predictive capabilities for comparing

alternatives and estimating area-wide effects, and are being found useful in this regard. The analysis area used is ADF&G's individual wildlife analysis areas; they are the smallest unit of land that ADF&G collects and analyzes data on. WAA's appears to be an appropriate scale for this kind of analysis. The model is run on each 'grid' point in our database and receives an unique habitat suitability index score based upon the collective characteristics of that grid point (volume class, elevation, slope, aspect, beach, etc.).

Comment: The Habitat Capability Models have not been used as designed or intended. The discriminating capabilities of the interagency wildlife models were lost when habitat capabilities were averaged over FORPLAN analysis areas. (SEACC, STATE) The wildlife models have not been fixed or verified through interagency peer review. (SEACC, WLD)

Response: Please see previous response. FORPLAN solutions are now specific to VCU's that have be aggregated into WAA's. We believe that ADF&G's WAA's are sufficient for comparative analysis of alternatives to make programmatic decisions. In tables in the Wildlife Section of Chapter 3 of the EIS we have identified WAA's that contain ADF&G's Highest Value Community Used VCU's, as identified in ADF&G August 26, 1996 letter. However, these VCU's tend to be associated with planned timber sales and may not necessarily represent all "high use" deer hunting areas where timber sales are not planned (e.g., Angoon and Juneau areas).

Comment: The deer habitat capability model is over-conservative, a worst case scenario, based on inconclusive or flawed studies (as is the black bear model), and doesn't reflect reality. Deer habitat capability will vary across the Forest: studies done in Juneau are not applicable forest-wide. (AFA) The deer habitat capability model should be revised to reflect literature (Hanley & Rose, 1987 and Kirchhoff & Schoen, 1987) which shows that neither canopy cover nor wood volume are useful predictors of the effect of overstory or snowpack. Kirchhoff's measurements were taken in 2nd growth timber, not old growth. All volume class 4 or better should count the same. (APC)

Response: See previous responses. The deer habitat capability model is a worst case scenario in that we have assumed that the maximum amount of timber will be harvested over the next 100 years. We do not believe we have used flawed studies. We agree that habitat capability varies from place to place and that a study conducted near Juneau would have to be carefully extrapolated to an area near Ketchikan. Therefore, the deer habitat model is based on studies and information from throughout Southeast Alaska, including the knowledge of local biologists, and data from the Alaska Department of Fish and Game. Snow depth ratings for each value comparison unit (VCU) (roughly a watershed: there are over 900 VCU's for the Tongass) were one of the main indicators of habitat capability used, and these have been adjusted based on field verification studies. Other factors used to estimate habitat capability were elevation, aspect, vegetation (including timber volume class), and the presence of predators. The literature cited in the comment was used, along with dozens of other studies, in developing the model. See also the previous two responses, and the response to the following comment. The limitations of the vegetative typing and model are disclosed in the FEIS.

Comment: The discussion of possible limitations to the Sitka black-tailed deer model (page 3-479) is questioned. Specifically:

- the snow-depth ratings are based on considerable data from throughout Southeast Alaska, and were updated to better reflect actual conditions, not to "correct apparent problems" as is stated
- predation rates of gray wolves are not known for Southeast Alaska, but the model used information from extensive research on deer-wolf relationships in other areas
- the discussion of patch-size relationship limitations is meaningless, since lack of time prevented this relationship being used when the model was used to estimate effects
- although the vegetation typing used for deer studies was independent of that used in Forest Service inventories, all typing used the same variables and definitions so the results are comparable. (WLS)

Response: The FEIS has incorporated these comments. The discussion cited (on page 3-479 of the Supplement) was not intended (or used) as a refutation or criticism of the habitat capability model for deer, but is included as part of the assessment of "methodology and scientific accuracy". As with all effects modeling, our knowledge and methodologies are imperfect, but that does not reduce their usefulness or validity at one particular point in time, as long as the limitations are understood. Questions raised about the models, both in the comments on the Forest Plan and internally, will help focus the efforts to improve such models in the future. Specific to your four points:

- if problems with model outputs relative to snow depth ratings had not surfaced, it may not have been apparent that they weren't reflecting actual conditions. While the ultimate goal is to have a model reflecting reality as closely as possible, it is by correcting apparent problems that this is often achieved;
- predation rates are estimated based on the best available information; nevertheless, knowing these rates for Southeast Alaska will certainly help improve (or validate) the model;
- whether or not patch size was used in the model for this programmatic level of planning, mention of the limitations of such information for Southeast Alaska is not meaningless, just an observation. Patch size is discussed on pages 3-542 and 3-543 of the Supplement;
- the discussion of differences in vegetation typing did not say, or imply, that the results of the model weren't "comparable," but simply says that being able to correlate the two sets of data would enhance model validation.

Comment: The habitat capability models need to be verified before they are used to predict "actual impacts" of the alternatives on wildlife species. Current habitat value information is limited, and too many assumptions are used for the models to be used to make "quantitative assessments." The likelihood of underestimating effects is high. The U.S. Fish and Wildlife Service will continue to work with the Forest Service to refine the models, and wishes to review the validation studies that are done: a schedule showing these studies should be included in the FEIS. (USDI) The wildlife capability/timber effects models need verification before they can be used to make decisions regarding old-growth habitats and minimum viable populations. (RF&G, SEACC)

Response: The use and usefulness of the habitat capability models is discussed in several of the previous responses. As stated in previous responses, we have greatly reduced our use of these models until more evaluation of these models can be completed. Many are currently undergoing field verification, and adjustments are being made to improve their predictability. Peer review will follow this step; some peer review of the concepts has already occurred. In the context of the Forest Plan analysis, to date the models are being used only for comparison of Forest Plan alternatives and projecting potential effects over fairly large areas. The verification (and resulting refinements) done so far indicates a reasonable level of accuracy for programmatic planning purposes. Habitat models are a tool available for estimating the effects of habitat changes on individual wildlife species for alternative comparative purposes.

Comment: (1996) Experience indicates that the information generated from wildlife models will be used literally, although not appropriately, at the project level. For example, if projected habitat conditions minimally meet those described in the model for a certain species after completion of forest projects, then it is assumed that the needs of the species are met and the project will not adversely affect that species. Therefore, the most updated information should be incorporated so that models more accurately define species' needs. The FEIS should use the updated model produced after the deer assessment panel to determine impacts to deer habitat. However, caution should be taken when applying this model, as the data used from hunter surveys may be biased due to inconsistent reporting by the hunters.

Response: Please see previous responses on habitat capability models. Only the deer model, which received extensive reviews, was used in the FEIS to evaluate the relative differences among alternatives. Model outputs taken out the context of alternative comparison should be viewed with extra caution. We agree that hunter surveys should be also used with caution. There is always a chance that model outputs could be misused and that one of the reasons why we invite comment on our analyses.

Comment: (1996) Management Indicator Species that were used in the habitat models to evaluate wildlife species do not include any species dependent on the intertidal or subtidal habitats. The FEIS should include intertidal or subtidal habitat impact analyses.

Response: These areas are not within our jurisdiction, but require an extensive state and federal permitting process and environmental review at the project level for management activities to take place. Potential effects of Log Transfer Facilities (the primary potential effect of Forest Plan implementation on the marine environment) are addressed in the Transportation Section of Chapter 3 of the EIS; the Alaska Timber Task Force Log Transfer Facility Siting Guidelines, used to minimize effects of these facilities on the aquatic environment, are included in the Forest Plan appendices. Aquatic management indicator species are discussed in the Fish Section of the FEIS, and were evaluated using expert opinion from the riparian/fisheries panel to identify issues and concerns. Riparian, Beach, and Estuary Forest-wide Standards & Guides protect habitats directly adjacent to salt water where the developmental LUD's are applied. The river otter and the bald eagle are MIS species that are dependent on marine environments.

We also prepared a conservation assessment for the marbled murrelet, another species that is dependent marine environments. In addition, the marbled murrelet and river otter viability was evaluated in the Murrelet and Other Mammal Panel Assessments, respectively**.**

Comment: (1996) In table 3-87 on page 3-207, none of the management indicator species provide a measure of evaluating the effects of timber operations on the marine environment. Additionally, the models appear to consider only the direct effects of timber harvest, and do not include indirect and cumulative effects of ongoing logging operations. The FEIS should address this need for information, and develop a wildlife model that would include these species for use at the project level.

Response: Please see the previous response. The species panel assessments and conservation assessments considered long-term (100 years) cumulative effects.

Comment: (1996) Page 3-207 of the RSDEIS states that the Management Indicator Species models used in the 1991 SDEIS are not used in this draft for a variety of reasons. These models should be improved and refined to fit the scheme for the Revised Plan, and models should be developed for the species of concern for future analysis. Appropriate habitat capability and/or population viability models are needed for the entire Tongass Forest, not just individual timber sale areas or administrative regions. Project planners need this or some other method to measure the effects of the Standards and Guidelines.

Response: Please see previous responses concerning habitat capability models. It was not practicable to obtain the data necessary to conduct rigorous population viability analyses similar to the one done for the Spotted Owl in Oregon and Washington. Therefore, we opted to convene independent panels of scientific experts to evaluate how well alternatives addressed the old-growth ecosystem, goshawk, wolf, small mammals, marten, marbled murrelet, deer, and other mammals viability and/or other concerns. In addition, we developed interagency conservation assessments for the goshawk, wolf, and murrelet to evaluate species' status, habitat requirements, and how forest management may influence their viability. The panel assessments and the conservation assessments will help us focus research and build and refine habitat capability models in the future.

Comment: (1996) The Supplemental DEIS states that "(a) Forest-wide Standards and Guidelines in the Proposed Forest Plan maintain sufficient deer habitat capability to support at least 13 deer/mile^2 where deer are the principal prey of wolves." The Standards and Guidelines do not maintain sufficient deer habitat capability, rather they provide direction for the land managers to manage for sufficient deer habitat capability. Also, this Standard and Guideline should be flexible enough to allow use of the most current deer habitat information. The Deer Habitat Capability Model is still being updated using new hunter, snow,

and predator information. Local empirical information would provide the best source for management direction.

Response: These Standards & Guidelines have been revised in the FEIS. This specific standard is provided under the Wolf standards and guidelines (in Wildlife Forest-wide Standards & Guidelines in the Forest Plan). The objective is to sustain sufficient deer habitat capability to maintain the current equilibrium of current wolf populations of an estimated 250-300 wolves on Prince of Wales Island and current human deer harvest demand. The wolf conservation assessment estimated the deer population necessary to meet this equilibrium objective as 13 deer per square mile. The guideline also provides for use of the most recent version of the interagency deer habitat capability model and local field data on deer populations.

Comment: (1996) The RSDEIS seems to haphazardly combine the 1991 management indicator analyses with panel evaluations of other species without a satisfactory explanation on why these other species, and whether these species are supposed to represent the diversity of biota occurring on the Forest. Given the rarity of the coastal temperate rain forest ecosystem, its insular setting and endemic biota, and the long-term consequences associated with continued large-scale timber harvest, such limited analyses are not adequate for management of the public's trust resources.

Response: We have provided more information on the MIS. We have also taken a 2-phased approach to addressing wildlife issues - a "coarse" filter approach that considers entire ecosystems - particularly the old growth forest and a "fine" filter approach that specifically considers individual featured species (see discussion in Biodiversity Section of Chapter 3 of the EIS). We have focused our wildlife analysis on the featured species that have been identified as the most likely to be impacted by the alternatives or greatest viability concerns. These were generally those species used by the Interagency Viable Population Committee to craft their habitat conservation strategy, species that have been subject to listing petitions under the Endangered Species Act, and other featured species of concern (deer). We have focused on old growth habitat and on species either have a strong associations with old growth habitats or their populations are sensitive mortality caused by increased human access.

Comment: Estimating habitat capability for cavity dwelling species needs to account for inter-species competition for snags. This requires either decreasing the habitat capability for each species, or increasing the number of snags to manage for. (USDI)

Response: Maintenance of snags is provided for in the Wildlife Forest-wide Standard & Guidelines**.** In areas of the Forest with mostly natural LUD's ... there will be essentially no effect on the natural availability of snags. In areas of the Forest with development, we anticipate that, on average, at least 50% of the 1954 old growth will be retained, and hence at least 50% of the natural availability of snags. The relatively few studies of cavity dwelling management indicator species (red-breasted sapsucker and hairy woodpecker) included counts of actual numbers of birds correlated with the habitat and/or numbers of snags in which they were found. These were done independently of each other or other species present. Presumably the actual numbers present of these species reflect inter-species competition in a natural environment. Also, for the two species mentioned, capability coefficients differed considerably for different habitat types, suggesting that inter-species competition between these two species is not a critical factor.

Comment: The Southeast Alaska river otter subspecies, *Lutra canadensis mira*, was wrongly omitted from the EIS. It is endemic to forested shorelines of the Alexander Archipelago, and consideration of it and its biological uniqueness.

Response: The river otter, *Lutra canadensis*, is one of the management indicator species for the Tongass. Considerations of habitat capability and the estimation of potential effects from Forest Plan alternatives for the river otter should adequately account for the subspecies as well. We have no information indicating that the habitat needs of *Lutra canadensis mira* are any different from the generic river otter. Alternatives

provide varying levels of protection for important otter habitats (esp. riparian and beach fringe) and the preferred alternative provides a beach fringe protection of at least 1,000 feet and substantial riparian habitat protection in areas considered for development.

Comment: (1996) Kittlitz's murrelet needs to be analyzed and considered in the Tongass Forest Plan.

Response: We have not addressed this species explicitly since little concern was expressed for this species relative to other viability issues. The foraging niche is the same as the marbled murrelet (marine waters) and is located outside our jurisdiction. The nesting habitat ... talus rock slopes of immediate post glacial rock faces, does not appear to be impacted by any of the alternatives. In contrast, the marbled murrelet, is closely associated with old-growth forest for nesting, does raise some potential concerns and the alternatives have been thoroughly evaluated their effects on this species.

Comment: Wildlife demand has been understated. The purpose of deer hunting is "to put food on the table." Demand must identify populations needed for successful hunting, not just opportunities to hunt. ADF&G's deer population objectives are better indicators of demand than what has been used. (ABG) Describing demand in terms of hunter days, rather than in terms of numbers of species the public wants produced, understates demand. Also, a "reasonable growth trend" for public demand for each species, based on the best available data, should be used. (SEACC, STATE)

Response: Demand for deer, the most commonly hunted game species, and the Tongass' ability to satisfy that demand over time, is in the FEIS. We do not use hunter days as an estimate of demand. Rather, we use the average annual deer harvest for the past 8 years in each WAA as an estimate of "demand". We agree with your assessment that disclosing another demand trend has merit. In analyzing human population trends from Southeast Alaska census data since 1960, it's clear that there's a consistent upward trend in human population. Further, hunting license statistics indicates there's a pretty constant rate of hunters per capita thus indicating that a continuing rise in the number of hunting licenses is a reasonable hypothesis. In the FEIS we are estimating an increased demand for the deer of 18% for each of the next 2 decades, and 15% each of the next three decades (also see Communities Section of the Economic and Social Environment in Chapter 3 of the EIS).

Comment: No clearly labeled map of Wildlife Analysis Areas (WAA's) has been included; no WAA map is included. (WLS) WAA's are not identified on the subsistence map.

Response: While the Subsistence map for the Supplement did include Wildlife Analysis Areas and their numerical identifiers, no legend identifying these was included. This has been corrected for the map in the FEIS.

Comment: (1996) Table 3-88 on page 3-215, uses volume classes, when these classifications have been changed to "Higher, Medium, and Lower Volumes."

Response: This has been corrected.

Viable Populations

Comment: The analysis of minimum viable populations needs improving. There is no "meaningful" population viability assessment. (WLD) You have presented no scientific basis that the "habitat reserve areas" used are adequately or effectively linked by the "corridors" mentioned. Your approach has not been substantiated or adequately analyzed. (WLS) The viable population analysis does not guarantee well-distributed populations throughout the Tongass. (RF&G, SEACC)

Response: We have improved the analysis in the FEIS. In the 1996 FEIS we have the benefit of a independent peer review of the VPOP strategy; conservation assessments for the goshawk, marbled murrelet, and wolf; and 7 wildlife/old-growth panel conducted by scientists with expert professional knowledge and experience of the species being evaluated. The general process used for the panel assessments is described Chapter 3. We cannot 'guarantee' maintaining viable populations, even in the absence of additional forest management. Rather, we provide risk assessments of the likelihood of maintaining viable populations.

Comment: The Plan (and all alternatives) fails to provide for the long-term sustainability of viable, well-distributed wildlife populations, as required by law (MUSY, NFMA and TTRA). Although viability is defended, there is no plan for maintaining it, and no scientific backing that what is provided will work: how will corridors and protected areas guarantee viability? (TCS) Other problems are: (also TCS)

- basic concepts of conservation biology have not been followed. Last year's old growth retention standard and guideline was dropped, and the recommendations of the Viable Population Committee were rejected.
- there is no definition of "well distributed"
- there is no alternative that explicitly provides for viability (one should be added to the FEIS).

Response: see the previous 4 responses. We believe the Forest Plan and FEIS has provided a multi-scale approach for long-term viable, well-distributed wildlife populations. Of the alternatives considered in the FEIS, the preferred alternative represents an explicit attempt to address general as well as specific issues related to wildlife viability.

- It builds upon a foundation of the VPOP conservation strategy of large and medium reserves and in combination with other alternative specific non-development LUD's provides substantial reserve strategy protection for old growth associated species.
- Small reserves recommended by VPOP have been explicitly mapped (16% of each VCU qualifying for a small reserve) with the Old Growth LUD to provide enhanced landscape connectivity and finer scale watershed-level habitat for less vagile species (e.g. flying squirrels).
- In addition to small HCA's, in the preferred Alternative enhanced landscape connectivity (recommended by VPOP and the PNW Peer Review) is also maintained by the 1,000' Beach and Estuary Standards & Guidelines and the Riparian Forest-wide Standards & Guidelines and non-scheduled old-growth. Collectively these components will retain at least 50% of the 1954 productive old growth within the managed lands between reserves and should significantly contribute to landscape connectivity.
- Ecological "pinchpoints" are specifically provided significant reserve protection on Chichagof Island and central Kuiu Island, and to a lesser extent on Neck Lake on North Prince of Wales Island.
- At least one very large reserve in each ecological province is protected from further development as recommend in the PNW peer Review of the VPOP strategy.
- Collectively, this alternative adequately addresses conservation planning measures that provides a moderately high likelihood of sustaining viable populations of the Alexander Archipelago Wolf and Queen Charlotte Goshawk as identified in the interagency conservation assessments.
- To reduce risk to small island endemics, islands less then 1,000 acres in size have been placed in a non-developmental LUD. Specifically, these islands that have been removed from a developmental LUD are listed as follows: Whitney, East Level, Mosman, Greys, White Cliff, Eagle, Gedney, and Peratrovich.

- The preferred alternative proposes a maximum harvest level of 474,000 acres of old-growth over the entire 100-year planning period. This maximum harvest level represents a 70% reduction of old growth proposed for harvest in the current Tongass Plan (1,700,000 acres, USDA Forest Service 1979).
- Under the preferred alternative, 685 out of the largely forested 740 (92%) VCU's are consistent with an "effective" 300 year rotation at year 2095, a primary consideration of the Goshawk Conservation Assessment that concluded that landscapes under this harvest schedule had a high likelihood of sustaining goshawk habitat.
- This plan is judged by the scientific review to have a low to moderate risk of not maintaining viable wildlife populations over the next 100 years, or conversely has a relatively high likelihood of maintaining viable wildlife populations.
- Finally, we present a 100 year plan here. However it does not commit us follow this trajectory when more information becomes available. Through an adaptive management framework, the plan can be refined or amended to address new information on wildlife viability concerns (see Chapter 5 of the Forest Plan).

Comment: The Interagency Viable Population Committee recommendations for ensuring well-distributed viable populations should be adopted to insure viability, and to prevent species from being listed under the Endangered Species Act. (SEACC, STATE) The interagency recommendations should be followed until more research can be completed on how much old growth is needed to maintain viable populations. (USDI) A long-term strategy for keeping wildlife populations viable and well-distributed is still needed: the Viable Population Committee's report should have been followed. (WLS)

Response: See the previous response; we have incorporated the VPOP 1993 conservation strategy recommendations into the alternatives to varying degrees. In the preferred alternative we have fully adopted the VPOP recommended HCA's strategy. In addition, we have also incorporated considerations from three conservation assessments (goshawk, murrelet, and wolf) and the PNW peer review of the VPOP strategy.

Comment: The viable population analysis and treatment is legally inadequate, for the following reasons:

- the effects of vegetation changes on management indicator species (MIS) have not been analyzed
- MIS population trends are not discussed
- the additional MIS recommended by the Viable Population Committee have not been considered, with no explanation of why. (SCLD)

Response: See the previous two responses. In addition, we have provided more information on MIS in the FEIS.

We have taken a 2-phased approach to addressing wildlife issues - a "coarse" filter approach that considers entire ecosystems - particularly the old growth forest and a "fine" filter approach that specifically considers individual featured species (see discussion in Biodiversity Section of Chapter 3 of the EIS). We have focused our wildlife analysis on the featured species that have been identified as the most likely to be impacted by the alternatives or greatest viability concerns. These were generally those species used by the Interagency Viable Population Committee to craft their habitat conservation strategy, species that have been subject to listing petitions under the Endangered Species Act, and other featured species of concern (deer). We have focused on old growth habitat and on species either have a strong associations with old growth habitats or their populations are sensitive mortality caused by increased human access.

MIS population trends will probably never be precisely known for most species, although for some species there is considerable data on wildlife numbers either in the form of actual counts or extrapolated estimates. For instance, we know that approximately 1,330 brown bear (about one per square mile) inhabit the National Monument portion of Admiralty Island, and that approximately 6,000 brown bear inhabit the Tongass National Forest today. Scientific research, field counts, and hunting data are all sources of this information. However, since actual counts for most species are not available, and since populations tend to fluctuate

year-to-year or cyclically, most of our wildlife modeling and population estimates are based on habitat capability rather than actual numbers. This approach (and the use of management indicator species) is discussed in the "Wildlife" section of Chapter 3 of the EIS. Continuing work to field-validate these models helps to refine them. Also, since we know where and roughly how much timber harvest has historically occurred on the Tongass, and making the assumption that habitat changes are largely the result of timber harvest, we can draw some reasonable estimates of what the likely carrying capacities were prior to any large-scale habitat changes (using the year 1954 as the benchmark). We can also estimate trends from 1954 to the present, and can estimate further changes to habitat capability (and thus have an indicator of carrying capacity trends) in the future, based on Forest Plan alternatives.

Comment: The Viable Population Committee's recommendations have been "unscientifically" rejected: the scientific literature they used was ignored, and no alternative analysis was done comparing them to the selected method. This violates NEPA and NFMA, and gives no choice for the decision maker. (SCLD) Attempting to refute recommendations made by an interagency committee in a planning document is not appropriate. (WLS)

Response: We have not done as these comments suggest. The Interagency Viable Population Committee's original habitat conservation strategy has been incorporated, almost precisely as envisioned, in the final preferred alternative. Also see the previous three responses.

Comment: The definition of "well distributed" needs revising. Use the Interagency Committee's definition. "Species located in the areas designated for 'Development' should not be allowed to be totally extirpated from whole islands and large land masses." (USDI)

Response: The NFMA implementing regulations 36 CFR 219.19 require assessing abundance and distribution such that adequate habitat is present in the "planning area," which is the Tongass. "Well distributed" is discussed on page the Wildlife section of Chapter 3 of the FEIS and varies by species' life history and dispersal capability. By addressing individual species and the entire old growth ecosystem at a variety of scales (forest -wide, provinces, WAA's, VCU's, watersheds, small islands), we believe we have satisfactorily addressed the well-distributed issue. The Threatened, Endangered, and Sensitive Species Forest-wide Standards & Guidelines under the sensitive species section provides direction to " maintain habitat to support well-distributed viable populations of sensitive species throughout the recent range of the species by avoiding or minimizing impacts to species whose viability has been identified as a concern."

Comment: (1996) The Forest Service obligation under NFMA to ensure viability will not be met because of modification of the Forest's old-growth habitat. Statements on page 3-255 of the RSDEIS and information provided in the Old-Growth Assessment Panel Summary support this concern. The FS should be conservative in their timber harvest activities while aspects of adaptive management are incorporated, and time and resources are invested to carry out goals of the Monitoring and Evaluation Plan. The FS can implement a plan that can sustain a reasonable harvest level and yet be responsive to long-term fish, wildlife, and associated societal needs and requirements under an integrated ecosystem approach.

Response: See previous responses regarding viability. We believe the Revised Plan provides a multi-scale approach for maintaining a moderately high likelihood of sustaining long-term viable, well-distributed wildlife populations. This is achieved primarily through the allocation of lands to natural setting LUD's and secondarily through the provisions of specific Standards and Guidelines for individual species. The Forest Plan provides a reasonable timber harvest level balanced with providing for a moderately high likelihood of sustaining viable populations.

Comment: (1996) The Habitat Conservation Area's are based on flawed science and should either be reduced or eliminated. Findings were used from areas dissimilar to the Tongass and were therefore not valid.

Response: This concept/strategy has been thoroughly reviewed by conservation biologists (e.g., peer review of the Interagency Viable Populations Committee report). They agree that we have used the best available information and appropriately used HCA's. The various alternatives considered no reserves, an extended rotation, and both together. A reserve-based alternative was judged to provide the necessary balance to appropriately address all major issues.

Comment: (1996) Management of the Tongass National Forest should be based on the best available scientific information and should incorporate the concepts presented in the January 1995, Report to Congress, Anadromous Fish Habitat Assessment (AFHA), the Interagency Viable Populations (VPOP) Committees' May 1993 Strategy, the VPOP Committee's May 1994, Response to the Peer Review, the Alexander Archipelago Wolf, Queen Charlotte Goshawk, and Marbled Murrelet Conservation Assessments, and the Alaska Department of Fish and Game (ADF&G) brown bear and marten studies results. The findings and recommendations contained in these documents represent the best scientifically defensible information for maintaining viable populations.

Response: We have fully considered the findings and recommendations in these documents and have incorporated the findings of these documents to degree judged necessary to develop an adequate, reasonable wildlife viability strategy for the Tongass National Forest**.**

Comment: (1996) The Forest Supervisors' letter states that the Preferred Alternative incorporates a wildlife habitat strategy for maintaining well-distributed, viable wildlife populations similar to what was proposed in 1994 that was an important factor in the decision by the U.S. Fish and Wildlife Service not to list the Alexander Archipelago wolf and the Queen Charlotte goshawk under the Endangered Species Act. This implies that the Preferred Alternative incorporates habitat management practices that the Service agreed would maintain viable populations of species for the long-term, i.e., 10 to 15 years, the period of time for which the Revised TLMP is intended to guide the management of the Forest. The U.S. Fish and Wildlife Service did not object to the proposed implementation of the (never implemented) 1994 interim habitat management guidelines as an interim measure, with the understanding that the revised TLMP would contain the results of the goshawk conservation assessment. However, a long-term ecosystem management strategy incorporating the goshawk and wolf conservation assessment information should be developed and included in the Revised TLMP rather than incorporation of the 1994 interim guidelines.

Response: These assessments have been addressed and incorporated into the preferred alternative to the degree necessary to have an adequate, reasonable strategy for these species.

Comment: (1996) Efforts should be made to maintain management options by conserving remaining large blocks of contiguous high volume old-growth to provide for biological and ecological viability of plant and animal species, and to minimize or mitigate the adverse effects of increased fragmentation, as recommended by the Pacific Northwest Experiment Station.

Response: The FEIS preferred alternative adopts this strategy by maintaining at least one very large reserve of natural setting LUD's in each ecological province. See previous viability responses.

Comment: (1996) The Tongass National Forest has a healthy ecosystem. There is no need to establish HCA's that will adversely affect human populations by their restrictions.

Response: The FEIS looks out at what could happen with 100-150 years of land disturbance under full implementation of the Plan. What may be a healthy ecosystem now may not be healthy under continued levels of development for the next century. The opinions of the scientists that evaluated the alternatives did not agree that HCA's are not needed over the long-term. Furthermore, the range of alternatives examined other strategies such as extended rotations to address viability of old-growth associated species and in many cases these strategies were considered lower risk by scientific experts. However, we believe the FEIS preferred alternative balances this risk with the need to provide for other multiple uses of the forest.

Comment: (1996) The current flexibility of old-growth reserve locations, size, shape, and composition could compromise the fish and wildlife productivity of large, medium, and small old-growth forest reserves and wildlife travel corridors. Forest-wide landscape approaches that incorporate reserve components as defined in the VPOP Strategy with the Peer Review suggested modifications, should be included in all project alternatives.

Response: See previous responses. The large, medium and small HCA's are described and mapped in the FEIS preferred alternative for the entire Forest and will be part of all project-level planning alternatives.

Comment: (1996) The RSDEIS does not adequately describe the proposed reserve strategy. The FEIS should describe the proposed reserve strategy in more detail, with maps included.

Response: The selected reserve strategy is displayed on the map for the preferred alternative. Lands within Wilderness and National Monument, and all other LUD's that generally prohibit commercial timber harvest are considered as reserves and contribute to a Forest-wide old-growth conservation strategy. The strategy is also described in the Chapter 3 of the FEIS in the Wildlife section under viability.

Threatened, Endangered and Sensitive Species (see also Standards & Guidelines)

Comment: Biological assessments for T & E species were not included in Appendix L as stated. (SEACC)

Response: We apologize for this unintended omission. Biological assessments are included in Appendix J of the FEIS.

Comment: The definition for "Category 2" candidate species is incorrect. The definition should read "there is some evidence to support it [to support proposed rules], but further biological research and field study usually will be necessary to ascertain the status of the taxa in Category 2." (USDI)

Response: The USFWS discontinued the use of this designation and is discussed in the Threatened, Endangered & Sensitive section of the FEIS.

Comment: Further study, such as status surveys, is recommended for all Candidate species occurring on the Tongass: such studies must be completed before habitat capabilities can be determined and viable populations maintained. (USDI)

Response: See response above regarding the USFWS discontinuation of the Candidate Category 2 terminology. Studies and information needs are an explicit component of sensitive species management and are provided for under Threatened, Endangered & Sensitive Forest-wide Standards & Guidelines. For several species (e.g. many MIS, goshawk, wolf, and deer) enough is known to make preliminary estimates of habitat reductions and to identify viability concerns, if any. Interagency review and study is ongoing, and will help identify any special management needs for these species. As stated in the Threatened, Endangered, and Sensitive Species Forest-wide Standards & Guidelines, the FS, ADF&G, and the USFWS

have entered into an Memorandum of Understanding (MOU) to promote interagency cooperation in the conservation of species tending toward listing under Federal or State Endangered Species Acts. This MOU will promote these studies that you advocate.

Comment: (1996) The RSDEIS states that the environmental consequences for former Category 2 and Sensitive species were discussed in the 1991 Supplemental DEIS and are still considered accurate with improvements to the Standards and Guidelines. However, the RSDEIS does not consider the cumulative effects of all forest uses on these species, nor does it provide sufficient analytical information or a risk assessment for the preferred alternative.

Response: The level of analysis given each species is commensurate with the information base and the perceived viability risk associated with that species. Species with known viability risks or those whose life histories were important in designing the size and spacing of HCA's, had complete Panel assessments by species experts. These viability panels evaluated all risks that they were concerned with.

Comment: (1996) The FS should include a cumulative effects analysis on the fish and wildlife species mentioned in the Threatened, Endangered and Sensitive Species section of the RSDEIS before the plan is approved, and each of the alternatives should be given equally comprehensive analyses. The FS should use the information and management recommendations contained in the Interagency Conservation Assessments for the Alexander Archipelago Wolf, Queen Charlotte Goshawk, and Marbled Murrelet as the best available scientific information about those species.

Response: Information contained in these interagency assessments has been fully considered in estimating the effects of alternatives (See Wildlife Environmental Consequences in Chapter 3 of the FEIS). For example, the effects analysis for wolves considered the varying sizes of reserves planned in each alternative relative to the considerations contained in the wolf assessment.

Comment: (1996) In the fourth paragraph of page 3-128 (Revised Supplement), the following addition is needed after the fifth sentence: "In part, the decisions were based on expectations of the USFS employing species specific conservation strategies into the revised plan. The Service encourages USFS adoption of conservation reserve strategies in the Revised Forest Plan to avoid compromising the available habitat necessary to maintain population viability."

Response: This statement has been incorporated.

Comment: (1996) Since the Alaska Heritage Program is in its infancy compared to programs in most other states, no lists or global rankings exist for nonvascular plants or invertebrates. Certain classes within these two taxonomic groupings are often highly speciated, and may serve as first order indicators of environmental degradation. The FS should identify species within these taxa for further planning consideration and monitoring in the FEIS.

Response: The Threatened, Endangered, and Sensitive Species Forest-wide Standards & Guidelines provide direction to support monitoring, research, and inventory work for threatened, endangered, proposed, and sensitive species. The region recently published a paper on the Lichens of southeast Alaska. In addition, Threatened, Endangered & Sensitive Forest-wide Standards & Guidelines also provide for monitoring and suggests revisions of the Regional Sensitive Species list and all sources of available technical information necessary to assess species population status relative to viability concerns will be considered.

Comment: (1996) The second column of table 3-47 (Revised Supplement) identifies Fish and Wildlife Service Species of Special Concern. The Service no longer maintains lists of species being considered for listing such as those formerly designated Species of Concern or Category 2 Candidate Species.

Response: See responses above. This table has been corrected.

Comment The spotted frog (*Rana pretiosa*) is a Category 2 species. A biological assessment must be completed, and the species should be included in all sections referring to Candidate and Sensitive species. (USDI)

Response: The Category 2 designation has been dropped by the USFWS. A Biological Assessment is only required pursuant to Section 7 of the Endangered Species Act for listed or proposed Threatened and Endangered species. Biological Assessments for currently listed species are included in Appendix J.

Comment: The marbled murrelet should be a sensitive species. (GP)

Response: The marbled murrelet will be considered for the sensitive species list during periodic interagency reviews to update the list pursuant to direction in the Threatened, Endangered and Sensitive Species Forest-wide Standards and Guidelines, and Regional and National Forest Service policy.

Comment: Wilderness, LUD II, TTRA stream buffers, and the Beach Fringe and Old Growth LUD's should easily accommodate marbled murrelet and northern goshawk requirements: there's no need for sensitive species status (or any other special management). (KPC)

Response: The goshawk is on the Regional Foresters Sensitive Species list. The murrelet is not on the sensitive species list. We agree that the non-developmental LUD's listed provide important habitats for these species; sensitive species designation provides a recognition of a viability concern for planning and conservation purposes. In addition, both species receive special management direction through individually tailored Standards & Guidelines. When and if viability concerns for the goshawk have been addressed, the specie may be removed from the sensitive species list.

Comment: (1996) The RSDEIS states that the strength of the association between murrelet nesting habitat and highly productive old-growth forest has not been established, and uses the fact that two of the four murrelet nests found in Southeast Alaska had been on the ground to substantiate that statement. All four nests were in productive old-growth habitat and even though two ground nests have been discovered in Southeast Alaska, there is a strong association between several old growth forest attributes and marbled murrelet nesting, based on studies conducted elsewhere. (See USDI letter for more specifics.)

Response: We agree that studies conducted elsewhere indicate that there is a strong association between old-growth forest and marbled murrelet nesting habitat.

Comment: We suggest the Townsend's warbler be added to the Sensitive species list to represent neotropical migrants, whose rapid declines are of considerable concern. (USDI)

Response: See responses above. Revision of the Regional Sensitive Species list is not accomplished in forest plans. National Forest Service policy provides for a regional process to systematically examine and revise, where necessary, the Regional Forester's Sensitive Species list. The Townsend's warbler will be given consideration during the next list revision.

Comment: (1996) Based on the best available scientific information as compiled in the Goshawk Conservation Assessment, a timber harvest rotation of at least 300 years is required to regain old-growth forest habitat characteristics in harvest units. If timber harvest rotations of less than 300 years are implemented, there will be a corresponding increased risk to species dependent on such habitats. Furthermore, if a system of old-growth reserves is implemented as part of conservation measures intended to compensate for harvest rotations of less than 300 years, the number and size of such reserves containing desired habitats and accompanying habitat connectivity should be increased from that contained in the preferred alternative to adequately diminish the risk to affected species.

Response: This consideration is fully discussed in the FEIS (see the Wildlife Section). See previous responses on how the preferred alternative meets viability concerns/requirements and see the following response.

Comment: (1996) The revision process has not incorporated an adequate wildlife strategy for maintaining a well-distributed, viable population of goshawks over the next 100 years. Viability of such a long-lived species cannot be considered for only a 10-15 year period. This is not a biologically valid approach and is not supported by either the Conservation Assessment for Northern Goshawk or the panel of goshawk experts convened by the FS. The FS should adopt a conservative comprehensive landscape strategy that would not further compromise the available habitat base for the Queen Charlotte goshawk in Southeast Alaska by retaining existing large blocks of mature forest needed to assure a viable goshawk population across the Tongass National Forest.

Response: See the previous responses on how the preferred alternative addresses viability considerations in general. and specifically the goshawk relative to the interagency conservation assessment. Furthermore, the panel assessments explicitly rated alternatives as to their likelihood of sustaining viable populations in 100 years. They did not examine 10 year time frames. The FEIS Wildlife Section also discusses that longer time frames are necessary to assess viability.

Comment: (1996) The Forest Supervisors' letter states that the Preferred Alternative would reduce old-growth on the forest from 91 to 73 percent. The old-growth is not stratified here, however, the actual loss of critical goshawk habitat could be much higher, especially if goshawk populations are clumped. If the proposed habitat reserves are not implemented in a timely or adequate manner, the risk for reducing goshawk numbers and distribution would increase.

Response: See previous responses. The revised preferred alternative now maintains 84% of the 1954 old-growth at year 2095, assuming maximum timber harvest levels. Some of the best habitats for goshawks are likely to be found in productive old-growth within the beach, riparian, and old-growth reserves which are not available for timber harvest and were identified as very important habitat components in the interagency goshawk conservation assessment. Another factor to keep in mind is that the 10 year risk to goshawk habitat is much lower than the 100 year risk. If new information on goshawk viability becomes available over the next decade, the Forest Plan can be amended or revised to reduce risk to goshawks for the following 90 years. One of the key components of the preferred alternative is a strategy to preserve options for the future through the maintenance of a system of reserves, including at least one large reserve in each ecological province.

Comment: (1996) The RSDEIS stated that goshawks appear to prefer productive old-growth forest at low elevations and relatively gentle slopes, and that most timber harvest occurs in these conditions, causing elevated concerns among the panelists. Yet, the RSDEIS only discusses the importance of riparian, beach, and estuary features to quality goshawk habitat and asserts that these features enhance the confidence that an alternative would maintain suitable habitat to support well-distributed goshawk populations. The FEIS should clearly express the importance of maintaining or protecting productive old growth forest at low

elevations and relatively gentle slopes, i.e., preferred goshawk habitat. Important goshawk habitat occurs outside riparian, beach, and estuary areas as well.

Response: Please see previous response. These habitat components are further discussed on in the Wildlife Section of the FEIS. The preferred alternative is largely consistent with an "effective" 300 year rotation. The long "effective" rotation coupled with riparian, beach, estuary, and old-growth reserves maintain enough habitat to provide a low level of risk to not maintaining a well distributed goshawk population. Over 55% of the 1954 productive old growth will be retained in the areas subject to timber harvest by 2095, including beach and riparian habitats, that in addition to established reserves provides a moderately high likelihood of maintaining viable goshawk populations. Also many of the natural setting (non-developed) LUD's, such as Wilderness and Legislated LUD II, always incorporate all landscape positions, including low elevation and low gradient slopes.

Comment: (1996) There is no evidence that the two-aged timber harvest and stand management system, which would leave 10-20 percent of trees within some timber units, would be sufficient to provide adequate foraging or nesting habitat for goshawks in those units. The assumption is that all timber units represent direct and permanent loss of habitat for goshawks in the revised plan. Surveys by the U.S. Fish and Wildlife Service suggest that there is not a reserve of goshawks outside of timber sale areas to be able to replace decreased goshawk productivity from habitat loss within timber sale areas.

Response: We did not suggest that recently harvested two-aged units would be good nesting habitat for goshawks. However, it is likely that as a two-aged stands matures, it would provide more suitable nest sites than a stand that has been clear-cut. In contrast to an even-aged harvest (clear-cut), two-aged timber harvest increases the biological legacy and structural diversity of the stand, which benefits most prey species. Two-aged management is an attempt to mimic natural stand replacement events and retain some old-growth characteristics thereby mitigating some of the lost goshawk productivity.

Comment: (1996) Protecting individual goshawk nests with an area of only 100 acres does not represent a comprehensive conservation strategy that would provide habitat required to maintain a well-distributed viable goshawk population. The RSDEIS stated that this limited protection is complementary to a "broader landscape strategy." However, this "strategy" is not included in the Standards and Guidelines. If an alternative is selected that does not include the management practices recommended in the goshawk conservation assessment, then the only protection afforded this species would be limited to nest-by-nest protection.

Response: See previous response on how the preferred alternative addresses goshawk viability concerns. The old growth conservation strategy is an implicit combination of all non-development LUD's across the forest that maintain the integrity of the old growth ecosystem. The preferred alternative adopts a landscape approach to goshawk viability and is consistent with the management considerations in the Goshawk Conservation Assessment

Comment: (1996) The RSDEIS states that maintaining or regenerating conifer stands in mid- to late-seral stand structure from 100 to 200 years was believed to supply adequate habitat for prey production and goshawk foraging opportunities, but it did not state how many acres of mid- to late-seral stands should be maintained. The FEIS should discuss how much acreage of mid- and late-seral stands should be maintained and what number of years was viewed as favorable for an extended rotation by the panelists.

Response: Roughly, under a 300 year rotation, about 1/3 of the stands would be 100-200 years.

Comment: (1996) The concept of reserves was thought by goshawk panelists to be of less importance than having a landscape design which incorporates an uneven-aged management prescription forest-wide. Yet,

the Preferred Alternative incorporates a limited amount of uneven-aged (two-aged) management, with modified old-growth reserves. The FEIS should explain further why the panelists' opinions were not used. Despite the experts opinions, the selected alternative includes a limited amount of uneven-aged silvicultural practices and does not include a 300 year rotation that would maintain a goshawk population.

Response: The Revised Final preferred alternative has increased the amount of reserves and has significantly reduced the amount of two-aged management projected to be applied. Due to the large extent of reserves proposed in the preferred alternative, it was deemed that a reduction in the amount of two-aged management posed a low risk to goshawk viability. Reducing the amount of two-aged management and replacing it with even-aged management also reduces the overall projected acreage subject to timber harvest. Also see previous responses relative to how the preferred addresses elements within the interagency goshawk conservation strategy.

Comment: (1996) The FEIS should fully address what "large and medium habitat reserves as proposed" were considered too small to sustain more than one or two pairs of goshawks. The final document should clarify whether it is referring to the VPOP Committee-sized HCA's, or the reserves proposed in the RSDEIS. Without knowing the size of the reserves considered in this section, it is difficult to assess how the panelists considered roads not an "adverse element" to goshawk habitat suitability.

Response: The panelists were referring to the 40,000 and 10,000 acre reserves designed in the original VPOP strategy. This is clarified in the FEIS. This conclusion was drawn by panelists when presented with information that goshawk use areas averaged 10,000 acres each.

Comment: (1996) The RSDEIS states that nearly 40 percent of the productive old-growth used by goshawks is unsuitable for timber harvest. It does not state what type of unsuitable timber land this is (i.e., wilderness, stream buffers, beach buffers, etc.). The FEIS should state where this 40 percent unsuitable productive old-growth is located.

Response: This approximate figure is obtained from the Interagency Goshawk Conservation Assessment and includes unsuitable lands within timber development LUD's (excluding Wilderness, LUD II, etc.)

Effects from Activities

Comment: The relationship between wildlife habitat capability, future hunting capacity, and subsistence demand needs to be made clear. Replace the table on page 3-622 with one showing the effects by Wildlife Analysis Area for decades 1, 2, 5 and 50. (TCS)

Response: We believe that this is now clear in the FEIS. We have displayed habitat capability in relation to anticipated subsistence demand for years 1995, 2005, and 2095 by WAA for each community in the Communities part of the Economic and Social Environment section of Chapter 3 of the EIS.

Comment: Not being able to address habitat fragmentation on a spatial basis places the EIS in violation of law and regulation (such as 36 CFR 219.3, 219.12, 219.19, 219.26, and 219.27(g), 40 CFR 1502.14(f), 1502.16(h), 1502.24, 1508.7 and 1508.8). (SEACC)

Response: The references cited in the comment are to several sections of regulations under the National Forest Management Act and the National Environmental Policy Act. Most contain general direction about monitoring and/or analyzing environmental consequences. One addresses viability, and two diversity. None give specific requirements for addressing habitat fragmentation. The other side of the comment is, have we been able to address fragmentation "on a spatial basis"?

The comment probably is referring to the FORPLAN linear programming model used to project timber harvest over time by alternative and help evaluate harvest and road consequences in terms of vegetation changes. The model is limited in being unable to precisely locate individual harvests over time, and for good reason; this programmatic Plan does not make those site-specific decisions. But the FORPLAN model can predict the amount of change within a discrete area over time, and this is done, for wildlife, by each of ADF&G's Wildlife Analysis Areas and other, larger, areas such as Ecological Provinces. It may be important to note that the smallest analysis area that ADF&G uses for data gathering is the Wildlife Analysis Area. The effects of fragmentation on the old-growth resource and wildlife are discussed in the old-growth and biodiversity sections of the Chapter 3 of the FEIS (see Biodiversity Section).

Comment: (1996) Although the FS included a forest fragmentation analysis, it is incomplete without including past, present, and future effects of roads. The RSDEIS does not adequately address direct and cumulative impacts each alternative would have on species potentially affected by further fragmentation caused by roads. The FS has built an extensive road system into large tracts of old-growth forest blocks throughout the Tongass in order to harvest and transport logs to transfer facilities. The FS should begin analysis of the adverse impacts that the immense existing and planned road system (permanent and temporary) has on forest fragmentation and the old-growth dependent breeding bird populations.

Response: Other than the direct loss of habitat to forest nesters, we are not aware of direct impacts fragmentation of road corridors on forest breeding bird populations in southeast Alaska. However, It is possible that road corridors could increase nest predation. We have displayed the amount old-growth harvested in each alternative. This serves as an index to amount of roads corridors associated with each alternative. See previous response and the Management Indicator Species part of the Wildlife section of FEIS Chapter 3. The Transportation Forest-wide Standards and Guidelines provide direction to consider the potential impacts of road corridors to wildlife.

Comment: (1996) Theoretically, as more forest is cut and roads built, more old-growth edges would be developed that are exposed to wind, snow accumulation, and radiant energy, thus changing the forest micro-environment (flora and fauna) that interior forest dependent species (e.g., brown creeper) require.

Response: We agree that road corridors can change micro-environments. To our knowledge the brown creeper is not an interior forest dependent species in southeast Alaska, but one study has associated this species with "high" volume stands. Old-growth edges tend to "seal" after about 20 years which partially restores the interior forest micro-environment.

Comment: Neither the FORPLAN model, nor the habitat capability models, reflect known spatial habitat needs or habitat quality in the determination of habitat values. The related effects analysis (for habitat, diversity and viability) is thus inadequate. (WLD)

Response: Please see previous responses. The panels and species assessments incorporated the spatial needs of species into the evaluation of alternatives. In addition, spatial relationships are described by landscape position, such as beach and riparian, and are incorporated into many wildlife models. Beyond landscape position, our understanding of "spatial habitat needs" is limited if this equates to the effects of patch size, fragmentation, of "appropriate juxtaposition" of habitat features across the landscape.

Comment: The point of declining habitat capability is that habitats modified by management activities either no longer provide habitat or are reduced in quality. This must be disclosed. (WLS) Wildlife are threatened by both the removal of habitat and access to habitat.

Response: We agree with both these comments. This concept is central to our analysis, and is disclosed in many places in the EIS (Chapter 3: sections on "Biological Diversity," Old-growth Forests," "Wildlife,"

etc.). Access to habitat is discussed for those wildlife species where hunting or human presence is a factor (deer, marten, black and brown bear, others: see “Wildlife” section, and also in the “Subsistence” section).

Comment: The effects of mining and recreation on wildlife have not been evaluated. (WLS) What will be the effects of the proposed roads (thousands of miles) on wildlife?

Response: The effects of roads and road use are discussed for those management indicator species (MIS) where these effects are of concern or have been identified and the wolf, marten, and brown bear panel assessments. Marten, wolf, brown bear and black bear are the species for which road effects are projected and discussed. Effects from mining to wildlife have not been estimated for the Forest Plan revision. These are normally localized, and can be better analyzed at the project level. The Forest-wide standards and guidelines, and additional direction within the Minerals LUD, provide for minimizing and/or mitigating effects to wildlife from mineral developments.

Comment: Your analysis needs to be more site-specific, and use smaller analysis areas by which to display effects. Smaller areas than geozones are needed. The DEIS doesn’t contain an understandable display of wildlife impacts: need displays by smaller areas (such as watershed aggregates) for hunters to relate to them. (TCS)

Response: Most of these comments pertain to the DEIS published in 1990. Geozones are no longer used as a geographic scale for analysis. Changes were made in the FEIS to provide a more appropriate level of analysis for many resources, within our capabilities. For the wildlife and subsistence resources, much of the analysis was done by each of 192 Wildlife Analysis Areas (the unit used by the Alaska Department of Fish and Game (ADF&G)); for diversity and old-growth, the analysis was done by each of 21 Ecological Provinces. Small scale landscapes such as Value Comparison Units (VCU’s from the 1979 TLMP) were used for assessing goshawk viability. True site-specific analysis can only be done at the project level, where the actual locations and alternative sets of management activities are evaluated.

Comment: The two-step planning process will not meet cumulative effects requirements unless more detailed, site-specific analysis of wildlife effects is presented, including 10-year harvest location data. (RF&G, SEACC) The planned timber harvests must be depicted in more detail, and the short- and long-term effects on fish and wildlife and their users reported more clearly. (SEACC, STATE)

Response: A separate site-specific environmental analysis is done for each project (the second step in the two-step planning process). The cumulative effects of the project and any past, present or reasonably foreseeable future projects (in the same area) are also analyzed for the project. The Forest Plan does not authorize specific projects, and therefore, does not provide nor need to provide the site-specific information for such projects; therefore, the cumulative effects analysis is limited to the estimated effects of the alternatives as a whole. Where effects can be estimated by smaller land units, such as timber harvest by Wildlife Analysis Area, such information is used. The cumulative effects are primarily based on the assumption that the maximum amount of activity allowed under an alternative, or for a particular area, will in fact occur, and these amounts of activities (timber harvesting, road building) are accumulated over time to estimate long-term cumulative effects. Cumulative effects (generally over at least 100 years of full plan implementation) on wildlife habitat and species (including viability), and fish, have been analyzed in this manner. Some of these effects have also been displayed by community. Actual determination of alternative ways of implementing projects is appropriately left to the second step in the planning process.

Comment: Cumulative wildlife effects should be described in terms of both changes in long-term habitat capabilities, and changes to population levels in any one year. There is too much annual variation to use population level as a stand-alone basis for analyzing long-term effects. (SEACC, STATE)

Response: Very few of our analyses discuss population responses, rather changes in habitat capability. The annual variability of wildlife populations stated in the comment is the reason we have not attempted to estimate population levels "in any one year" or overall. Cumulative wildlife effects are almost always stated in terms of changes to long-term (e.g. 100 years) habitat capability, abundance, or quality, a subject which has been discussed in many previous responses.

Comment: The Supplement understates the potential adverse effects on sport and subsistence hunters. (SEA, SEACC, SNSC, STATE) Proposed timber cutting will "squeeze out recreational hunting." (TRS) What about the effects on non-subsistence hunters if subsistence priorities kick in due to future shortages? (TCS) The adverse effects to sport hunters that will result from reductions in habitat have not been adequately addressed or disclosed. These include:

- effects on deer and brown bear in key areas
- impacts to non-rural (i.e., non-subsistence) residents. (ABG)

"The effects on wildlife and their users under all alternatives are understated" since the only objective is to maintain minimum viable populations ("which by definition are not healthy enough populations to support hunting"). (RF&G, SEACC)

Response: The relative ability of each alternative to meet hunter demand during the next 100 years is described in the Communities Section of the Economic and Social Environment in Chapter 3 of the EIS. For this analysis, subsistence and non-subsistence hunting are broken out, and non-subsistence hunters can see, for each area, whether their demands are likely to be met, or where they may be "squeezed out." The objective in these tables is not to just maintain viable populations. These tables show hunting considerably beyond meeting viable populations. We did not quantitatively examine capability relative to brown bear due to limitations in the models as discussed earlier.

Comment: The Supplement understates the potential adverse effects on commercial guides and outfitters. (SEA, SEACC, SNSC, STATE) The adverse effects to outfitters and guides have not been adequately addressed or disclosed. (ABG) The negative effects on the wildlife-based economic sector (guides, charter boat operators, etc.), including wildlife viewing, are understated and barely acknowledged. This must be corrected. Big game guides and outfitters are not acknowledged as an "equal resource" in the Plan, nor have potential adverse effects on them been adequately addressed.

Response: The commercial guiding and outfitting "industry" has not been separately analyzed. We do not have adequate information on the make-up of the industry, areas of use, and so on, to be able to do so. However, as a component of recreation and hunting demand and use, outfitters and guides are indirectly covered. For instance, the following wildlife goal (in Chapter 2 of the Final Revised Plan) will help provide for commercial outfitting and guiding: "Maintain habitat capability sufficient to produce wildlife populations that support the use of wildlife resources for sport, subsistence, and recreational activities."

Comment: (1996) On page 3-208, the effects of timber harvest on deer are significantly understated. The FEIS should state that clear-cut logging results in high-magnitude, low-frequency disturbance of forests, just the opposite of what naturally occurs. After the initial years following logging there is a rapid increase in deer forage due to the large amount of light penetration created by open stand conditions. However, after the initial 20-30 years, there is a 100-150 year period in which conifers overtake shrubs and the overstory canopy becomes so dense that little light reaches the forest floor. Understory vegetation (deer forage) is shaded out, often completely. During this even-aged stage, forest stands are of little value to wildlife and are very low in biodiversity. Old-growth conditions characterized by a multi-layered canopy, diversity in structure and composition usually do not appear for at least 250 years in Southeast Alaska. This section of the RSDEIS should be revised to include this information.

Response: These concepts have been reinforced in the FEIS (see the Wildlife section of Chapter 3).

Comment: (1996) The last paragraph of page 3-222 in the RSDEIS states that for the Wildlife Analysis Areas (WAA) in which the average deer harvest was 20 percent or higher than the carrying capacity, no more timber harvesting would be permitted. Table 3-89 also shows estimated changes from existing (1995) habitat capability after each alternative. This analysis does not consider the timber sales that are being released before this Revised Plan can be implemented (i.e. , Northeast Baranof). As a result of on-going timber sales, the habitat base will be less by the time the Revised Plan is implemented than what is shown in this table for 1995. The FEIS should include these sales in this analysis or defer harvest from the units recently planned for harvest located in these WAA's.

Response: The above guideline referred to has been modified. (See the Wildlife Forest-wide Standards & Guidelines in Chapter 4 of the Forest Plan.) We agree that current projects in advanced stages of planning are not specifically included in the effects analysis. The Revised Plan documents a review of current projects and provides direction regarding transition and consistency with the Revised Plan (Chapter 5 of the Plan on Implementation).

Comment: (1996) Table 3-89 on page 3-223 shows the deer habitat percent change from 1995, but it should also show changes from 1954 to give a better understanding of the cumulative effects of timber harvest on deer habitat in each WAA. Otherwise, the reader is presented with an incorrect, underestimated impression of the total impact of logging on deer.

Response: We have changed the table so that it reflects the 141 year period from 1954 to 2095, instead of the 100 year period from 1995 to 2095.

Comment: (1996) In the first paragraph of page 3-239, concerns raised about reductions in deer winter habitat stated in this paragraph were not discussed in the Deer section of the RSDEIS. They should be included in the Deer and Subsistence sections in the FEIS. The Forest Service should select an alternative that provides protection to deer winter habitat.

Response: Anticipated effects of each alternative on deer habitat capability and deer demand are disclosed in Chapter 3 of the EIS in the Wildlife section, in the Subsistence section, and in the Communities Section of the Economic and Social Environment. As shown in these sections, the preferred alternative protects a substantial portion of the deer habitat Forest-wide.

Comment: (1996) The FEIS should clearly state which WAA's support comparable or lower modeled deer densities of 13 deer/mile^2, which "may be at risk of either not sustaining current wolf populations, or current levels of human deer harvest or both."

Response: A full discussion of WAA's that meet this consideration are discussed relative to effects analysis on the Alexander Archipelago Wolf in the FEIS in the Wildlife section of Chapter 3.

Comment: How can deer, brown bear and other old growth-related species be maintained at 90 percent of current populations with the almost 50 percent reduction in high-volume old growth and 200 miles of roads that are proposed? The effects on deer are understated.

Response: Our analyses indicate deer and bear populations are secure at the Forest-wide scale, since the majority of the productive old-growth will be remaining in 100 years. However, decreases in wildlife habitat capability are not distributed evenly across the Tongass. For example, some WAA's are projected to have over a 50% decline in deer habitat capability over the 100 years. Therefore, we display wildlife information by WAA so a more site-specific evaluation of the alternatives can be done. Roads have minimal influence on habitat capability but do increase human access to legal and illegal kill. The effects on deer are

estimated using the latest version of the Panel reviewed interagency habitat capability model, which is based on extensive research and local professional knowledge. See earlier responses for a thorough discussion of the deer model, its components, limitations, and cautions for use.

Comment: (1996) On page 3-209, additional information is necessary to more fully assess the effects to brown bear of the alternatives. For example, alterations in timber cover can affect the quality of brown bear food and cover causing bears to change their use of an area. Brown bear habitat can be affected by timber harvesting in many ways (detailed in the letter from USDI).

Response: Additional information is provided in the Brown Bear panel summary in Chapter 3. In addition, a Forest-wide standard and guideline provides for the identification of important brown bear foraging sites along important anadromous fish streams. Where cover is insufficient along important foraging areas, additional forested buffers in excess of that already provided by the Riparian Forest-wide Standards & Guidelines may be provided, up to approximately 500 feet on both sides of the stream. The guideline also directs that analyses be conducted to ensure mortality rates remain sustainable and that potential effects of roads be evaluated relative to additional morality.

Comment: (1996) In the third sentence of the third paragraph of page 3-209, the number of brown bear kills not associated with legal hunting seasons should read “67 known kills”; the total is generally estimated by Alaska Department of Fish and Game (ADF&G) to be at least twice the known number.

Response: Thank-you, we have made the correction.

Comment: (1996) The RSDEIS states the short-term risks to marbled murrelet viability are likely minor, considering the population estimate of 250,000 birds in Southeast Alaska. However, due to the high adult survivorship and the low reproduction rate of this species, population numbers may not reveal the effects of an impact for years. Research conducted in the murrelet’s Pacific Northwest range suggests that there are sufficient indicators to demonstrate a cause and effect relationship between loss of mature forest and a reduction of murrelet populations. The FEIS should analyze how cumulative and secondary impacts of timber harvests on FS and adjacent private lands would affect this species.

Response: We agree that there is an association between murrelet nesting habitat and old growth forests and that murrelets have demographic features that may take many years to display effects of habitat loss. We have tracked the amount of old growth available for murrelet nesting habitat for the 141 year period from 1954 to 2095 as an approximation of the effect on murrelets. We have also displayed the amount of other ownership lands in each WAA. In evaluating the alternatives the murrelet panel assessment members also had this information to conduct their evaluation of impacts. However, the murrelet population may be nearly twice this size based upon FWS surveys, murrelet populations in the Pacific Northwest may be an order of magnitude smaller than in Southeast Alaska, and habitat conditions there may be very different where an estimated 80-90% of the original old growth forest has been lost, thus making comparisons between the Pacific Northwest and Southeast Alaska weak at best. We continue to conclude that short term risks to murrelets are relatively minor, particularly with the significant reserve features of the preferred alternative that will protect very large reserves in every ecological province.

Comment: (1996) Further old-growth fragmentation may reduce local populations of old-growth dependent neotropical bird species due to an increase of predation, competition, hatching failure, loss from inclement weather, and noise disturbance. Forest edge-effect predation can extend as far as 50 to 600 meters into the forest, requiring forest tracts to be greater than 247 acres in size before forest-interior features are found. Due to predation, songbird nest success rates are lower in nests less than 45 meters from the forest edge than in nests further in the forest.

Response: Reductions in old-growth associated species are expected from the direct loss of habitat and possibly from nest predators along edges. We believe that the reserve strategy in the preferred alternative conserves a significant amount of neotropical bird habitat and we do not have any evidence for southeast Alaska that the habitat loss mentioned above is a viability concern. In addition, assessing the effects of forest fragmentation in the very heterogeneous forests of Southeast Alaska is problematic at best.

Comment: It is not clear how the Supplement can conclude (page 3-757) that harvest on private land may lead to reduced hunter success, more restrictive bag limits, or elimination of sport hunting (to satisfy ANILCA), yet cannot predict the outcome of its own activities on public land. (SEACC, SNSC)

Response: These same conclusions are not made in the FEIS and the FEIS (Subsistence Section in Chapter 3) does a better job of addressing these points.

Comment: The assertion that "the State has allowed the over-harvest of wildlife" is erroneous and needs to be corrected. (RF&G, SEACC)

Response: There are many instances where ADF&G hunting and trapping statistics show that ADF&G's Wildlife Analysis Areas have sustained hunting harvests through an entire decade above the level that ADF&G recommends. Several factors could account for this anomaly:

1) the habitat capability model incorrectly identifies true carrying capacity;
2) relatively mild winters occurred during the 10 year period such that the winter range was not as critical a factor in determining the actual population of animals;
3) the percent of carrying capacity used as the rate of hunting harvest is too conservative
4) a combination of two or more of the above.

The Supplement to the Draft EIS (pages 3-583 through 3-597) discussed and displayed the habitat capability hunting statistics, and ADF&G's rate of harvest information for each of the major species hunted or trapped. The Supplement pointed out where the information suggest something is yet unknown as it relates to the four factors listed above. The data indicates that we are unable to accurately assess wildlife populations and the effect of hunting and trapping, changes in habitat, and weather patterns on those populations at any given point in time.

Comment: Concern with the effects of continued old growth harvest on the deer populations in the Stikine area: much has been cut already, and there don't seem to be any studies.

Response: A Table in the Wildlife Section of the FEIS shows winter habitat capability for deer, by alternative, by WAA estimated in 1954 and 1995, and projected to 2095. These estimates are based on a habitat capability model which has gone through numerous reviews and updates. The Community Deer Harvest map in the map packet gives the WAA numbers and the recent average deer harvest for each WAA. A substantial amount of deer habitat will be protected by a combination of Old-growth Habitat LUD reserves, as well other natural setting LUD's. Furthermore, through the beach fringe and estuary 1,000-foot buffer and the riparian standards & guidelines, additional deer habitat will be protected. As you probably know, for the first time in about 15 years, deer hunting in the Petersburg area has been reopened because of the apparent significant recovery of the deer population since the crash in the mid 1970's. ADF&G is doing studies, including deer pellet transects and on-going research on the effect of island size, wolf/deer population dynamics, and vegetation composition and characteristics, on deer densities.

Comment: The potential effects of timber harvesting on the movement and distribution of moose between Glacier Bay and the Chilkat Peninsula should be analyzed. (USDI)

Response: Site-specific effects such as these are best analyzed at the project level, where actual locations of proposed activities are known. Direction for evaluating the effects on moose habitat is included in the Forest-wide standards and guidelines for wildlife, and would apply to any project proposed for the Chilkat Peninsula that could potentially affect moose habitat.

Comment: The potential effects of land-based resource development activities (timber harvesting and mining) on whale prey species (and thus threatened and endangered whales) in the Point Adolphus area of Chichagof Island should be addressed, in particular as this relates to Glacier Bay National Park and Preserve. (USDI)

Response: In the Revised Plan, the entire Point Adolphus coastal area, from the boundary of the private land to the east (near Hoonah) to the west (including all of the Pt. Adolphus/Mud Bay Legislated LUD II), is unavailable for timber harvest. There are no identified mineral activity tracts in the area, and no known proposals or potential for minerals development. The preferred alternative has established an old growth reserve in the Chicken Creek watershed, precluding any timber harvest activity on NFS lands that would either directly or indirectly effect prey species at Point Adolphus. Based on these allocations and the low mineral potential, we can foresee no effects whatsoever to whale prey species.

In addition, a biological assessment for threatened and endangered whales has been completed in consultation with National Marine Fisheries; the resulting Forest-wide standards and guidelines are included in the Revised Plan. The NMFS has concurred with the Biological Assessment conclusion that the proposed forest plan revision will not likely adversely affect listed marine mammals. The biological assessment is in Appendix J of the FEIS.

Comment: (1996) The Forest Plan (Chapter 1) states "(a) maximum of 8.7 million acres of old-growth forest wildlife habitat retained after the first decade." This statement is misleading, because not all of this old-growth is the same quality of wildlife habitat. Some of these 8.7 million acres are suitable for old-growth dependent species, but some of it may not be suitable at all. The Forest Plan should qualify this statement by stratifying this figure by habitat values or changing it to, "A maximum of 8.7 million acres of old-growth forest retained after the first decade."

Response: A change similar to this suggestion has been made. The language now reads: "A maximum of 8.7 million acres of old-growth forest retained."

Goals and Objectives

Comment: Manage not for minimum viable populations, but for "healthy populations." To assure all wildlife uses, including hunting and subsistence, objectives beyond minimum viable levels must be used. Maintaining viable populations is not an acceptable wildlife goal: it is not responsive to the needs of hunters. (TRS) The wildlife objective of maintaining viable populations will not provide for sustained yields for sport and subsistence hunting and wildlife viewing. The wildlife objectives should be stated in specific terms like the timber and visual objectives are. (SEACC) Wildlife habitat capability objectives "that provide for the permanent retention of the old-growth habitats necessary to guarantee the sustained yield of wildlife to meet the public demand" are needed. (RF&G, SEACC)

Response: The following are now the wildlife goals: "Maintain the abundance and distribution of habitats, especially old-growth forests, to provide a moderately high likelihood of sustaining viable populations. Maintain habitat capability sufficient to produce wildlife populations that support the use of wildlife resources for sport, subsistence, and recreational activities." These revised goals respond to the desire to maintain populations in excess of those needed for meeting only viable populations.

Comment: The goal for wildlife (to "ensure the maintenance of viable populations"), in contrast to those for timber ("maximum production") and minerals ("emphasize ... development"), is not proactive, and sets only the bottom line for management. Managing for viable populations is the absolute minimum required by law, and has the potential for taking species to the brink of extinction. "If the Service is serious about managing wildlife and wildlife habitats its goal would be to develop a proactive program," one that actively manages the wildlife resources to meet public desires. (WLS)

Response: Please see previous response.

Comment: Numerical, and habitat capability, objectives by Wildlife Analysis Area should be used, and measured against ADF&G's objectives. (TRS) There are no clear (quantitative) wildlife objectives. (WLD) The planning regulations call for establishing "objectives for the maintenance and improvement of habitat" beyond the minimum viable level. (WLS) The final plan should specify wildlife habitat objectives for each wildlife analysis area. Quantitative habitat capability objectives, by Wildlife Analysis Area, are needed for management indicator species to be able to implement the Plan: the proposed Forest-wide objectives aren't enough. Use ADF&G information; objectives based on percent of carrying capacity would be best.

Response: Please see previous two responses. ADF&G's wildlife analysis areas have been used for many aspects of estimating effects to wildlife populations and wildlife habitat capability, for the analysis of hunter demand, and for estimating subsistence effects related to deer. One of the evaluations of meeting hunter demand used ADF&G's deer harvest data as a measure of existing demand. We have also used the ADF&G "Highest Priority Community Use Areas" to assist in identifying locally important areas to individual communities relative to indirect population objectives.

Comment: The objectives should attempt to minimize impacts to hunters in those WAA's most important to communities. ADF&G's deer population objectives could be used for this purpose. (SEACC, STATE) Objectives for huntable populations of big game should be based on the "rural determinations of Southeast communities made by the Federal Subsistence Board in December of 1990." Goals for huntable wildlife populations are needed.

Response: Please see previous three responses, which discuss goals and objectives related to hunting. Changes is the land allocations in the final Revised Plan where made, in part, based on the demand for local resources by rural communities. For instance, see the changes (additions) to the natural setting land use designations in the Sitka Area between the RSDEIS preferred and this Revised Plan. The Communities section of the Economic and Social Environment part of Chapter 3 of the FEIS analyzes hunter demand and

habitat capability in areas of use by the rural communities of Southeast Alaska (as well as Juneau and Ketchikan, the only communities in Southeast not considered rural by the Federal Subsistence Board). Based in part on these analyses, changes were made to the Final Preferred alternative. Use of these analyses, including looking at future potential hunter demand, is used in concert with looking specifically at population objectives and the State's identified community use areas.

Comment: It has not been established that "maintenance of the current population" is what the public desires. For instance, bald eagle numbers have been increasing since the 1950's, and may continue to increase if reductions in habitat capability don't set limits. This is one reason why population objectives for the management indicator species are needed. (WLS)

Response: The minimum NFMA regulation requirement is to manage habitat to maintain viable populations, within a multiple-use context. Most species on the Tongass are well above viable levels. A viable population is defined, for planning purposes, as one which has the estimated number and distribution of individuals to insure continued existence of the species is well-distributed in the Forest. In relation to bald eagles, the objective for bald eagle habitat is no reduction from the current level of 92 percent of 1954 habitat capability. There is no fixed number of animals we can assure as part of a population objectives … we can just talk about habitat. Habitat within 1,000 feet of the shoreline and within at least 100 feet of major streams, where essentially all bald eagle nests occur, will be maintained through the use of the Beach Fringe and Estuary Forest-wide Standards & Guidelines, Riparian Forest-wide Standards & Guidelines, and 330 foot eagle nest buffers (unless an areas is already in an allocation that excludes timber harvesting).

Comment: Manage for quality future wildlife resources in each of the "island ecotypes and mainland population zones," rather than just for "a viable population left somewhere in the forest."

Response: We are unsure of the specific reference to island ecotypes and mainland population zones." However, we believe the preferred alternative provides a moderately high likelihood of sustaining habitat to support well-distributed viable populations of all species across their range on the Tongass. Many components of the preferred provide the justification for this conclusion. Relative to island ecotypes, we have removed all islands less than 1,000 acres from the timber base to prevent possible adverse impacts on potentially occurring island endemics that may be associated with old growth forests. In addition, at larger spatial scales we have provided for at least 1 very large reserve in each ecological province to provide spatially explicit landscape designs for maintaining viable populations.

Comment: Areas that possess commercially valuable timber close to communities are also the areas from which much of the fish and wildlife harvesting occurs, and water is drawn for human consumption. Inadequate implementation of balanced resource objectives may jeopardize the important wildlife and fisheries values in these areas. (SEACC, STATE)

Response: The Municipal Watershed Land Use Designation is designed to protect water quality for human consumption for many communities throughout southeast Alaska. For communities with watersheds not covered by this LUD, we have included direction for coordinating with owners and operators of public water systems to meet watershed protection needs on a case-by-case basis (Soil & Water Forest-wide Standards & Guidelines). We have used ADF&G's Highest Priority Community Use Areas and information from local residents provided through public comments or obtained through identification of subsistence use areas to identify locally important areas. We have attempted to balance competing uses for limited resources nearer communities; non-development (natural setting) LUD's have been applied near many communities to help provide habitat for the continued production of high quality fish and wildlife resources for human consumption. In other areas, especially with existing development infrastructure, the Revised Plan often includes continued development activity. However, protection of important fish and wildlife habitats has been provided in these areas by using the Beach & Estuary Fringe and Riparian Forest-wide Standards & Guidelines and allocating a minimum of one small old-growth habitat reserve (Old-growth Habitat Land Use Designation, or the equivalent) in each watershed (VCU).

Comment: The extensive areas of Wilderness and no harvest provide adequate protection for fish and wildlife habitat; harvested areas also provide variety. Don't only target old-growth species for protection: second-growth stands are important also.

Response: While it is true that "harvested areas provide variety," the variety provided (that is, second-growth forests in various stages of development) does not necessarily benefit many species of wildlife indigenous to Southeast Alaska, many of which are associated with old-growth forests. Harvested areas also do not usually replicate the kinds of openings and forest structure important to old growth associated species. The wildlife benefits of second-growth forests (for instance, forage) are usually of relatively short duration, and favor only certain species. As has been discussed in several previous responses in this section, the habitat capability models for management indicator species, and the analyses of biological diversity, wildlife, and species viability, all use the assumption that reductions in the amount of old-growth forest will have negative effects on some of the wildlife species of most concern for Southeast Alaska and the Tongass National Forest. Most second-growth stands will be managed primarily to promote timber growth for future timber harvest, although Forest-wide standards and guidelines provide direction for second-growth management to enhance wildlife benefits in several kinds of important wildlife areas. Areas within Wilderness and Natural Setting ("no harvest") LUD's of course do provide important and substantial wildlife habitat, but within areas where timber harvest is allowed, habitats such as riparian areas and beach fringe will also be retained, as well as a mixture of age classes including old-growth habitats.

Comment: The plan needs objectives for wildlife habitat management and enhancement. The RPA goal of "increasing habitat capability by 15 percent" has not been addressed. The Tongass must be managed to ensure the maintenance and enhancement of the long-term productivity of wildlife resources and habitats. (TRS)

Response: Objectives for both wildlife and fish habitat improvements are included in the Forest Plan (Chapter 2, "Forest Management Objectives"), and these projects are also discussed in the "Fish" and "Wildlife" sections of EIS Chapter 3. The RPA goal cited is a nationwide average, not specifically applicable to the Tongass. This objective is practically impossible for old-growth associated species since the harvest of a single stand would technically reduce habitat capability and it is difficult to increase capability for that already lost when re-establishment of old growth characteristics may take centuries. Thus this RPA idealistic goals is relatively impractical for the Tongass. For wildlife, the less-than-100-percent habitat capabilities are largely the result of conversion of old-growth forests to second-growth forests. The long-term management goal for most second growth is a sustained yield of wood products, rather than a return to old-growth habitat capabilities (although in the Revised Plan, about ½ of current second growth will no longer be available for timber harvest and, over time, most will revert to old-growth forest).

Comment: Concern with the "controlling" role of snow: "Where habitat is maintained only [to support minimum viable numbers] a succession of winters with cold and heavy snow can wipe out a residual population." Deer needs during severe winters, not just average winters, must be addressed and planned for.

Response: Deer viability has not been identified as an issue. The model and evaluation of effects, takes into account a watershed's propensity to have heavy-snow winters.

Comment: The estimated reductions in wildlife habitat capability, for several species and in several areas, are unacceptable and must be changed. Specifically:

- the destruction of deer winter habitat near Gustavus, Hoonah, Kake, Pelican, Sitka and Yakutat
- the declines in black bear (up to 70 percent) and brown bear. (NAS)

Response: We are no longer presenting habitat capability from models for black and brown bears. See earlier responses relative to habitat capability models and MIS. Please see previous response for background on deer. Deer habitat capability reductions in areas near the communities mentioned are displayed in Communities section of the Economic and Social Environment in Chapter 3 of the EIS. Deer habitat capability reduction vary around individual communities, however, several features of the preferred alternative should reduce adverse effects (1,000-foot beach and estuary fringe, small old growth reserves in each watershed, and large reserves near some communities).

Comment: According to a recent ADF&G study, the future of deer in Tenakee Inlet (northeast Chichagof Island) under additional logging looks "grim." The demand exceeds the capacity in all areas. Therefore, retaining the remaining habitat, especially the critical winter habitat, is essential. (C-TS, TSAB) ADF&G predictions for Sitka hunters show demand not being met past the next decade: proposed harvest will have additional serious affects on Sitka's ability to harvest fish and game. (SCS)

Response: Please see the changes that have been made in the Tenakee Inlet and Sitka areas in the land allocations in the Revised alternative. The effects of these changes on these communities are analyzed in the Communities section of the Economic and Social Environment in Chapter 3 of the EIS.

The goal of the Forest Plan is to find the best mix of uses for given areas of the Tongass; providing habitat for huntable levels of wildlife is one of many uses that have to be weighed in the decision (See Record of Decision for further discussion about finding the balance of uses that maximizes net public benefit).

Comment: An alternative that includes protection of the ADF&G "deferral areas" is needed. (RF&G, SEACC) Defer timber harvest in the "best wildlife habitats" for at least the next 10-15 years.

Response: Working groups between State Government including ADF&G and the Forest Service considered just such an approach in the spring of 1992. The State chose not to pursue this alternative beyond the initial analysis that occurred in spring of 1992.

The Revised Plan incorporates many aspects that protect some of the "best wildlife habitats," including by allocating large, medium and small Old-growth Habitat (LUD) reserves, and using the beach and estuary fringe and riparian Forest-wide Standards & Guidelines.

Comment: What are you doing about the decline of habitat for management indicator species? An alternative that doesn't show any declines should be evaluated.

Response: Among potentially realistic alternatives, Alternative 1 of both the RSDEIS and the FEIS comes closest to incorporating no further declines in habitat capability from Tongass timber harvest, with no scheduled harvest.

Comment: If wildlife populations in a certain area are a problem, close the area to hunting and fishing for awhile to let the wildlife re-populate: don't close the area to timber harvest or for access permanently.

Response: The only "permanent" closures of areas to timber harvest are done by Congress, through the designation of Wilderness, National Monuments, Wild Rivers, etc. (or, in the case of TTRA, Legislated LUD II areas). The allocation of the other "non-timber" land use designations is done at the discretion of the Forest Service, and will be re-evaluated at the time of each Forest Plan revision, or sooner if changing conditions warrant a re-evaluation. We presume by "access" you are referring to the use of roads built for timber harvest purposes.

The Plan decision is that forest development roads are open to motorized use unless specifically designated closed; however, in localized cases, timber harvest roads are often closed to motorized uses after timber harvest for wildlife purposes. This is usually done to reduce human-related effects on wildlife, and is often planned early in the timber sale process. Road management in particular areas is analyzed in project-level planning using Forest Plan standards & guidelines.

Comment: If the climate changes as predicted, many species will need to be even more mobile than they are now. Maintaining large old growth blocks and adequate corridors between them will be even more important. Emphasize large, continuous old growth blocks (>5,000 acres) for wildlife habitat, also smaller, dispersed blocks (@500 acres).

Response: The Revised Plan incorporate a system of large, medium, and small old growth habitat reserves well distributed throughout the forest, with at least 1 very large reserve in each ecological province. Corridors are primarily maintained through the application of the Beach and Estuary Fringe (1,000 foot buffers) and the Riparian Forest-wide Standards & Guidelines.

Comment: (1996) The Preferred Alternative drops the attributes of Alternative 3 that were found to be important for marten: the 1,000 foot beach fringe, AFHA Option I and 2 riparian habitat buffers, and a 200 year rotation. It is unclear what consideration was given to the recommendations of the Marten Assessment Panel experts. Well-founded explanations should be provided for not including information or recommendations provided in the marten panel assessment.

Response: The Preferred alternative (Revised Plan) described in the FEIS now adopts the 1,000 foot beach fringe, a more protective riparian option than in the RSDEIS preferred alternative (Riparian Option 2A), and has an expanded the old-growth reserve system. Panelists did not believe that 100 year rotations had a high likelihood of supporting viable marten populations. Our analysis shows that over 850 of the 926 VCU's on the Tongass will be consistent with a *300-year* rotation by the year 2095.

Comment: (1996) Table 3-100 on page 3-255 shows the percent of remaining interior old-growth and higher-volume old-growth in a selected portion of the 21 biogeographic provinces on the Tongass. The RSDEIS states that the old-growth habitat changes for the areas in this table are such that there may be potential for reaching local viability concern for old-growth dependent species with additional habitat alterations. The FS should manage these areas conservatively in light of this concern, and defer timber harvests in these areas during this planning period (10-15 years).

Response: See the previous responses.

Standards and Guidelines, LUD Prescriptions

Comment: The standards and guidelines are not rigorous enough to assure the maintenance of minimum viable populations, nor have they been validated. (WLS) The standards and guidelines need to include measurable objectives and directly relate to project-level objectives. (RF&G, SEACC, WLD) The wildlife standards and guidelines are neither specific or measurable, and they are "loaded with ambiguities." They should be rewritten. (TRS)

Response: These comments were written in response to the DEIS and SDEIS. Many of these standards and guidelines have been rewritten since then. The Wildlife Forest-wide Standards & Guidelines have been developed from several sources, including the guidelines from other agencies (U.S. Fish and Wildlife Service, National Marine Fisheries Service, Alaska Department of Fish and Game), information from scientific literature and research, and through Interdisciplinary development. They contain many measurable "objectives" and requirements (for instance, all the direction under Bald Eagle Habitat, the direction for aircraft flights and/or boat traffic under Marine Mammal Habitats, Seabird Rookeries and Waterfowl Habitats, and the wolf den and goshawk nest protection). Standards and guidelines provide direction for how projects are to be carried out to avoid or minimize effects: they do not normally need to relate to project-level objectives. An exception is where the project itself is being done for the wildlife resource, and very specific objectives and guidelines are provided for Wildlife Habitat Improvements. We do not know what "loaded with ambiguities" refers to; one possibility is that you are referring to clauses such as "where consistent with other resource objectives" which we find to be consistent with the laws that guide the management of the national forest.

Comment: The wildlife standards and guidelines need direction for meeting wildlife population objectives (which also must be presented). Providing for viable populations should be the minimum standard, not the objective. Quantifiable standards for maintaining viability and distribution of wildlife are needed. (WLS)

Response: The Forest-wide standards and guidelines are intended to provide direction and guidelines to individual projects for avoiding or minimizing effects on resources Forest-wide. Land use designation standards and guidelines provide ways to avoid or minimize effects on resources consistent with the goals and objectives of that individual land use designation. They are not used to meet area-wide types of objectives (such as population objectives or the amount of habitat to maintain), although they will often help attain such objectives. Also see previous responses relative to deer, estimated demand, analysis of deer habitat relative to demand, ADF&G Community Use Areas, and the Communities section of the Economic and Social Environment in Chapter 3 of the EIS.

Comment: Changes in the standards and guidelines are needed to:

- clarify ADF&G's role in fish and wildlife management
- assure they will be consistently applied
- relate the Plan's resource objectives to project planning areas
- recognize the Alaska Forest Resources and Practices Act. (SEACC, STATE)

Response: Coordination/cooperation with ADF&G is included throughout the Wildlife standards and guidelines, and in particular in the initial section, "Coordination/cooperation with Other Agencies, Institutions and Partners" (Final Forest Plan). Given the status of subsistence management (ANILCA Title VIII in Alaska), the Federal and the State roles in management of fish and wildlife are intertwined.

We do not know what changes would "assure" that the standards and guidelines would be consistently applied. For "standards," very specific direction is given that is not usually open to interpretation. For "guidelines," the direction may be specific or more general, with some flexibility left to individual resource professionals and allowances made for differing on-the-ground situations. The Plan includes a monitoring plan to help assure consistent application.

Relating resource objectives to project planning areas has been discussed above. For standards and guidelines, the objectives are usually to avoid, minimize or mitigate adverse effects, and are not readily quantifiable or applicable to "planning areas" (as opposed to projects within an area).

The Alaska Forest Resources and Practices Act primarily provides direction for activities on State and private lands. However, for timber harvest and associated roading on Federal lands, consistency with the Alaska Forest Practices and Resources Act ensures that activities affecting the coastal zone are consistent, to the maximum extent practicable, with the Alaska Coastal Zone Management Program enforceable policies. Words to this effect are incorporated in the Lands Forest-wide Standards & Guidelines. In essentially all cases, the Forest Service Best Management Practices (see Appendix C of the Forest Plan) for timber harvest and associated roading activities are at least as, and often times more stringent, than the State Forest Resources and Practices Act requirements.

Comment: Objectives are needed for the Threatened, Endangered and Sensitive Species standards and guidelines. The standards and guidelines for sensitive species give direction only to maintain viable populations and for avoiding or minimizing impacts. This is not enough. A conservation strategy for each species should be developed that will ensure recovery beyond sensitive status. Maintaining only a viable population will keep the species on the brink of extinction. (WLS)

Response: A viable population is defined, for planning purposes, as one which has the estimated number and distribution of individuals to insure continued existence of the species is well-distributed in the Forest. Thus, maintaining viable populations goes much farther than keeping species "on the brink of extinction." In fact, it is only by falling well below a viable population that species approach extinction, and one purpose of a threatened or endangered classification is to bring the species back to a viable level. Sensitive species are those that, while not yet "on the brink," are considered susceptible of falling below a viable level, and are thus given special consideration to ensure their viability. We disagree that objectives aren't provided for in the Threatened, Endangered and Sensitive Species Forest-wide Standards & Guidelines (see Revised Plan), unless the commenter means numerical objectives. Objectives are provided by such statements as: "Provide for the protection and maintenance of Stellar sea lion habitats," or "Maintain and enhance osprey populations and habitat."

Comment: The Sensitive species standards and guidelines should make it clear under what circumstances it will be "desirable to implement habitat enhancement projects to increase habitat capabilities and expand species distribution." How State and Federal resource agencies with responsibilities for fish and wildlife will be involved also needs to be clarified. (USDI)

Response: The Standards and Guidelines reference FSM 2670. The specific FSM parts applicable are 2670.22, 2670.32, 2670.44, 2670.45, and 2670.46. This FSM direction identifies that all projects must have a biological evaluation for sensitive species, which will address the desirability or need for habitat improvement (enhancement and rehabilitation). These same sections of the manual give direction for the coordination with other Federal agencies, States agencies, and other groups or individuals concerned about the conservation of sensitive species. In addition, this objective also seeks to improve a species conservation status, possibly to the point where viability concerns are diminished or eliminated thus removing sensitive species recognition.

Comment: Which standards and guidelines will apply to future designated sensitive species? (SEACC)

Response: The one's that we will develop for them, through a Forest Plan amendment, should any additional species become sensitive. Hopefully, through the application of all current Forest-wide and LUD standards and guidelines, Forest Plan monitoring, and continued risk assessments or the future adoption of a conservation strategy, the need to add additional species to the sensitive list will be avoided.

Comment: (1996) The RSDEIS states that Southeast Alaska most likely supports small, less mobile endemic species which have not been thoroughly investigated or described. The 1993 VPOP Strategy (page 29) states: "However, biological intuition does suggest that vegetation between HCA's similar to that within the HCA's would enhance the survival of dispersing individuals whether it is present in the matrix or as corridors (Fahrig and Merriam 1985, Noss 1987, Murphy and Noon 1992). Lack of definitive information on the need for corridors should not preclude their consideration in conservation planning unless better solutions to maintaining dispersal are available (Hobbs 1992). Generally, the maintenance of existing linkages should be a primary component of conservation planning since it is easier to retain them than to replace them in the future (Hobbs 1992)." Conditions now exist in most places across the Tongass that make it possible to maintain corridors between old-growth reserves across the Tongass. These corridors should be protected from further harvest since they have positive habitat values for many species, and the importance of corridors for their dispersal are not fully understood. The greater the distance between old-growth blocks, the more important it is to have corridors. It is prudent to strive to maintain as much actual connectivity as possible.

Response: Please see the response to the viability comments. The Revised Plan provides for corridors through the application of the Riparian and Beach & Estuary Fringe Forest-wide Standards & Guidelines, mapping small HCA's, lands in non-development LUD's that maintain the old-growth ecosystem (e.g. the Old-growth Habitat LUD and other natural setting LUD's), and in non-harvested areas where timber management is allowed to occur (over 50% of the productive old growth will be retained through implementation of current Standards and Guidelines in timber harvest areas). These features of the Revised Plan will certainly contribute to a forested matrix between reserves to meet the objectives mentioned for dispersal.

Comment: (1996) Support the use of a new land use designation for deer winter habitat and woodland muskeg, as long as these areas are maintained in a natural setting. Object to logging and related development activities in these areas. Incorporate patch size factors into the deer model, and adjust the patch size factors for the size of old-growth forest patches occurring on the island. Will deer habitat capability models be run to determine deer habitat loss in logged areas?

Response: Wilderness, Monument, Old-growth Habitat and other non-development LUD's are used to conserve winter deer habitat, as do some of the Standards and Guidelines (e.g., 1,000' beach fringe). We do not believe a specific LUD for deer winter habitat and woodland muskeg is called for. The deer panel and subsequent interagency review of that model did not recommend the addition of a patch size variable. The deer model is designed to determine the effect (loss of habitat) of timber harvest.

Comment: (1996) In the last paragraph of page 3-255 the FS should protect the "pinch-points" identified in the RSDEIS as important for natural connectivity to allow dispersal or migration of certain land-based species. The FEIS should include a map showing the location of these areas, and adopt Standards and Guidelines that would defer timber harvest in them.

Response: In the preferred alternative, ecological "pinch-points" that are under Forest Service management are specifically identified and have been allocated to non-developmental prescriptions (e.g., Chichagof Island and Kuiu Island).

Comment: (1996) Information provided on Subsistence (pages 3-119 through 3-127) and the description section of 32 Communities (pages 3-328 through 3-44 1) state that:

1. "Subsistence hunting, fishing, trapping and gathering activities represent a major focus of life for many Southeast Alaskan residents." (Page 3-119)
2. "deer, in most communities, are the principal subsistence species likely to be affected by the alternatives." (Page 3-329)

In addition, the Sitka Black-tailed Deer Standard and Guideline Effects Analysis analyzed the possible effects of the deer winter range Standard and Guideline and considered it to be "conservative relative to maintaining deer habitat capability because the standard does not account for potential increased demand for the deer resource." It also states, "This forest-wide Standard and Guideline is specifically designed to address concerns raised by subsistence and sport users of the deer resources." Therefore, the deer winter range Standard and Guideline should be included in the selected alternative and applied forest-wide to meet the objective of "maintaining current opportunities for deer hunting by maintaining deer habitat capability" (page 3-222 of the RSDEIS).

Response: The Sitka Black-tailed Deer Standard and Guideline was changed in the preferred alternative. It directs the project analysis and planning to "Identify important deer winter range before or as part of project analysis," and to "Assure interdisciplinary involvement and consideration of deer winter range in project planning and in the environmental analysis process." More stringent standards and guidelines were not adopted for deer habitat because of the expansion (from the RSDEIS preferred) of the beach fringe which provides high quality winter habitat and because of the amount of land Forest-wide in natural setting LUD's (e.g., in Wilderness, Monuments, Old-growth Habitat, and Remote and Semi-remote Recreation LUD's). See also previous responses.

Comment: (1996) Areas should be inventoried at the project level to identify Volume 7 type stands separately and harvest of this type of stand should be prohibited or limited. Prior harvest of Volume 7 stands has had significant adverse impacts on deer populations in some areas of Tongass Forest.

Response: Substantial areas containing volume 7 type stands are protected from harvest under the Plan LUD's and standards and guidelines. In addition, our understanding of deer habitat relationships as reflected in the deer habitat capability model does not give disproportionate value of volume class 7 stands as deer winter range over volume class 5 or 6 stands. In fact, many volume class 7 stands may be spruce dominated stands in riparian systems and often receive less value in the deer model. Thus it is difficult to understand how harvest of the relatively rare volume class 7 stands can have a "significant adverse" impact on deer populations**.**

Comment: (1996) Recommendations for brown bear standards and guidelines include:

1. Cutting unit sizes should meet the Retention Visual Quality Objective on page 3-154 of the Proposed Revised Forest Plan.
2. Timber harvesting should be deferred in areas adjacent to past cutting units until cut units reach the age when they provide adequate thermal and hiding cover for bears.
3. The non-forested components, such as avalanche chutes, wet meadows, and side hill parks that provide bear food, should be left undisturbed.
4. Adequate leave strips should be left between cutting units and between roads and cutting units to provide cover for bear security and movement.
5. Roads should be managed with considerations for:
    a. Obliterating the road and revegetating the road bed after logging.
    b. Closing roads on a seasonal or year-long basis to provide security and maintain habitat effectiveness.
    c. Avoiding loop roads in planning transportation systems.
    d. Designing roads to avoid impacting important habitat components.

Response: These suggestions were considered and to the extent practical, while meeting other resource objective, were incorporated into the Transportation and Bear Habitat Management (in Wildlife) Standards and Guidelines in Chapter 4 of the Forest Plan. As an example, the bear standards and guidelines say, "Manage road use where concentrations of brown bear occur to minimize human/bear interactions and to help ensure the long-term productivity of brown bears. To meet this direction, develop and implement road management objectives through an interdisciplinary process (see Transportation Forest-wide Standards & Guidelines).

Comment: (1996) Winter deer range identification and management should be part of an overall wolf management strategy that ensures wolf viability throughout its range in Southeast Alaska. The strategy should incorporate sport and subsistence harvest issues. Human take of deer should include habitat issues and not rely entirely on recent harvest statistics. The current deer habitat capability model employed in the proposed plan is not adequate to accomplish the required environmental effects analysis. The Conservation Assessment for the Alexander Archipelago wolf provides the best available information and management recommendations for this species.

Response: The deer standards and guidelines provide guidance to identify important deer winter range. The Forest-wide Standards & Guidelines for the Alexander Archipelago Wolf generally provide for the maintenance of at least 13 deer per square mile where deer are the principle prey of wolves (to sustain wolves and to consider meeting estimated human deer harvest demands). This measure is taken from the conservation assessment of the Alexander Archipelago wolf and seeks to maintain an equilibrium between current wolf populations of 250-300 animals and the current human harvest of deer. The current deer habitat capability model is the best management tool available to estimate the effects of management activities on long-term deer habitat capability, was developed through many iterations among professionals in interagency meetings. The model was developed and intended for use in evaluating and comparing relative differences among planning alternatives; it is not a population model.

Comment: (1996) On page 3-211 (Bald Eagle) the first sentence of this paragraph should be changed to read:

> "North America's bald eagle population reaches its highest density in Southeast Alaska."

then change the third sentence to read:

> "The most recent population estimate (1992) was over 13,000 adult birds; more than 8,000 nest sites have been identified to date (1996). Their nesting habitat is primarily old-growth trees along the coast and within riparian areas."

Then change the last sentence of the paragraph to read:

> "...nest trees are surrounded by a minimum 330 foot radius protective habitat management zone."

Response: Thank you, we have made the corrections.

Comment: (1996) The brown creeper is an interior forest species. The RSDEIS states that optimum brown creeper habitat use occurs when patches of preferred habitat are greater than 15 acres, but a patch that small is all edge. Interior old-growth forests provide important winter habitat for brown creepers. They provide thermal protection from wind and precipitation that forest edges do not. A patch that is all edge would not provide such protection.

Response: We agree that some 15 acres patches would be all edge, however we do not have any information that creepers do not use these small patches.

Comment: (1996) The FS should adopt the recommendation made by several Viability Assessment Panels (Goshawk, Marten, Small Mammals, Old Growth) to extend the rotation period because 100 years substantially increases the risk of species non-viability. The management rotation should be 300 years. Why were the Assessment Panels not given an alternative to rate that used a 300-year harvest rotation?

Response: Under the preferred alternative, 685 out of the largely forested 740 VCU's are consistent with an "effective" 300 year rotation at year 2095. The panels evaluated two alternatives that considered a 200 year rotation. The 200 year timber rotation, in most cases equates to an "effective" 300 year ecological

rotation, due to the large amounts (generally >33%) of old-growth in riparian, beach, and non-developmental LUD's.

Comment: (1996) Many of the VPOP proposed HCA's are included in Alternative 3 in several different types of LUD's; semi-remote recreation, remote recreation, old-growth habitat, special interest area, research area, or LUD II. The purpose for reserving these areas for old-growth dependent species would be lost if included under LUD's that are not specifically described as wildlife habitat, and would be in danger of modification in the future if they are not at least recognized as having a joint purpose. A map with HCA's meeting the VPOP Committee criteria with the Pacific Northwest Peer Review recommended modifications and their importance as habitat for old-growth dependent species should be included in the FEIS. Any previously described HCA now located in a LUD not specifically described as wildlife habitat should be given a joint purpose to recognize its importance as wildlife habitat that needs to retain old-growth characteristics.

Response: The Semi-remote Recreation, Remote Recreation, Old-growth Habitat, Special Interest Area, Research Natural Area, and LUD II LUD's all have wildlife objectives (see their descriptions in the Forest Plan). Management within these areas will be consistent with wildlife viability objectives. In addition, copies of the original HCA map used for alternative development as well as independently mapped small HCA's will remain in the TLMP planning record for future reference. Finally, the Old-growth Habitat LUD Standards & Guidelines and Appendix K provide design criteria for the Forest-wide old-growth reserve strategy.

Comment: (1996) The Southeast Alaska ecosystem continues to be altered primarily by timber harvest activities without the basic knowledge of how such alteration is affecting resident nesting, migratory, and wintering waterfowl. A basic inventory, research, and monitoring program needs to be planned, initiated, funded, and pursued to better understand what waterfowl resources are present throughout the year, what requirements are needed for them to maintain viability, and how they have been and continue to be impacted by changes in habitat conditions. This is important for forest-dependent species such as Vancouver Canada goose, harlequin duck and marbled murrelet, the latter two being species with some viability concern (RSDEIS Table 3-47).

Response: The Waterfowl and Shorebird habitats and Marbled Murrelet sections of the Wildlife Forest-wide Standards & Guides promote protection of habitat and additional inventory, monitoring, and research. Appendix B of the Forest Plan identifies numerous information needs for wildlife.

Comment: (1996) No Standards and Guidelines are available for small mammals, considered most vulnerable in the panel assessment process. Small mammal standards and guidelines should be developed by experts with local knowledge of small mammals on the Forest for the FEIS and implemented to provide for adequate conservation of these species.

Response: To reduce risk to small island endemics, islands less then 1,000 acres in size are placed in a non-development LUD in the preferred alternative. Specifically, the islands that have been removed from a development LUD are: Whitney, East Level, Mosman, Greys, White Cliff, Eagle, Gedney, and Peratrovich. Small mammal viability concerns are addressed the same as any other species with concerns, as described in the Threatened, Endangered, and Sensitive Species Forest-wide Standards & Guidelines. As our information base improves on these species we will be able to provide more specific management direction. Small mammal zoogeography and ecology is an important information needs being addressed by the Pacific Northwest Research Station (See Appendix B of the Forest Plan on Information (and Research) Needs). The Record of Decision includes additional standards and guidelines for small mammals. These are evaluated in Appendix N.

Comment: (1996) Management Indicator Species analyses are used inconsistently. In the Wildlife section, recognition was given to recent criticisms of the Tongass National Forest Indicator Species, and other

species were analyzed by a panel of experts. In the Management Prescriptions section, however, future planning activities are restricted to management indicator species. Future planning activities should not be limited to the named management indicator species.

Response: The Wildlife and the Threatened, Endangered, and Sensitive Species Forest-wide Standards & Guidelines are an important part of the Management Prescriptions. These standards and guidelines address all wildlife.

Comment: (1996) In the Old-growth Habitat LUD prescriptions, the wording does not allow deferral of logging or road construction if the impacts to fish and wildlife are too great. It says that they only need to be considered. In some situations, building a road in a manner that would, in general, reduce adverse effects on fish and wildlife may still be harmful for local, sedentary populations. The approved plan should include a standard that allows the decision not to build a road and/or log a unit due to certain fish and wildlife considerations.

Response: Project-level planning always has the discretion to build or not build a road based on resource concerns, including wildlife. The proposed plan does not prohibit this. New road construction is generally inconsistent with Old-growth Habitat LUD standards and guidelines, except where no feasible alternative is available. Commercial timber harvest is generally precluded except for catastrophic salvage.

Comment: (1996) On page 4-7 (Biodiversity, number 7) the purpose of this Standard and Guideline is to provide interior forest habitat within a closed canopy forest at least 300 feet from the forest edge. The size of interior forest areas should be maintained to avoid creating areas where the size of the interior forest is too small to be utilized by old-growth dependent species. A buffer of 600 feet from the forest edge should be considered around corridors and forest blocks when analyzing the amount of old-growth forest habitat available for old-growth dependent species.

Response: These standards and guidelines for biodiversity have been removed in the Final Plan; most were duplicative of standards and guidelines within other Resources. Non-duplicative standards & guidelines still deemed appropriate, and already elsewhere in the Plan, where added. Some have been incorporated as overall forest goals and objectives, while others are now in the Forest-wide Standards & Guidelines. Nothing in the proposed forest plan prohibits considering a 600 foot buffer around corridors and forest blocks during project level planning.

Comment: (1996) On page 4-95. 1. (Threatened or Endangered Species) the following statement should be added after number 4. (It augments the implementation of the December 20, 1994, Interagency Memorandum of Understanding.)

> "5. Provide habitat and population survey information of species of concern to the U.S. Fish and Wildlife Service to assist in the status investigations of those species required by the Endangered Species Act."

Response: We believe the interagency Regional Memorandum of Understanding in #4 ensures interagency cooperation in the conservation of species tending toward listing under the Federal or State Endangered Species Acts. The following has been added to the Threatened, Endangered & Sensitive Forest-wide Standards & Guidelines to address this concern "exchange records and information with appropriate organizations and state and Federal agencies on the status of populations and habitat."

Comment: (1996) On page 4-100 (Candidate Species and Species of Concern) the U.S. Fish and Wildlife Service no longer uses the term "Category" to define or differentiate among Candidate species. Candidate species are now defined as those species for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threats to support proposals as threatened or endangered

(formerly Category I Candidate species) under the Endangered Species Act. Also, the U.S. Fish and Wildlife Service no longer maintains lists of species being considered for listing, such as those formerly designated Category 2 candidate or Species of Concern.

Response: This has been updated.

Comment: (1996) On page 4-126, V (Bald Eagle Habitat) the paragraph is very general and does not provide the specificity necessary to afford a level of uniform compliance needed to ensure that this essential habitat element is protected. The 10 Standards and Guidelines contained in the November 6, 1995, Standards and Guidelines review draft should be included in the Final Standards and Guidelines. Those 10 Standards and Guidelines apply throughout the forest, while allowing for protection of these areas as they are found and mapped. Compliance could be easily monitored. They would also minimize concerns about discretionary interpretation of Standards and Guidelines while adding specific measures necessary to maintain the ecological integrity of bald eagle habitat.

Response: The Bald Eagle MOU includes relatively specific, nondiscretionary, standards. We opted to reference the MOU in the Plan to avoid redundancy.

Comment: (1996) On page 4-127, VII, consideration should be given in the Final Forest Plan to the potential for adverse impacts to marine mammals and the marine environment due to fuel spills, storage, transport, and handling.

Response: Forest-wide Standards & Guidelines in Wildlife & Transportation require following procedures established by the Alaska Department of Environmental Conservation regarding disposal of oil and fuels.

Comment: (1996) On page 4-127, VIII (Seabird Rookeries. A. 1) the last sentence in this section be changed by deleting the phrase "...on upland habitats."

Response: We have not deleted the phrase, since the Forest Service generally only asserts jurisdiction to regulate human use on uplands.

Comment: (1996) On page 4-129 (Alexander Archipelago Wolf. A.3.) the phrase "(t)his is generally, 13 deer/mile^2" should be deleted. This Standard and Guideline should read: "Provide sufficient deer habitat capability to sustain a wolf/deer equilibrium and meet human deer harvest demands for sport and subsistence use, based on the most updated deer habitat capability model or sufficient, relevant local empirical information."

Response: The 13 deer/sq. mi. estimate is the equilibrium level suggested by the Wolf Conservation Assessment. The standards and guidelines for the wolf allow the flexibility to be responsive to new information and revisions of the models.

Comment: (1996) On page 4-129 (Marbled Murrelet) repetitive marbled murrelet inland surveys should be performed in project areas for at least a two-year period.

Response: We are currently evaluating the effectiveness of inland marbled murrelet inland surveys. We encourage their use, but we are not prepared to require a two-year monitoring period.

Comment: Under "Habitat Improvement Planning," what are the habitat and population objectives; where are they presented? (WLS)

Response: Objectives are stated (usually as the first sentence) for each of the species listed individually in the Subsistence, Fish, Wildlife and Threatened, Endangered and Sensitive Species standards and guidelines.

Comment: Under "Snag/Cavity-Nesting Habitat," evaluating 4th order watersheds is not adequate: they vary too much in size, and adequate snag distribution may not be achieved. (WLS) Also:

- snag retention standards and guidelines must be more than "considered": they must be implemented
- snag retention standards and guidelines must be implemented before timber harvest, not after
- live trees must be retained and managed for future snags. (WLS)

Response: We have dropped the reference to 4th order watersheds. Providing for reserve tree/cavity-nesting habitat will be addressed in project level planning. General direction for reserve tree/cavity-nesting habitat is still provided in the Wildlife Forest-wide Standards & Guides.

Comment: A better method for selecting wildlife retention areas is needed. The method used for the Bohemia and Starfish Sales (using ADF&G's suggestions) was good and should be incorporated into the Forest Plan standards and guidelines. (NCC)

Response: The new revised forest plan does not use the retention method. Instead wildlife issues are initially addressed through old-growth and similar land allocations and standards and guidelines at the Forest Plan level. Wildlife concerns are further addressed at the project level by deferral of old-growth areas and harvest unit design at the stand and landscape scales. At the project level the adequacy of small HCA's are reviewed as provided for in the Old-growth Habitat LUD.

Comment: The portion of the wildlife standard and guideline in the DEIS pertaining to old growth retention (the use of 5,000-acre blocks and retention of 24 percent) shouldn't have been dropped. List, designate and display (on a map) critical wildlife habitat retention areas. Provide wildlife retention areas (mapped and set aside) for each "wildlife management area."

Response: Please see previous response. Wildlife habitat "retention" areas have not been identified on a Forest-wide or area-wide basis. This standard was used in earlier planning efforts and has been replaced by a Forest-wide old growth conservation strategy (see the Old-growth Habitat LUD and information in the Biodiversity and Wildlife Sections of the FEIS). Important or critical wildlife habitat is identified during project planning.

Comment: Direction for rehabilitating past or future degraded habitats resulting from transportation system development is lacking and should be added, including other resource agency involvement and methods to be used. (USDI)

Response: Wildlife and fish enhancement and rehabilitation projects are listed in the Revised Plan for implementation over the coming 10 to 15 years. Road management objectives are established and a road management plan developed for each ground disturbing project to determine what roads should be closed and which should be left open to public use. Other standards and guidelines common to all alternatives can be used to reduce future effects.

Comment: The requirement restricting helicopter flights in the bald eagle standards and guidelines (V.A.6) seems unnecessary and overly restrictive. Inactive bald eagle nests should not have the 330' buffer maintained for more than five years. (AFA)

Response: The bald eagle standards and guidelines are based on a joint interagency agreement with the U.S. Fish and Wildlife Service.

Comment: Leave strips of 300 feet should be applied to all tidewater shorelines, and to all ridges connecting alpine or feeding areas to tidewater areas or other critical areas of deer winter habitat.

Response: The Forest-wide Standards & Guidelines for Beach and Estuary Fringe provide for a 1,000-foot no-harvest zone along all shoreline areas. Riparian areas and natural setting LUD's also serve as wildlife corridors. Additional corridors are considered during project-level planning on a case-by-case basis. In addition, there are 3.4 million acres of unproductive old growth on the Forest, which will never have timber harvest, some of which serve to link tidewater shorelines with alpine areas.

Comment: Wildlife baseline studies done after pre-work has already started (such as mineral exploration) will not be a true baseline, since the wildlife will already be affected.

Response: We assume you are referring to the direction in the Minerals LUD to "establish or use existing baseline wildlife inventories." The Minerals LUD applies to both development and exploration activities within the area covered by the LUD, whenever such activities may result in "significant surface disturbance."

Comment: Limit clearcut size to 20 acres, with an average of 10 leave trees per acre, to provide for wildlife needs.

Response: We do not know which particular wildlife species or "needs" are being referenced.. Most management indicator species of the Tongass are old-growth associated species for which small clearcuts with a substantial number of "leave trees" may not provide the necessary habitat. Using nothing but small clearcuts may also lead to considerable habitat fragmentation and many more miles of roads (which both may be detrimental). However, small clearcuts can be appropriate perhaps not only for identified habitat related benefits, but riparian and scenic quality as well. The Timber Forest-wide Standards & Guidelines allow for consideration of small clearcuts, group selection and individual tree selection in all LUD's based on on-the-ground project level design.

Comment: The Forest Sciences Lab study of prescribed fire should be completed before fire is used any further to "improve" wildlife habitat.

Response: The use of prescribed fire for wildlife habitat improvement is not mentioned under "wildlife habitat improvement" in the Wildlife Forest-wide Standards & Guidelines. Using prescribed fire to "accomplish resource management objectives" is still an option (Fire Forest-wide Standards & Guidelines), but is seldom used in Southeast Alaska.

Comment: The standards and guidelines for ospreys should direct that annual surveys are done, not every five years. The population of ospreys is small, and significant changes could occur over a one or two year period. (WLS)

Response: Since osprey nesting habitat generally occurs in areas covered by the Riparian or Beach Fringe and Estuary Forest-wide Standards & Guideline (within LUD's that allow timber harvest), significant disturbance of known or unknown nest sites is extremely unlikely. However, there is no language in the

Threatened, Endangered, and Sensitive Species Forest-wide Standards & Guidelines to limit or preclude annual osprey surveys.

Comment: The standards and guidelines for trumpeter swans should state “no disturbance” rather than “avoid disturbance’ (page 4-70). (SEACC)

Response: “No” is not a verb, so wouldn’t work in a direction statement. “Avoid” in this context means “prevent the occurrence of” (Webster), and seems to clearly state the desired objective of not disturbing the swans.

Comment: The standards and guidelines for mountain goats do not address aircraft disturbance. (SEACC)

Response: A guideline has been added to the Wildlife section of the Forest-wide Standards & Guidelines regarding aircraft disturbance near mountain goats.

Comment: The stellar sea lion standards and guidelines should be modified so that there are no timber harvest units within a mile of haulouts. (A list of rookeries and haulouts is enclosed.) (NMFS)

Response: The standards and guidelines direct that “facilities, camps, LTF’s, ...” be located one mile (or more) from known haulouts. We know of no scientific literature or other information to support the need for a requirement limiting harvest units more than a mile from haulouts.. The Beach Fringe & Estuary Standards & Guidelines will provide a average 1,000-foot buffer along all shorelines in areas where timber harvest would occur. Furthermore, the revised Biological Assessment prepared for listed marine mammals concluded that the proposed revised forest plan with associated standards and guidelines, developed in cooperation with the NMFS, would not adversely effect these species. The NMFS concurred with this finding.

Comment: Provisions to protect humpback whale habitat in Silver Bay and the Eastern Channel near Sitka should be added to the Plan. These must address reducing air and water pollution from the Sitka mill. (GP)

Response: Other than controlling the use of aircraft or boats in conjunction with Forest Service permitted or approved activities, provisions for protecting whale habitats are the responsibility of State and other Federal agencies, since the Forest Service does not have jurisdiction over marine waters. Controlling pollution from the Sitka Mill (which is on private land) is also the responsibility of State and other Federal agencies. The Sitka Mill is now closed.

Comment: National regulations for approaching marine mammals are scheduled for publication in the Federal Register early in 1992. It is recommended that these regulations be used in place of the applicable standards and guidelines to avoid confusion for the public. (NMFS)

Response: See response above relative to the Biological Assessment prepared for listed marine mammals. In addition, the direction now reads: “Ensure that Forest Service funded, permitted or approved activities are conducted in a manner consistent with the requirements, consultations, or advice received form appropriate regulatory agencies for the Marine Mammal Protection Act (MMPA), the Endangered Species Act, and National Marine Fisheries Services guidelines for approaching seals and sea lions.

Comment: The term “practicable” used in the standards and guidelines for seabird rookeries and waterfowl habitats needs to be defined, and further guidelines for what is “practicable” added. (USDI)

Response: “Practicable” is defined in 40 CFR 230.3(q). It is no longer used in the standards and guidelines for seabird rookeries and waterfowl habitats..

Comment: The source for the distance guidelines used to minimize disturbance to seabirds, herons and waterfowl should be identified. “We suggest all aircraft and vessels maintain at least a 1-mile horizontal and aircraft maintain a minimum 1,500 foot vertical distance above known or observed bird colonies and concentrations.” Also, further guidelines are needed for avoiding disturbance due to all kinds of human activities, not just aircraft. (USDI)

Response: The source for distance guidelines are numerous interdisciplinary and interagency meetings that have been held to discuss standards and guidelines. We have cited relevant literature in FEIS when needed. One of the sources used as a starting point was a letter from Lana Shea, ADF&G, in 1988. In our review, we believe ADF&G did a thorough review of the literature and documented that review in the ADF&G report (Alaska Habitat Management Guide, Guidelines for the Protection of Wildlife and Their Habitat and of Human Use of Fish and Wildlife, 1986), and reached a reasonable conclusion regarding appropriate standards and guidelines. The great blue heron was a species not specifically covered in the ADF&G letter. Guidelines for the great blue heron were addressed by an interagency team of wildlife biologists (Suring et al., 1993) which did a thorough review of the literature for the heron and developed distance guidelines, which we have incorporated in part. Your suggestion for “at least 1-mile horizontal...distance from known or observed bird colonies and concentrations” has not been adopted because it was deemed not necessary as a standard or guideline. However, nothing in the current standard prohibits a the FS from regulating use within 1 mile of a particular bird concentration or colony.

Comment: Direction for rehabilitating adversely-affected waterfowl habitat should be added to the standards and guidelines. If transportation analysis finds no practical routes for avoiding high-use waterfowl wetlands, the timber sale should be designed to minimize impacts. Logging should not be conducted during periods when the waterfowl are using the area (during spring and fall migrations and summer breeding and nesting). (USDI)

Response: We have added the following standard and guideline to the waterfowl section of the Wildlife Forest-wide Standards & Guidelines: “During project planning, consider the need to rehabilitate waterfowl habitat following development activities if there is no feasible alternative to the habitat disturbance. (Also see the Wetlands Forest-wide Standards & Guidelines.)” The part of the comment which suggests that logging should not be conducted during periods when the waterfowl are using the area is incorporated in the standards and guidelines which state, “Minimize human disturbance ... during important periods of the year...”

Comment: We suggest adding direction for avoiding documented or suspected marbled murrelet nesting habitat by [re]scheduling timber harvest. (USDI)

Response: Direction for management of marbled murrelet nesting sites is now included in the Wildlife Forest-wide Standards & Guidelines.

Comment: We recommend adding the following to the Peale’s Peregrine Falcon standards and guidelines: “Aircraft flights on Forest Service approved projects, when weather ceilings permit, should maintain at least a 1-mile horizontal and 1,500 foot vertical distance from known or potential peregrine falcon nest sites to avoid conflict.” Also, further guidelines are needed for avoiding disturbance due to all kinds of human activities, not just aircraft. (USDI)

Response: In order to enforce the suggested guideline, it would be necessary to specifically locate the Peale's Peregrine Falcon nest sites for all Forest Service personnel, permittees and contractors. However, the locations are kept confidential by the U.S. Fish and Wildlife Service in order to avoid poaching/stealing of the birds. Locations are also available to selected Forest Service personnel. The Heron and Raptor Nest Protection section of the Wildlife Forest-wide Standards & Guidelines are general enough that nest site locations will not become readily apparent to the public.

Beach Fringe and Estuaries

Comment: The Beach Fringe designation concept is excellent.

Response: Thank you.

Comment: The definition of estuaries must include the associated grassflats and mudflats, where some of the most productive marine habitat occurs. (NCC) The definition of estuary is confusing. The Beach Fringe LUD should not extend up tidal rivers with little or no estuary influence. (AFA)

Response: See previous response. Estuaries are ecological systems at the months of streams where fresh and salt water mix, and where salt marshes and intertidal mudflats are present. Following is the modified definition of the estuary used in the Revised Plan: the landward extent of an estuary is the limit of salt-tolerant vegetation (not including the tidally influenced stream or river channel incised into the forested uplands), and the seaward extent is a streams delta at mean low water. This definition should meet the concerns of both comments.

Comment: For beach fringe areas, the emphasis should be on undisturbed conditions: salvage sales should not be allowed. Also, wildlife enhancement to create small canopy gaps should only be done in second growth stands within the beach fringe. (WLS)

Response: The Beach and Estuary Fringe is 1,000' in width from the beach in several alternatives, including the preferred. The standards and guidelines have been clarified in the Beach and Estuarine Fringe Forest-wide Standards & Guidelines, and state: "..Allow salvage of dead standing and/or down material if the salvage activity is consistent with long-term beach and estuary management objectives. Small amounts of standing green timber may be harvested during salvage operations for safety and operational considerations." This language does not preclude salvage, but rather emphasizes the wildlife, fish, wetlands, coastal recreation, visual, cultural and other related resources associated with shoreline and estuarine areas (see Final Forest Plan, Chapter 4, Beach & Estuary Fringe Standards & Guidelines for Objectives and Identification.

The Beach Fringe and Estuarine Forest-wide Standards & Guidelines, and also state: "Wildlife habitat restoration of young-growth conifer stands is encouraged to accelerate development of advanced seral stand structure. Treatments may include thinning, of young stands, release, pruning, and fertilization."

Comment: (1996) Beach fringe standards should be extended to 1,000' or even to 1,500' because of importance of beach fringes for wildlife corridors and scenery values. Extend the no-cut buffer to 1,000' and allow only selective harvest for an additional 500' to provide a wind-resistant edge.

Response: The Final Forest Plan includes a 1,000' buffer managed under the Beach and Estuary Fringe Standards & Guidelines. It recognizes the importance of this landscape position to wildlife resources. Additional buffering can be considered on a case-by-case basis during project level planning.

Comment: (1996) The FEIS should describe how beach fringe areas include haulouts for marine mammals, including sea otters, seals, and sea lions.

Response: This is addressed in the Marine Mammal Habitats section of the Wildlife Forest-wide Standards & Guidelines. Haulouts generally occur below mean high tide, a point where Forest Service jurisdiction begins and where the Beach Fringe buffer begins.

Comment: (1996) The Alaska Region Channel Type Classification System per the Channel Type User Guide (USDA, April 1992) should be used to identify estuaries. The Estuary Fringe Standards and Guidelines should be applied to all stream channels classified and field-verified as one of the five channel types within the Estuarine Process Group (i.e., channel mapping symbols ES 1, ES 2, ES3, ES4, and ES8). The U.S. Fish and Wildlife Service National Wetland Inventory maps should be used to identify estuaries.

Response: See response above regarding the definition of estuary. The Alaska Region Channel Type Classification System and the USFWS National Wetland Inventory maps will be valuable aids in identifying estuaries.

Comment: (1996) The standard to locate facilities more than 1,000 feet from Class I streams or beds of aquatic vegetation should be retained.

Response: The FEIS provides direction in the Beach and Estuary Fringe Forest-wide Standards & Guidelines to locate facilities more than 300 feet from the mouths of intertidal channels of known Class 1 anadromous fish streams or tidal or subtidal beds of aquatic vegetation to avoid significant impairment. Project level analysis may increase this distance if local site specific analysis indicates that additional protection is warranted. Also see the Log Transfer Facility Siting guidelines in the Appendices to the Forest Plan.

Comment: (1996) The RSDEIS listed several reasons the 500-1,000 foot beach buffer has been found important for wildlife. The RSDEIS stated that beach fringe could provide more effective landscape linkages between habitat reserves, protect long-term bald eagle habitat capability, buffer the primary beach fringe zone from windthrow, maintain a functional interior forest condition within the entire primary beach fringe, sustain habitat for goshawks and indirectly contribute to overall landscape management of lands between habitat reserves. However, the Forest Supervisors have chosen not to select an alternative with this extended beach fringe.

Response: We have applied the 1,000-foot Beach and Estuary Fringe Forest-wide Standards & Guidelines in the preferred alternative.

Comment: (1996) The Forest Service should manage beach and estuary fringe under a Land Use Designation. Management under the proposed forest-wide Standards and Guidelines would not necessarily afford a level of protection needed to ensure that this critical landscape element serves the many functions intended. Beach fringe and estuary locations are definable, and compliance monitoring would be relatively easy.

Response: Managing the beach and estuary fringe as a Forest-wide standard will provide essentially the same level of resource protection as a Land Use Designation. Managed as a LUD, it would not be clear what other management would apply (for instance what type of recreation objectives).

Comment: (1996) The Forest Service should implement a beach fringe land use designation with a precisely written, definitive, stringently monitored and enforced set of Standards and Guidelines. It should include a beach fringe that has 0-500 foot "no harvest" buffer without roads, strict adherence to Standards and Guidelines, including monitoring, and a 500-1,000 foot buffer where uneven-aged management is acceptable. The 500-1,000 foot buffer is a recommendation made by ADF&G for protection of marten habitat. (1996) The November 1995, draft Standards and Guidelines for beach and estuary fringe [those used for the Panel Assessments] offer well-conceived direction for meeting the criteria of being definitive and able to be uniformly and rigorously enforced. Any deviations from this approach fall short of the public's expectations of sound, implementable, and enforceable forest-wide Standards and Guidelines.

Response: See previous responses. We have applied a 1,000' Beach and Estuary Fringe Forest-wide Standards & Guidelines in the preferred alternative.

B. Comments About Geographic Areas

Introduction

These area-specific (or site-specific) comments are divided into three sections:

- "lists" of areas with generic comments but little or no individual comment;
- comments on specific areas, arranged by major geographic area; and
- “lists” of rivers pertaining to possible Wild and Scenic River designations.

The geographic areas usually include more than one specific area, although some areas with many in-depth comments may be listed separately. The geographic areas used as the main headings, and which are included in alphabetical order, are listed in the Table of Contents. Comments about existing or proposed Research Natural Areas, Special Interest Areas, or Experimental Forests are included under the Special Areas section of the Resource/Issue comments summaries.

Comments about individual rivers related to possible Wild and Scenic River designations are included with the descriptions of each river in Appendix F. The Record of Decision discusses the rational for the individual river recommendations.

Many comments were received on the DEIS about areas that subsequently became Wilderness or Legislated LUD II as a result of the Tongass Timber Reform Act. The majority of these comments requested protection for these areas similar to the designations that Congress gave them. Comments of this nature about these areas are not included in this summary, but other comments about these areas are included.

References made to timber sale numbers (sale #) are to the sales listed on the Long-Term Contracts Map in the map packet of the August, 1991 Supplement to the DEIS.

Notes on Land Use Designations

In evaluating the LUD selections (or allocations), it should be noted that the Scenic Viewshed and Modified Landscape LUD's are applied where a mix of resource uses and activities, primarily scenic viewing, recreation uses and timber harvesting, occur together. These areas are managed so that the visual evidence of developments (harvest units, roads, etc.) receives emphasis during project design. These LUD's are often used along shorelines, bays and inlets, at developed recreation sites, and along major transportation routes. The requirements for timber harvest under these LUD's may also mean a reduction in the effects to wildlife habitat and associated subsistence resources than would occur under the Timber Production LUD.

Whenever the LUD selected for an area allows development activities, the Riparian Forest-wide standards and guidelines apply to all streams, and the Beach and Estuary Fringe Forest-wide standards and guidelines to all beach and estuary shoreline areas.

The term "Legislated LUD II" applies to the Land Use Designation II areas designated by Congress (Tongass Timber Reform Act of 1990) to be managed in perpetuity in the same manner as the LUD II areas in the 1979 (as amended) Forest Plan. Like Wilderness, these designations are already in place.

It should also be noted that allocating an area to a particular land use designation is not a decision about specific projects that will occur there, but only about the types of projects that <u>may</u> occur there. When individual projects and proposals are undertaken, an evaluation through an analysis of site-specific environmental effects occurs before a decision is made on whether or not the project should be implemented, and if so, how. Most of the concerns expressed about specific areas, the related resource values (including scenic quality, subsistence uses, wildlife habitat or recreation), and the potential effects

that management activities would have on these values will all be evaluated in much more detail at the project level whenever proposals are made.

Lists of Areas

Note: The Land Use Designation (LUD) allocations of the revised Forest Plan for all the areas listed in items A through J below are included in Table 1 following item J. More in-depth responses for the allocation choices for most of these areas are included in the responses under the "Individual Area Comments."

A. **Comment:** Approximately 1,400 letters were received on the DEIS in response to a National Wildlife Federation article, a SEACC "Alert" (newsletter), and Wilderness Society or Sierra Club articles or newsletters. All of these sources listed specific areas for the public to include in their comments, and the majority of writers did so. Some of the publications just ask for "protection" of the areas, others asked that either the Remote Recreation or Old Growth prescriptions be applied. These areas are:

- Mt. Edgecumbe (National Recreation Area proposal)
- the entire Mansfield Peninsula
- Salmon Bay Lake "key tributaries"
- Honker Divide canoe route and adjacent roadless lands
- Cleveland Peninsula (defer harvest for 10-15 years)
- HR 987 areas left out of the Tongass Timber Reform Act
- River corridors with outstanding natural beauty, high fisheries production, or unique ecologic characteristics (no specific ones listed)
- all Research Natural Areas (no specific ones listed)

B. **Comment:** A short article in *Greenpeace Magazine* resulted in over 100 letters on the 1991 Supplement. Most writers included a list of several areas that should not be "back on the block" (scheduled to be clearcut: "Anyone who has been there knows that to clearcut these areas is madness."). These were:

Port Houghton/Sanborn Canal, Hoonah Sound, Cleveland Peninsula, Honker Divide, Sarkar Lakes and North and West Dall Island.

C. **Comment:** Southeast Alaska Conservation Council (SEACC) in their 1990 DEIS comments listed a number of areas as "deserving of special management attention," with the desire that "the integrity of these [be] safeguarded." No reasons were given. Most of these areas appear elsewhere in the summaries. Following is SEACC's list:

Sullivan Island, Mansfield Peninsula, Ushk and Deep Bays, Upper Tenakee Inlet, East Kuiu Island, Bay of Pillars, S. Kuiu, Rocky Pass, Duncan Canal, Castle River, Kah Sheets River, Beecher Pass, Port Houghton, Sanborn Canal, Blind Slough on Mitkof Island, the entire Salmon Bay Lake watershed, Honker Divide (Thorne River--Sweetwater), Sarkar Lakes, Indian Creek near Hollis, Cleveland Peninsula, Kegan Lake, Keete Inlet, Mabel Bay, and Kassa Inlet (all south of the Nutkwa watershed), Mount Edgecumbe, Lake Eva, Kelp Bay, Catherine Island, plus other specific subsistence, wildlife, fish, outstanding river corridors, and recreation places throughout the Tongass.

D. **Comment:** A Southeast Alaska Conservation Council (SEACC) "alert" ("Tongass Action Alert: Your Voice Needed") and other material resulted in another 100 or so letters. The majority of these included comments on areas as follows:

- establish and maintain the Honker Divide Canoe Route
- more Wild and Scenic Rivers in LUD II areas

- old growth or Remote recreation LUD's for the areas "supported for Wilderness by the U.S. House of Representatives," and certain other areas (which should have "the strongest protection possible"). These are listed in several letters as:

Goose Flats/Upper Tenakee Inlet	Sarkar Lakes
Ushk Bay/Hoonah Sound	Kegan Lake
Port Houghton/Sanborn Canal	Honker Divide
North & West Dall Island	North Kruzof Island
Cleveland Peninsula	Mansfield Peninsula
Chilkat Peninsula	Rocky Pass
Salmon Bay Lake	Kalinin Bay
Duncan Canal	Dry Bay
East Kuiu Island	

E. Comment: Several people at the public hearings held throughout Southeast Alaska listed areas for which was requested no roading or timber harvest. These included:

Duncan Canal, Goose Flats, Ushk Bay, Port Houghton, Kegan Lake, East Kuiu, Cleveland Peninsula, Rocky Pass, Chilkat Peninsula, Mansfield Peninsula and Honker Divide.

F. Comment: The following watersheds should be protected entirely:

Salmon Bay, Chuck River, Kadashan, Windham Bay, Rocky Pass, Sarkar Lakes, Blind Slough, Honker Divide, Harding River, Farragut Bay, Duncan Salt Chuck Creek, Port Houghton/Laura's Creek/Sanborn Canal (NCC)

G. Comment: In their comments to the 1991 Supplement, SEACC listed the following areas as "meriting special management protection" for their outstanding wildlife, fisheries, hunting, fishing, subsistence, recreation and tourism values. About one-third of these same areas were listed by Greenpeace.

Sullivan Island	Katzehin	Chilkat Range
Cowee Creek	Herbert/Eagle Rivers	Situk, Ahrnklin Rivers
Kalinin Bay	Spaulding Meadows	Arena Cove
Point Couverden	Endicott Arm	Port Houghton
Sanborn Canal	Mansfield Peninsula	Windham/Holkham Bays
Upper Tenakee Inlet	Poison Cove	Ushk & Deep Bays
Lake Eva	Kelp Bay	Mt. Edgecumbe
N. Kruzof	Catherine Island	Nakwasina/Halleck Is.
Hanus Bay	Kakul Narrows	Broad River
S. Kuiu	Bay of Pillars	E. Kuiu
Rocky Pass	Duncan Canal	Woewodski Island
Portage Bay	Wrangell Narrows	Blind Slough
Pt. Frederick	S. Wrangell Island	Whaletail/Menafee
N. Etolin	Farragut Bay	Dry Bay
Back Channel,Wrgl.	Harding/Eagle Rivers	Cape Fanshaw
Santa Ana	Honker Divide	Cleveland Peninsula
NW POW Island	W. POW Island	San Fernando Island
El Capitan	N. Sea Otter Sound	All of Salmon Bay Lake
Sarkar Lakes	Carroll River	Moira Sound
Kegan Lake	Indian Creek	W. Dall Island
Orchard Lake	George Inl. Salt Chuck	S. POW Island
Thomas Bay	Haida Inlets: Kassa, Mabel, Keete	

H. Comment: Several individuals commented that all areas proposed for Wilderness in the 1989 House Bill HR987 should be recommended for Wilderness, or otherwise given strong protection. These include:

- Port Houghton/Sanborn Canal (VCU's 79 and 84)
- South and East Kuiu (VCU's 410-414 and 416-418)
- North Tenakee Inlet (Goose Flats, Seal and Long Bays: VCU's 224-226, 228 and 229)
- Duncan Canal (VCU's 434-436, 438-440 and 448)
- Bay of Pillars (VCU 403)
- Point Adolphus (VCU 196)
- Hoonah Sound (VCU's 224-226)
- Chuck River/Holkham (VCU's 64, 68-70 and 72-74)
- Rocky Pass (VCU's 427-428)
- Nutkwa (VCU's 685, 688 and 689)
- Etolin Island (no VCU's in final bill)
- San Fernando Island (VCU 628)

I. Comment: A few individuals felt that "Multiple Use Management" should continue for the following areas:

Salmon Lake Bay tributaries, Honker Divide canoe route, Etolin Island, Cleveland and Mansfield Peninsulas, Mt. Edgecumbe, and Upper Game Creek.

J. Comment: (1996) The Alaska Rainforest Campaign and SEACC recommended the following areas for “LUD II or similar” protection:

Honker Divide, Cleveland Peninsula, Port Houghton, East Kuiu, Ushk Bay/DeepBay/Poison Cove, Broad Finger and Broad Creeks, Nakwasina, Kalinin, Chicken Creek (seee Pt. Adolphus), Upper Tenakee Inlet, Eleven Mile, Saook Bay (see Hanus Bay), Keete/Mabel Bays, Castle River, North Sea Otter Sound Islands, Calder-Holbrook addition, the rest of the Salmon Bay Lake watershed, NW Berners Bay, a restoration area on NW Prince of Wales Island, and SE Mitkoff Island. [The latter three general areas are not included in the table.]

A-J. Response: Table 1, which follows and extends over several pages, lists alphabetically the areas included in items A through J above, and gives the land use designations (LUD's) applied to these areas in the revised Forest Plan. More in-depth responses, including the rationale for the LUD allocations, for most of these areas may be found under part II. Individual Area Comments. In distinguishing between the three "timber harvest" LUD's, it should be noted that the Scenic Viewshed and Modified Landscape LUD's are applied where a mix of resource uses and activities, primarily scenic viewing, recreation uses and timber harvesting, occur together. These areas are managed so that the visual evidence of developments (harvest units, roads, etc.) receives emphasis during project design. The Timber Production LUD is used where industrial wood production is the main objective. Riparian areas, shorelines and estuaries receive protection for the other resources associated with these areas. Whenever the LUD selected for an area allows development activities, the Riparian, and Beach and Estuary Fringe, Forest-wide standards and guidelines apply, as previously discussed.

Table 1
LUD Allocations of Areas Listed in Generic Comments A-J

Area	Disposition
Arena Cove	This portion of Suemez Island is proposed as the Arena Cove/Cape Felix Geological Area (Special Interest Area LUD).
Back Channel	Most National Forest lands on both sides of Back (or Blake) Channel (between Wrangell Island and the mainland) have the Scenic Viewshed LUD, with the lower half along the mainland mainly in Semi-remote Recreation. A portion of Wrangell Island across from Madan Bay is in Timber Production.
Bay of Pillars	All of this area of Kuiu Island has been assigned to either Remote or Semi-remote Recreation (LUD's).
Beecher Pass	The National Forest portion (north end of Woewodski Island) has the Scenic Viewshed LUD.
Blind Slough	This area of Mitkof Island is proposed as the Blind Slough Scenic and Zoological Area (Special Interest Area LUD). Also, Blind River is a recommended Recreation River.
Broad River	This area along Peril Strait (across from Rodman Bay) will be managed under the Timber Production LUD, with Scenic Viewshed along the shoreline.
Cape Fanshaw	The National Forest lands along the Cape, except for Cape Fanshaw Research Natural Area, are in the Old-growth Habitat LUD.
Carroll River	Carroll River above Carroll Inlet on Revilla Island is in the Timber Production LUD, except for Modified Landscape at its mouth.
Castle River	The lower two miles of this river on the west side of Duncan Canal, including the recreation sites, are in the Semi-remote Recreation LUD. The upper portion is in Timber Production.
Catherine Is.	The north and northwest portions of the island (along Chatham Strait at Peril Strait) are assigned Scenic Viewshed, the east and south are in Old-growth Habitat, and the rest is in Modified Landscape or Timber Production.
Chilkat Pen.	All of the shoreline of the Chilkat Peninsula, including the areas seen from the cruiseship and ferry routes, is assigned Scenic Viewshed. Interior portions in the south, along the developed road system, will be managed for Timber Production. The rest of the peninsula is in Semi-remote Recreation.
Chuck R./ Holkham	The Chuck River, Endicott Arm and most of Holkham Bay (on the mainland south of Juneau) are now Wilderness. The remaining (northwest) part of Holkham Bay is assigned Semi-remote Recreation and Old-growth Habitat.
Cleveland Pen.	The western half of the peninsula is in Semi-remote Recreation. The eastern half is a combination of Old-growth Habitat, Timber Production, and Modified Landscape.
Cowee Creek	The National Forest portion of Cowee Creek (north of Juneau) is in the Scenic Viewshed LUD, overlain with the Minerals LUD.
Dry Bay	All of Dry Bay, on the mainland northwest of Thomas Bay, is in the Scenic Viewshed LUD.
Duncan Canal	The west side, and north end, of Duncan Canal (Kupreanof Island) are assigned the Semi-remote Recreation LUD. The east side south of the Wilderness is in Old-growth Habitat or Modified Landscape. See also Beecher Pass, Castle River and Kah Sheets River.
East Kuiu	The Port Camden area is in Timber Production. The shoreline and all bays and inlets south of Rocky Pass are in Modified Landscape or Old-growth Habitat, with Timber Production inland. See also Rocky Pass.
El Capitan	El Capitan Peak and southward to El Capitan Pass (northern Prince of Wales Island) is included in the Karst Areas Geological Area (Special Interest Area LUD). The north-south portion of El Capitan Pass (or Passage) is mostly in Timber Production; the east-west portion is Legislated LUD II on the south side and Modified Landscape on the north side.
Endicott Arm	See Chuck River/Holkham.

Area	Disposition
Etolin Island	See North Etolin Island and Whaletail/Menafee.
Farragut Bay	All of Farragut Bay (on the mainland north of Petersburg) is in Semi-remote Recreation. The Farragut River is recommended as a Wild and Scenic River. Adjacent bays and shoreline to the north and south are in Scenic Viewshed.
George In. Salt Chuck	The salt chuck itself (central Revilla Island) is in State of Alaska ownership. The adjacent National Forest land is in the Modified Landscape LUD.
Goose Flats	The portion of Goose Flats around the upper end of Tenakee Inlet, and inland for about one mile, is assigned Modified Landscape, and the more-inland part is in Timber Production.
Haida Inlets	Three inlets on south Prince of Wales Island were named: Kassa, Mabel, and Keete Inlets are all in Timber Production.
Hanus Bay/ Saook Bay	Most of Hanus Bay (along Peril Strait west of Catherine Island) is in the Scenic Viewshed LUD, with small portions in the Modified Landscape or Semi-remote Recreation LUD's. The mouth of Saook Bay is Scenic Viewshed, and most of the interior is in Timber Production.
Harding/Eagle R.	The Eagle River (south side of Bradfield Canal) is within an area assigned the Semi-remote Recreation LUD. The Harding River (north side of Bradfield Canal) is recommended as a Wild and Scenic River, and is surrounded by lands in Semi-remote Recreation.
Herbert/Eagle R.	The Herbert and Eagle Rivers (north of Juneau), and adjacent trails and recreation areas, are assigned the Semi-remote Recreation LUD. Except for the trails and recreation facilities, this is overlain by the Minerals LUD.
Honker Divide	The Thorne River and Hatchery Creek (central Prince of Wales Island) are recommended as Scenic and Recreation Rivers. The surrounding area, a corridor averaging two miles on the east and one to two miles on the west, is in the Old-growth Habitat, Scenic Viewshed and Modified Landscape LUD's.
Hoonah Sound	Most of this area of Chichagof Island is now in Legislated LUD II. The eastern portion along Peril Strait is in Scenic Viewshed and Old-growth Habitat. See also Ushk Bay.
Indian Creek	The lower half of the National Forest portion of this area (central Prince of Wales Island, next to Hollis) is in Modified Landscape, the upper half in Timber Production.
Kah Sheets R.	The river (south Kupreanof Island) is recommended as a Wild and Scenic River. The area around Kah Sheets Bay is in Semi-remote Recreation.
Kakul Narrows	Both sides of Kakul Narrows (between Peril Strait and Sergius Narrows north of Sitka) are in the Scenic Viewshed LUD.
Kalinin Bay	Kalinin Bay on north Kruzof Island is in Old-growth Habitat.
Katzehin	The Katzehin River (on Lynn Canal across from Haines) is recommended as a Wild River except for the lower two mile, which are in the Semi-remote Recreation LUD. The Wild River portion is surrounded by Remote Recreation.
Kegan Lake	The area around Kegan Lake (southeast Prince of Wales Island) is in the Semi-remote Recreation LUD.
Kelp Bay	Kelp Bay is along Chatham Strait on Baranof Island. Portage Arm is in Modified Landscape, Middle Arm is in Modified Landscape, and South Arm is in Remote Recreation. The Old-growth Habitat LUD extends around the rest of the south side of the bay. Pond Island is in Remote Recreation. See also Catherine Island.
Lake Eva	Lake Eva and surrounding area (south side of Peril Strait) are in the Semi-remote Recreation LUD.
Mansfield Pen.	All of Mansfield Peninsula is allocated to Semi-remote Recreation. The Minerals LUD is also applied to a portion of the peninsula.
Moira Sound	Most of the sound (southeast Prince of Wales Island), including the South and West Arms, is in the Timber Production LUD. The Kegan Lake area in Semi-remote Recreation. Portions of the North and South Arms are overlain with the Minerals LUD.

Area	Disposition
Mt. Edgecumbe	This area (south half of Kruzof Island) is proposed as the Mount Edgecumbe Geological Area (Special Interest Area LUD).
Nakwasina/ Halleck Is.	The shorelines of Nakwasina Sound (north of Sitka), and all of Halleck Island, are in Semi-remote Recreation.
N. & W. Dall Island	All National Forest lands on Dall Island, except for the northernmost part, are in Semi-remote Recreation, with several small areas part of the Karst Areas Geological Area (Special Interest Area LUD). The northern portion is in Modified Landscape.
N. Etolin Island	All shoreline areas, and most inlets and bays, are in Scenic Viewshed or Modified Landscape or Old-growth Habitat, as are all areas adjacent to the South Etolin Wilderness. The interior of Anita Bay and some inland areas are in Timber Production.
North Kruzof	North Kruzof is in a combination of Old-growth Habitat, Modified Landscape, and Timber Production. Sealion Cove is in Remote Recreation, and Shelikof Bay is in Semi-remote Recreation. See also Kalinin Bay.
N. Sea Otter Sound	Most lands of North Sea Otter Sound (northwest Prince of Wales Island) not in Legislated LUD II are in the Timber Production LUD. The passage between Marble and Orr Islands is in Modified Landscape. North Orr Island and other islands to the east are in Semi-remote Recreation.
NW Prince of Wales Is.	Port Protection and lands adjacent to Point Baker are in Semi-remote Recreation; Red Bay and the northern shoreline are primarily in Modified Landscape. Lab Bay and most interior areas are in Timber Production, with some areas in the Karst Areas Geological Area (Special Interest Area LUD). The western part south of Port Protection is in Legislated LUD II. See also El Capitan.
Nutkwa	Nutkwa Lagoon and Streams (south Prince of Wales Island) are now in Legislated LUD II; Nutkwa Inlet is in Timber Production. See also Haida Inlets.
Orchard Lake	Orchard Lake and surrounding lands on Revilla Island are in Semi-remote Recreation.
Pt. Adolphus	VCU 196 is the area east of the Point Adolphus Legislated LUD II area (north Chichagof Island). The shoreline and adjacent interior area outside the LUD II area, including Chicken Creek, is in Old-growth Habitat.
Point Couverdon	See Chilkat Peninsula.
Poison Cove	This area along Peril Strait north of Sitka is in Scenic Viewshed.
Portage Bay	Portage Bay, on Kupreanof Island, is mostly in Modified Landscape, with Scenic Viewshed at the head of the bay.
Port Frederick	All of the National Forest lands along the bay (north Chichagof Island) are in Old-growth Habitat, including Neka Bay and the Portage.
Port Houghton	The salt chuck at the end of the bay, Sanborn Canal and all shorelines of the bay are in Old-growth Habitat or Scenic Viewshed.
Rocky Pass	The lands on both sides of Rocky Pass (between Kuiu and Kupreanof Islands) are in Remote Recreation, with the lands around Big John Bay in Semi-remote Recreation.
Salmon Bay Lake	Salmon Bay and Salmon Bay Lake (north Prince of Wales Island) are now in Legislated LUD II. The Lake and Stream are also recommended as a Wild and Scenic River. Most of the surrounding lands (the tributaries or "watershed") are in Modified Landscape.
Sanborn Canal	See Port Houghton.
San Fernando Is.	This island west of Prince of Wales Island is all in Semi-remote Recreation.
Santa Anna	Santa Anna Creek and Lake Helen (upper Cleveland Peninsula) are recommended as a Scenic River. Santa Anna Inlet, except for the mouth of the creek, is in Timber Production.
Sarkar Lakes	Sarkar Lakes is recommended as a Wild, Scenic and Recreation River. The area around it (1979 Forest Plan LUD II area) is in Remote Recreation. The lands between there and the coast (west Prince of Wales) are assigned to Old-growth Habitat or Timber Production.

Area	Disposition
Situk/Ahrnklin R.	These two rivers are near Yakutat. All of the Situk River, between the Russell Fjord Wilderness and the ocean, is in a Semi-remote Recreation area. Most of the Ahrnklin is also in Semi-remote, with portions of the headwaters in Timber Production of Scenic Viewshed.
South Kuiu	All of South Kuiu (south of the Kuiu Wilderness) is assigned the Semi-remote Recreation LUD.
S. Prince of Wales Is.	We'll assume this refers to the area south of Hydaburg and Cholmomdeley Sound. Nutkwa, Haida Inlets, Moira Sound and Kegan Lake are discussed under those names. The National Forest lands immediately south of Hydaburg, are in Semi-remote Recreation. Cholmondeley Sound is a combination of Modified Landscape and Old-growth Habitat. Between Moira Sound and Kendrick Bay is Timber Production and Old-growth Habitat.
S. Wrangell Island	The road system of South Wrangell Island is included in the Scenic Viewshed or Modified Landscape LUD's, and most of the shoreline is in Scenic Viewshed. The rest is in Timber Production, except for an area in the Old-growth Habitat LUD near Toms Lake. See also Back Channel.
Spaulding Meadows	This recreation area north of Juneau, including the access trails, is in Semi-remote Recreation, with the Minerals LUD excluded.
Sullivan Island	All the National Forest land on Sullivan Island (northern Lynn Canal) is in Semi-remote Recreation.
Thomas Bay	The interior portion of Thomas Bay is assigned to Semi-remote Recreation. All the rest of the southern part is in Scenic Viewshed. The northern exterior of the bay has Scenic Viewshed along the shoreline and Modified Landscape inland.
Upper Game Creek	This area near Hoonah is in the Timber Production LUD.
Upper Tenakee Inlet	All the shoreline areas, bays and inlets are in Old-growth Habitat or Modified Landscape, with Timber Production inland. See also Goose Flats.
Ushk Bay	The bay is in Modified Landscape and Old-growth Habitat, with Timber Production inland.
W. Prince of Wales Is.	We'll assume this is the coastal area of Prince of Wales Island between Dall Island and the Mt. Calder/Holbrook Legislated LUD II area. North Sea Otter Sound is already discussed under that name, as are Sarkar Lakes, Arena Cove and San Fernando Island. The mainland below Craig is in Timber Production, except for Old-growth Habitat, Scenic Viewshed, Modified Landscape in Trocadero Bay, and a Special Interest Area at Soda Bay. Suemez Island, other than Arena Cove, is in Modified Landscape and (east half) and Timber Production (west half). Between Klawock and Sarkar Lakes/North Sea Otter Sound most of the mainland and islands are in Timber Production, except for Semi-remote Recreation around Salt Lake Bay, Scenic Viewshed and Modified Landscape at Staney Creek, and Old-growth habitat on south Hecata Island.
Whaletail/ Menafee	The outer half of Whaletail Peninsula (south Etolin Island) is in Scenic Viewshed and Old-growth Habitat, and the Menafee Inlet side in Modified Landscape.
Windham/ Holkham Bays	The interior portions of Windham Bay and surrounding area (about 60 miles south of Juneau on the mainland) are now in Wilderness; the rest of the bay shoreline is in Scenic Viewshed, with Timber Production inland. See Chuck River/Holkham for Holkham Bay.
Woewodski Island	Most of Woewodski Island (mouth of Duncan Canal between Mitkof and Kupreanof Islands) is placed in Scenic Viewshed, with the remainder in Modified Landscape.
Wrangell Narrows	The National Forest lands (west side of the narrows, below Petersburg) are mostly in Scenic Viewshed, with the remainder in Modified Landscape.

Comment: The following transportation and/or utility corridors are not supported: Haines-Juneau road, Bradfield road, Sitka-Warm Springs road, Kadashan road or powerline, Petersburg-Kake road (strongly opposed). (NCC)

Response: A goal of the revised Forest Plan is to provide opportunities for resource uses that contribute to the local and regional economies of Southeast Alaska. Such opportunities include the development of transportation and utility systems. All of the potential road corridors to which the Transportation and Utility Systems (TUS) LUD is applied (including those listed here) are from the State of Alaska's Southeast Alaska Transportation Plan (1986). The potential power transmission intertie corridors are from a study (Harza, 1987) done for the Alaska Energy Authority. The potential state transportation corridors are based on the 1986 State Transportation Plan for Southeast Alaska.

In the revised Forest Plan we have shown the TUS LUD on some of these identified transportation and powerline intertie systems. This LUD would not actually apply unless a specific proposal was analyzed (through a separate environmental analysis process) and approved. None of the transportation corridors mentioned are currently funded in the State budget for a site specific environmental analysis.

Regarding Kadashan, there is no transportation corridor proposed. There is a powerline intertie corridor proposed. The State indicates, through a 1987 study by Harza Engineering, Inc., that a Sitka-Tenakee Springs-Hoonah powerline intertie would best be served by a powerline through the Kadashan valley. The Legislated LUD II designation in Kadashan does not preclude this type of development. A site-specific environmental analysis of alternative routes would be conducted before a final route was selected and developed. At this time, there is no funding for either further study or construction of this portion of the intertie network.

Comment: A form letter from Angoon (total of 48 signatures, 1990 DEIS) asks that the following areas be "identified and protected as subsistence areas." The areas should not have any "increased" development, including logging, road building and mining.

Big Basket Bay	Little Basket Bay	Kelp Bay
White Stone	Peril Straits	Hood Bay (North & South Arms)
Chiak	Mitchell Bay	Kanalku
Favorite Bay	Wilsons Cover	White Water Bay
Fishery Creek	Chatham Straits	Eastern Baranof shore

Response: Of these 15 areas, eight are within the Kootznoowoo Wilderness (Admiralty Island National Monument) and would not have any development at all. The other areas are discussed below. For these discussions, it should be noted that the Scenic Viewshed and Modified Landscape LUD's are applied where a mix of resource uses and activities, primarily scenic viewing, recreation uses and timber harvesting, occur together. These areas are managed so that the visual evidence of developments (harvest units, roads, etc.) is minimized or reduced. This in turn may reduce effects to wildlife habitat and associated subsistence resources. Riparian areas, shorelines and estuaries are always protected.

- Big Basket and Little Basket Bays: both are in the Scenic Viewshed LUD.
- Kelp Bay: The Kelp Bay allocations are discussed in Table 1 above. These allocations were designed to minimize subsistence effects in selected areas.
- Whitestone Harbor: this area is in Modified Landscape.
- Peril Strait: Most of the shoreline and adjacent lands along Peril Strait are in Scenic Viewshed, and Hanus Bay is in Modified Landscape. The Lake Eva area is in Semi-remote Recreation. Rodman Bay, most of Appleton Cove, and Saook Bay are in Timber Production.

- Chatham Strait: All National Forest lands on the east side of Chatham Strait south of Mansfield Peninsula are in the Kootsnoowoo Wilderness; all of Mansfield is in Semi-remote Recreation. On the west side of Chatham Strait, the shoreline and adjacent lands south to Catherine Island are in Scenic Viewshed, with Freshwater and Sitkoh Bays, and the outer half of Catherine Island, in Modified Landscape. For the remainder of the strait, see Kelp Bay above, and Eastern Baranof Shore below.
- Eastern Baranof Shore: Except for Modified Landscape above and below Cosmos Cove, with Timber Production inland (but no sales scheduled), all of Eastern Baranof Island is in non-timber land use designations: Remote Recreation, Semi-remote Recreation and Wilderness.

Comment: The attributes which give a high-quality sport-fishing experience must be maintained within view of the following areas: (JCV)

Pavlof River	Castle River	Olive Cove and Creek
Kunk Lake	Helm Lake	Salmon Bay Lake
Sarkar Lake	Red Lake	North Thorne River
Miller Lake	Hatchery Creek	

Response: All of these areas have been assigned land use designations that provide for or maintain sport fishing and recreation settings. In addition, riparian areas, shorelines and estuaries are always protected. Specifically:

- Pavlof River (and Lake), Olive Cove and Creek (National Forest portion), Helm Lake, and Red Lake are in Scenic Viewshed or Modified Landscape LUD's, which require that timber harvest is managed so that the visual evidence of developments (harvest units, roads, etc.) is minimized or reduced.
- Castle River and Kunk Lake are in Semi-remote Recreation.
- Salmon Bay Lake is in Legislated LUD II.
- Sarkar Lake is a recommended Wild, Scenic and Recreation River surrounded by Remote Recreation.
- Thorne River and Hatchery Creek (Honker Divide) are recommended as Scenic and Recreation Rivers, surrounded by Scenic Viewshed.
- Miller Lake is on private land.

Comment: Assign the following hydroelectric sites the TUS LUD: Swan Lake (near Thomas Bay), Sunrise Lake (on Woronkofski Island), Dorothy Lake (near Juneau) and the coastline to Snettisham, and a portion of the Baranof Island coastline (Takatz Lake to Manleyville).

Response: The TUS (transportation and utility systems) LUD, in respect to utility systems, has been applied to all potential utility interties identified by the Alaska Energy Authority (AEA). Dorothy Lake and Takatz Lake are included. The coastline to Snettisham already has an existing powerline. If any of the other sites were identified by AEA to become part of the intertie utility system, the TUS LUD could be applied, if needed, through a Forest Plan amendment.

Comment: One individual requested that the following areas be designated for minerals development: Berners Bay, Chuck River, Port Houghton/Sandborn Canal, Point Adolphus/Mud Bay, West Duncan Canal, South Kuiu, Calder/Holbrook, Karta River, Kegan Lake and Nutkwa.

Response: The areas that were assigned the Minerals LUD were selected from a list of 52 "mineral activity tracts" identified by the U.S. Bureau of Mines as having known mineral reserves and development potential. Areas with such tracts listed in this comment are Berners Bay, Chuck River, West Duncan Canal and Calder/Holbrook. Of these, only Berners Bay has the Minerals

LUD applied. Chuck River is within Wilderness, and Calder/Holbrook within Legislated LUD II, for which the Minerals LUD would not be appropriate (the portion of Berners Bay inside the Legislated LUD II area was not assigned the Minerals LUD). None of the other areas listed were included in the 52 activity tracts. This would not preclude assigning the Minerals LUD in the future (as needed, through a Forest Plan amendment) should a development occur (except for the two Legislated LUD II areas or in any Wilderness area).

Comment: No log transfer facilities at: Port Camden, Port Houghton, Dry Bay, Browns Cove, Cape Fanshaw, Five Mile Creek, Castle River or Totem Bay. (NCC)

Response: Whether or not to construct an LTF, and its exact location, are decisions made at the site-specific project level, after additional environmental analysis including public involvement is completed.

Comment: We support a Semi-remote Recreation designation for these areas rather than the proposed Remote Recreation LUD, based on the evaluation of undiscovered mineral resources: Barbazon Range Addition, Juneau Icefield Addition, Kate's Needle Addition, and the Hessa Lake area. (USGS)

Response: The Kate's Needle Addition, and the Hessa Lake area, are assigned Semi-remote Recreation, but the Barbazon Range and Juneau Icefield Additions remain in Remote Recreation. The latter are primarily ice fields for which Remote rather than Semi-remote types of recreation occur.

Comment: There were also several general comments about the "smaller islands," requesting no logging. Commenters wanted an emphasis on scenic and recreation values, and on preserving these islands as complete ecosystems. "We can do without the small amount of timber these would produce."

Response: We do not know precisely what "smaller islands" refers to, but will try to give a general response. On the whole, where recreation uses and/or scenic values were known to be associated with small islands, these were considered in making the LUD allocations. On the other hand, where small islands with suitable timber were adjacent to larger areas being managed for timber harvest, they may have been included in the LUD allocation for the larger area. However, islands under 1,000 acres are not included in the suitable timber base of the revised Forest Plan.

Individual Area Comments

These are listed by area name as much as possible. Current Plan Management Area (MA) and/or Value Comparison Unit (VCU) numbers are also used. Specific areas are grouped by main geographic area (see Table of Contents).

The response to the individual area comments will normally be in two parts for each of the main geographic areas. The first part will follow the general summary (usually the first paragraph), and will give the rationale for the land use designation (LUD) selections for the area as a whole. The second part will be an individual response following each of the specific areas (if any) with more detailed comments as needed.

Admiralty Island (except Mansfield Peninsula)

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in each of Herring Bay, Gambier Bay, and Pybus Bay: Small cruiseship shorewalk (25).

Response: These sites are located in a Wilderness LUD. The stated activity is generally allowable. Group size restrictions apply.

Baranof Island, including both sides of Peril Strait

General Summary: Most commenters cited different combinations of scenic, recreation, subsistence and wildlife values and uses in identifying areas of Baranof Island for protection or non-timber allocations. These areas included Kelp Bay and Catherine Islands (high subsistence values), Peril Straits and the ferry route to Sitka (hunting, winter range, scenic quality), and Kruzof Island/Mt. Edgecumbe (scenic and recreation values). The Sitka Conservation Society identified the Hoonah Sound to Sitka ferry route and adjacent areas as "the heart of Sitka's economy and lifestyle," asking that recreation LUD's (formerly Primitive or Semi-Primitive, now Remote or Semi-remote) be applied. The Sitka State Parks Citizens Advisory Board (in their 1990 comments) asked that Kruzof Island, Partofshikof Island, Olga and Neva Straits, the south half of Peril Straits, and "coastal areas 30 miles south of Sitka" be managed for their subsistence, scenic, recreation and wildlife values; in their 1991 comments they expressed satisfaction with the LUD allocations of the preferred alternative for the Sitka area. A couple of commenters favored more roads in these areas, or roads connecting Sitka with the east side of Baranof Island; others opposed more roads, or any road connection across the island.

The 1996 comments are similar to those above. The only notable addition was that one commenter recommended that North Baranof Island, Middle Kruzof Island, Nakwasina Sound and Passage, and Katlian Bay be managed for a local wood products industry.

Response: The LUD allocations for the northern half of Baranof Island, including Peril Strait and the marine highway route, the islands and bays near Sitka, Kelp Bay, and inland areas, have been made to recognize the many scenic, recreation and subsistence values and uses of these areas while allowing timber harvest to continue on most lands already managed for that purpose. Along Peril Strait and the other straits and channels comprising the ferry route between Sitka and Chatham Strait, the Scenic Viewshed and (closer to Sitka) Semi-remote Recreation LUD's have been applied to the areas seen from or directly adjacent to this waterway. Most of the other shoreline areas, inlets and bays north and south of Sitka have been assigned LUD's (Scenic Viewshed, Modified Landscape, Semi-remote or Remote Recreation) to maintain or help provide for recreation and subsistence opportunities. Much of the interior of northern Baranof Island, with its existing road system accessing suitable timberland, has been placed in Timber Production to emphasize timber management. Whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

The Mt. Edgecumbe area (south Kruzof Island) is proposed as a Special Interest Area LUD to emphasize its geology and recreation uses. The lands north and south of the South Baranof Wilderness, which are roadless in character with low timber values, will be managed for Remote and Semi-remote Recreation. Potential transportation routes from Sitka to Rodman Bay and east Baranof Island, as identified by the State of Alaska, are recognized by the Transportation and Utility Systems LUD, although the State has no proposed projects at this time.

Following are more detailed comments on specific areas:

Catherine Island and Kelp Bay

Comments: These are traditional use areas for the people of Angoon. To maintain subsistence opportunities, existing roads should be closed and no timber harvest should occur. Kelp Bay is the most important subsistence area on the east side of Baranof Island: cancel sales 2 & 14. Protect Catherine Island, all three arms of Kelp Bay, and the coastline from Kelp Bay to Warm Springs Bay by assigning the Primitive Recreation (now Remote Recreation) or Old Growth Rxs. TRUCS classified Catherine Island and Kelp Bay as "important subsistence use areas" for the following communities: Angoon, Kake, Klukwan, Meyers Chuck, Pelican, Port Alexander, Port Protection, Sitka, Tenakee Springs and Wrangell. Public interest in the Kelp Bay Area is high. MA C43 should all be in the Timber Production LUD, and should have developed road systems with ties to the log transfer facilities for better timber economics, and ties to Sitka for use by residents for roaded recreation. (AFA, APC) Assign the Timber Production Rx to VCUs 296 and 297.

Response: The Kelp Bay and Catherine Island LUD allocations were designed for a mixture of uses and values, including subsistence, recreation, scenic quality and timber harvest. For Kelp Bay, the allocations are: Portage Arm and Middle Arm - Modified Landscape; South Arm - Remote Recreation; South Point - Old-Growth Habitat; and Pond Island - Remote Recreation. Project planning in the area has been designed to recognize subsistence values in selected areas. In addition, many traditional use areas are along the shoreline and in estuaries, which will be covered by the Beach and Estuary Fringe standards and guidelines.

The coastline (to Warm Springs Bay) is in Old-Growth Habitat near Cosmos Cove, and Semi-remote or Remote Recreation south of that. Catherine Island has Scenic Viewshed on the north, Old-Growth Habitat on the east and south, Modified Landscape in the central portion, and Timber Production for the remainder. The Kelp Bay portion of MA C43 has already been discussed; the remainder of C43 has Timber Production for the western interior, and Remote Recreation, the Clear River Zoological Area, and the recommended Glacial Wild River for the southern half. Any additional roads will be determined through planning for individual timber sale project areas.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following developments at Kelp Bay: Backcountry recreation lodge (250), day-use recreation (150), hut to hut hiking (25), day-use wildlife observatory (50), overnight wildlife observatory (50), leased proprietary camp (15P), heli-hiking, heli-skiing (30), equipment storage facility (100), flight-seeing landings (100), day-boat docks (50), boardwalks, paths and trails (A), small cruiseship shorewalk (25).

Response: This AVA site includes Wild River, Remote Recreation, Semi-Remote Recreation, Old Growth Habitat, Scenic Viewshed, Modified Landscape and Timber Production LUDs. The stated activities are generally allowable in these LUDs, except for equipment storage in the Wild River LUD. The stated activity levels exceed guidelines for lodges in all LUDs. The stated activity level exceeds guidelines for day-use recreation in Remote Recreation and Wild River LUDs but is allowable as an enclave in Semi-Remote Recreation LUDs. The stated level for hut to hut activity exceeds guidelines for Wild River, Remote Recreation and Old Growth Habitat LUDs and is allowable as an enclave in the Semi-Remote Recreation LUD. Stated activity levels exceed guidelines for day use facilities and docks in the Remote Recreation LUD. The stated activity level

exceeds guidelines for overnight wildlife facilities in Remote Recreation, Old Growth Habitat and Wild River LUDs but is allowable as an enclave in the Semi-Remote Recreation LUD. The stated activity level exceeds guidelines for leased proprietary camps in the Wild River and Remote Recreation LUDs. Stated activity levels exceed guidelines for heli-hiking and heli-skiing in Wild River and Remote Recreation LUDs. The stated activity level exceeds guidelines for flight-seeing landings in Wild River, Remote Recreation and Old Growth Habitat but is allowable as an enclave in the Semi-Remote Recreation LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Silver Bay and Baranof Warm Springs: Hut to hut hiking (25 - at Warm Springs), all prototypes with possible exception of resorts, small cruiseship shorewalk (25 - at Baranof Warm Springs)

Response: This AVA site includes Remote Recreation, Semi-Remote Recreation and Municipal Watershed LUDs. The stated activities and activity levels are generally allowable in these LUDs except for the Municipal Watershed LUD which is decided on a case-by-case basis.

Kruzof Island/Mt. Edgecumbe

Comments: Develop it for recreation, and allow ATV use. "Multiple use management" should continue for Mt. Edgecumbe. Kruzof Island is supported as a National Recreation Area: be sure it is managed in the same manner as Primitive Recreation or Old Growth (1990 comment). All of Kruzof Island should be in Semi-primitive Recreation. (SCS) MA C45 should be mostly in Semi-primitive LUD, but with some roads for access and salvage. (AFA, APC) Kalinin Bay deserves the "strongest protection possible" as a high-use recreation area with a prime anchorage. Assign the Timber Production Rx to VCU 308.

The 1996 comments are similar to those above, particularly with respect to protection. Exceptions were that one commenter recommended that North Baranof Island, Middle Kruzof Island, Nakwasina Sound and Passage, and Katlian Bay be managed for a local wood products industry, and that the Sealion Cove area be protected.

Response: The southern half of Kruzof Island, the Mt. Edgecumbe area (most of MA C45 and VCU 308), is proposed for special interest area designation as the Mt. Edgecumbe Geological Area to recognize and preserve its unique volcanic geology and maintain its many scenic and recreational features. This was a change from the 1990 DEIS recommendation as a National Recreation Area, but will afford the same kind of recognition and protection. Off-highway vehicle use may continue, but timber harvest will not be allowed and no roads will be developed. The central portion of Kruzof Island will for the most part remain available for timber harvest under the Modified Landscape and Timber Production LUD's, with Semi-remote Recreation along the eastern shoreline and Shelikof Bay. The northern portion of the island, including Kalinin Bay and Sealion Cove, is in Old-Growth Habitat.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following developments in Kalinan Bay, Snitsen Bay, Sea Lion Cove: Backcountry recreation lodge (no use level specified)

Response: This AVA site is located in an Old Growth Habitat LUD. The stated activity is generally allowable although the activity level would be limited to 24 overnight guests.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Gilmer Bay: Hut to hut hiking (12), day-boat docks (20), flight-seeing landings (10), day-use recreation (100), day-use wildlife observatory (30).

Response: This AVA site includes Old Growth Habitat, Semi-Remote Recreation, Modified Landscape and Timber Production LUDs. The stated activities are generally allowable in these LUDs (as enclaves in Semi-Remote Recreation), although stated activity levels exceed guidelines for day-use recreation in Old Growth Habitat LUDs.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for South Kruzof: Hut to hut hiking (30), flight-seeing landings (25), (Mt. Edgcumbe) flight-seeing landings (100), overnight wildlife observatory (30), day-use wildlife observatory (50), day-use recreation (100), equipment storage facility (3000), day-boat docks (50).

Response: This AVA site includes Special Interest Area, Semi-Remote Recreation and Modified Landscape LUDs. The stated activities and activity levels are generally allowable in these LUDs (as enclaves in Semi-Remote Recreation), except for the Special Interest Area LUD which is decided on a case-by-case basis.

Peril Strait

Comments: Peril Strait is a highly used hunting area and important deer winter range. VCU's 287-290 and 279 should be in Scenic Viewshed LUD. No LTF in VCU 279: the area is used heavily by whales and is on the ferry route. Sayuk (Saook) Bay is a traditional use area for the people of Angoon: to maintain subsistence opportunities, existing roads should be closed and no timber harvest should occur. Deep Bay is important for subsistence use and should be protected. MA C41 (also C34, C35, C37 and C39) is on the ferry route and should have no further logging until its impact on "our resource of the future, tourism" is fully assessed. If logging, it should be selective and low impact. MA C42 should have "no roads, period." (SC-J) Assign the Timber Production Rx to VCUs 287-290 and 295. MA's C41 and C42 should all be in the Timber Production LUD. Both should have developed road systems with ties to the log transfer facilities for better timber economics, and ties to Sitka for use by residents for roaded recreation. (AFA, APC) Complete the road across VCU 295 (for more economical management); a road from Sitka to Rodman Bay would have "multiple use benefits" (better ferry port for Sitka, more recreation opportunities, long-term development of Sitka community); a road connection from Sitka to Rodman Bay (or another eastside bay) is needed and encouraged. Others oppose any road connection across the island.

The 1996 comments are similar to those above, with emphasis on Poison Cove and Deep Bay.

Response: The shoreline areas of Peril Strait, from Sergius Narrows to Chatham Strait, are assigned the Scenic Viewshed LUD to provide for scenic quality along the marine highway route. This includes VCU's 279 and 287-289. Poison Cove and Hanus Bay are in Scenic Viewshed, and Deep Bay is in Modified Landscape, as is a portion of Appleton Cove. Fish Bay is in Old-growth Habitat, and Rodman and Saook (Sayuk) Bays, the rest of Appleton Cove, and inland areas (including MA C41) are in Timber Production. These latter areas have a developed road system accessing suitable timber and are currently being managed for timber harvest. The Lake Eva area (MA C42, VCU 295), a popular recreation place, is in Semi-remote Recreation. Normally, any additional roads will be determined through planning for individual timber sales. Semi-remote Recreation would allow road access across it to other areas. A possible transportation route between Sitka and Rodman Bay has been assigned the Transportation and Utility Systems LUD, although the State has no project proposed at this time.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Hanus Bay: Small cruiseship shorewalk (25).

Response: This AVA site includes Modified Landscape and Scenic Viewshed LUDs. The stated activity is generally allowable in both LUDs.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Lake Eva Trail: Small cruiseship shorewalk (25).

Response: This AVA site is located in a Semi-Remote Recreation LUD. The stated activity is generally allowable.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Lindbergh Head: Small cruiseship shorewalk (25)

Response: This AVA site includes Old Growth Habitat and Scenic Viewshed LUDs. The stated activity and activity levels are generally allowable.

Sitka area, including the ferry route north to Peril Strait

Comments:

- The following areas are strategically important to Sitka for subsistence uses (and most also for recreation) and should be protected: Katlian, Suloia, Fish and Silver Bays; Nakwasina Sound; Deep Inlet; Salmon Lake-Redoubt; and Seven Fathom.
- important wildlife areas near Sitka needing protection include: Deep Bay area (important for hunting); Kalinin Bay (important winter range, old growth pockets, important for hunting, deer and waterfowl); Dry Pass (important hunting area); southeast Partofshikof (important winter old growth deer habitat); Redoubt Bay, islands towards Biorka and Goddard area (important local hunting areas).
- important scenic areas near Sitka (for which the Scenic Viewshed LUD is recommended) include: Kalinin Bay (high local use); Dry Pass (scenic recreation area close to town); and Mt. Edgecumbe area and Shelikof Bay (viewshed of Sitka, high scenic values, favorite anchorage).
- all VCU's on the ferry route, Hoonah Sound to Sitka, should be in Semi-Primitive Rx, except Halleck & Krestof Islands in Prim. Rec.; also VCU's 319-325 and 349-351 should be in Prim. Rec.: "These areas are at the heart of Sitka's economy and lifestyle. They are the scenic foundation of our growing tourism and recreation industry. And they are the environment that supports our subsistence activities, our sport hunting and fishing, and our commercial fishing industry." (SCS)
- MA's C40 and C44-C46 are on the ferry route and should have no further logging until its impact on "our resource of the future, tourism" is fully assessed. If logging, it should be selective and low impact. MA C50 should have "no roads, period." (SC-J)
- assign the Timber Production Rx to VCUs 300-303, 305, 307, 309-311, 318-320, 322-325, 349 and 350.
- MA's C44, C46 and C48 should all be in the Timber Production LUD. All should have developed road systems with ties to the log transfer facilities for better timber economics, and ties to Sitka for use by residents for roaded recreation. C40 should also be all Timber Production except for a Modified Landscape buffer along Neva and Olga Straits: take advantage of the road system. (AFA, APC)

The 1996 comments are similar to those above concerning protection of Silver Bay, Salmon Lake, Redoubt Lake, and Nakwasina Sound. One commenter recommended that North Baranof Island,

Middle Kruzof Island, Nakwasina Sound and Passage, and Katlian Bay be managed for a local wood products industry.

Response: In general, most areas near Sitka identified as locally important, whether for recreation, subsistence use, hunting or fishing, or scenic quality, were assigned LUD's that would maintain or provide for those values. Other areas, where timber harvest is ongoing and with developed road systems, were given a timber management emphasis: these areas are mostly inland. Following is a list of the areas mentioned above, with brief discussions. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for the Katlian to Rodman Bay corridor: All uses, some uses conditional on road development, immediately hut to hut hiking (25).

Response: This AVA site includes both Old Growth Habitat and Timber Production LUDs and a small area of Semi-Remote Recreation LUD. The stated activity is generally allowable in all three LUDs although the stated activity level for the hut to hut hiking slightly exceeds guidelines in the Old Growth Habitat LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development at Fish Bay Hot Springs: Backcountry recreation lodge (250).

Response: This AVA site is located in an Old Growth Habitat LUD. The stated activity is generally allowable although the stated activity level greatly exceeds guidelines for the Old Growth Habitat LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following developments in Olga, Neva, Salisbury Sound Corridor, St. John Baptist Bay: Day-use recreation (300), hut to hut hiking (25), day-use wildlife observatory (50), overnight wildlife observatory (50), leased proprietary camp (15P), heli-hiking, heli-skiing (30), equipment storage facility (100), flight-seeing landings (100), day-boat docks (50), boardwalk, paths and trails (A), small cruiseship shorewalk (25).

Response: This AVA site includes primarily Old Growth Habitat and Semi-Remote Recreation LUDs with small portions of Scenic Viewshed and Timber Production LUDs. The stated activity is generally allowable in these LUDs although the stated activity level greatly exceeds guidelines for permanent overnight facilities and flight-seeing landings in the Old Growth Habitat LUD.

Areas mentioned by name:

- Biorka and adjacent islands - these islands south of Sitka are all in Semi-remote Recreation
- Deep Bay - see Peril Strait above
- Deep Inlet - south of Sitka: Semi-remote Recreation at its mouth, Scenic Viewshed otherwise
- Dry Pass - the land connection between Kruzof and Partofshikof Islands is in Scenic Viewshed
- Fish Bay - the interior of Fish Bay and the adjacent lands are in Timber Production: the area has existing roads and suitable timberlands currently under timber management
- Goddard area - Semi-remote Recreation
- Halleck Island - the west side of the island, along the ferry route, is in Remote Recreation; the rest of the shoreline is Scenic Viewshed, with Timber Production in the interior
- Kalinin Bay - see Kruzof Island above

- Katlian Bay - the National Forest lands are in Scenic Viewshed
- Krestof Island - the east side along the ferry route is in Remote Recreation, the remainder in Scenic Viewshed
- Nakwasina Sound - the shorelines are in Scenic Viewshed, with Timber Production inland
- Neva and Olga Straits - both are in Remote Recreation
- Partofshikof Island - the east side, along the ferry route, is in Remote Recreation; the west side is Scenic Viewshed, and the central portion in Timber Production
- Redoubt Lake - this recreation area is in Semi-remote Recreation
- Salmon Lake - this area south of Silver Bay is in Scenic Viewshed
- Seven Fathom - this bay near Crawfish Inlet is in Semi-remote Recreation
- Shelikof Bay - see Kruzof Island above
- Silver Bay - the National Forest lands are in Remote Recreation
- Suloia Bay - this area is within Wilderness

Areas mentioned by VCU number:

- 300-301 - the shoreline areas are in Scenic Viewshed or Remote Recreation; the interior, with its developed road system and suitable timberland, is in Timber Production. See Nakwasina Sound above
- 302 - the ferry route (Olga and Neva Straits) is in Remote Recreation; other areas are in Scenic Viewshed or Timber Production
- 303 - Sukoi Strait is in Scenic Viewshed. See Partofshikof Island and Kruzof Island
- 303/307 - see Kruzof Island/Mt. Edgecumbe above
- 309 - Krestof Sound is in Scenic Viewshed
- 310 - most areas are in Remote Recreation or Scenic Viewshed, with some Timber Production inland
- 311 - this area immediately behind Sitka is in Semi-remote Recreation
- 318 - this area is in Remote Recreation, with Blue Lake in Semi-remote Recreation
- 319-323 - includes Silver Bay, Salmon Lake, Deep Inlet and Redoubt Bay: the northwest shorelines are in Remote Recreation (Sitka viewshed), other shoreline areas and some inland areas are in Scenic Viewshed, and the remainder of the inland area is in Timber Production
- 324 - this area to the east of Silver Bay is in Modified Landscape
- 325 - Medvejie Lake is in Semi-remote Recreation
- 349-351 - this is the Redoubt Lake, Goddard, Biorka Island area, and is all in Remote or Semi-remote Recreation

Areas mentioned by Management Area number:

- MA 40 - the shoreline areas are in Scenic Viewshed or Remote Recreation; the interior, with its developed road system and suitable timberland, is in Timber Production. See Fish Bay and Nakwasina Sound above
- MA 44 - see VCU's 303 and 309, and Kruzof Island, above
- MA 45 - see Kruzof Island/Mt. Edgecumbe above
- MA 46 - see VCU's 310/311 above
- MA 48 - see VCU's 318-324 above
- MA 51 - see VCU's 349-351 above

South Baranof Island

Comments: MA C51 should be Wilderness due to its exceptional beauty, good bear habitat and rugged terrain. Assign the Timber Production Rx to VCU's 316-317, 326-328 and 334-343. MA C47 should have "no roads, period." (SC-J)

Response: Most of MA C51 (VCU's 334-343 - all of Baranof Island south of the South Baranof Wilderness) is in Remote Recreation, with Semi-remote Recreation for some coastal areas and around Port Alexander. Most of MA C47 (VCU's 316-317 and 326-328 - the eastern portion of Baranof Island between Kelp Bay and the South Baranof Wilderness) is in Remote Recreation, with Semi-remote Recreation for most of VCU 317. There is little suitable timberland in either of these management areas, and the recreation, scenic and other natural values are high.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Camp Coogan: Backcountry recreation lodge (250).

Response: This AVA site includes Old Growth Habitat, Semi-Remote Recreation and Modified Landscape LUDs. The stated activities are generally allowable in these LUDs although the stated activity level exceeds guidelines for overnight facilities in all LUDs.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development on Biorka Island: Day-use wildlife observatory, overnight wildlife observatory (no stated activity levels).

Response: This AVA site is located in a Semi-Remote Recreation LUD. The stated activity is generally allowable. Enclaves are allowable. Group size restrictions apply.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Redoubt to Crawfish: Day-use recreation, most uses of the prototypes, backcountry recreation lodge (150), day-use recreation (150), hut to hut kayaking (50), day-use wildlife observatory (50), overnight wildlife observatory (50), leased proprietary camp (15P), heli-hiking, heli-skiing (30), equipment storage facility (3000), flight-seeing landings (100), day-boat docks (50), boardwalks, paths and trails (A).

Response: This AVA site is located primarily within a Wilderness LUD but also includes Old Growth, Semi-Remote Recreation and Modified Landscape LUDs. No permanent overnight facilities, day-use facilities, commercial helicopter access or storage facilities are allowable in Wilderness. The stated activities are generally allowable in the non-wilderness LUDs (with enclaves) although the stated activity levels exceed guidelines for overnight facilities and flight-seeing landings in the Old Growth Habitat LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Gut Bay and Red Bluff Bay: Day-use recreation (300), hut to hut hiking (25), day-use wildlife observatory (50), equipment storage facility (3000), day-boat docks (50), boardwalks, paths and trails (A), small cruiseship shorewalks (25 - Red Bluff Bay).

Response: This AVA site is located in a Wilderness LUD. No permanent overnight facilities, day-use facilities, or storage facilities are allowable in Wilderness. The remaining stated activities are generally allowable for Wilderness. Group size restrictions apply.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Hoggatt Bay: Day-use recreation (300), hut to hut hiking (25), day-use wildlife observatory (50), equipment storage facility (3000), day-use boat docks (50) boardwalks, paths and trails (A).

Response: This AVA site is located in a Wilderness LUD. No permanent overnight facilities, day-use facilities, or storage facilities are allowable in Wilderness. The remaining stated activities are generally allowable for Wilderness. Group size restrictions apply.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Mist Cove Trail to Deer Lake: Day-use recreation (100), hut to hut hiking (25), flight-seeing landings (50), day-boat docks (20), boardwalks, paths and trails (A).

Response: This AVA site is located in a Wilderness LUD. No permanent overnight facilities or day-use facilities are allowable in Wilderness. The remaining stated activities are generally allowable for Wilderness although the stated level for flight-seeing landings exceeds guidelines for Wilderness LUDs.

Chichagof Island, except Tenakee Inlet (See Baranof Island for Peril Strait)

General Summary: Many specific areas were identified (often by Management Area or VCU) for non-timber allocations or simply for "protection." Recreation and subsistence values, wildlife habitat, and scenic quality were cited most often as reasons. The scenic qualities of the island in general were mentioned as very important to the tourism, tour boat and guide service industries. Some areas mentioned by name include: Hoonah Sound and Ushk Bay, the Kadashan drainage (now a Legislated LUD II area), Lisianski Inlet, and Sitkoh Bay. A minority of commenters asked for logging or road building in some of these same areas.

The 1996 comments are similar to those above. One addition were comments concerning the "world class" brown bear habitat on Chichagof Island, particularly in Upper Tenakee Inlet, Ushk Bay, Deep Bay, and Poison Cove.

Response: The LUD allocations for the eastern half of Chichagof Island have been made to recognize many of the scenic and recreation values and uses of these areas while allowing timber harvest to continue on most lands already managed for that purpose. Along Icy and Chatham Straits the Scenic Viewshed and Old-Growth Habitat LUD's have been applied to the areas seen from or directly adjacent to these waterways. Most of the inlets and bays, including Port Frederick, Freshwater Bay and Sitkoh Bay, have been assigned the Scenic Viewshed and Modified Landscape LUD's to help maintain recreation opportunities, or the Old-growth Habitat LUD. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas. Much of the interior of eastern Chichagof Island, with its existing road system accessing suitable timberland, has been placed in Timber Production to emphasize timber management, with Old-Growth Habitat bordering on Chatham Strait.

Much of the western half of the island is now in either the Wilderness or Legislated LUD II LUD's, including most of Hoonah Sound. The Lisianski Inlet and Strait areas not in these designations have been allocated to Semi-remote Recreation, to maintain their undeveloped character and recreation, scenic and subsistence values.

Following are more detailed comments on specific areas:

Hoonah Sound and Ushk Bay

Comments: There should be no logging in Hoonah Sound. Ushk Bay should be allocated to Primitive Recreation. (NAS, SCS) MA C39 should be in Timber Production; there is no justification for the Scenic Viewshed or Modified Landscape allocations. (AFA, APC) The 1996 comments are similar to those above regarding protection.

Response: All of Hoonah Sound to the west of Peril Strait and Ushk Bay is now in Legislated LUD II, which excludes timber harvest. Ushk Bay and Deep Bay (both in MA C39) are allocated to Modified Landscape, which will allow timber harvest while providing for recreation and scenic values. The rest of MA 39 is in Timber Production.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Hoonah Sound/Lizianski Pass: Hut to hut hiking (25), day-use wildlife observatory (50), overnight wildlife observatory (50), trails and boardwalks.

Response: This AVA site is located within a TTRA LUD II and Wild River LUD. The stated activities are generally allowable in both LUDs although the stated activity levels for all activities exceed guidelines in the Wild River LUD. Stated activity levels for overnight facilities also exceed guidelines in the TTRA LUD II.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Ushk Bay: Backcountry recreation lodge (100), hut to hut hiking, kayaking, canoeing (25), day-use recreation (150), day-boat docks (50).

Response: This AVA site includes Old-Growth, Scenic Viewshed, Modified Landscape and Timber Production LUDs. The stated activities are generally allowable in all LUDs within the site. The stated activity levels would be allowable in Timber Production, Modified Landscape and Scenic Viewshed LUDs but would exceed guidelines for all activities except day-boat docks in the Old Growth Habitat LUD.

Kadashan

Comments: Commenters, including the City of Tenakee Springs and SEACC, were strongly opposed to any utility or transmission corridors, powerlines or roads being built through the Kadashan drainage. Such a corridor would be inappropriate, and not in keeping with the reasons the area was designated as LUD II (Legislated LUD II). Kadashan is one of the most productive wildlife areas in southeast Alaska, with unsurpassed opportunities for wildlife viewing. A few commenters felt that the Kadashan road should be completed, to provide a connected road system for recreation and timber access, and to allow for more economical management of the area. (AFA, APC)

The 1996 comments are similar to those above regarding protection.

Response: The Transportation and Utility Systems LUD allocation through the Kadashan area reflects only a potential transmission line as identified by the Alaska Energy Authority. There are no proposals for the development of such a line at this time. No roads are identified, proposed or planned for the Kadashan Legislated LUD II area.

Lisianski Inlet and Strait

Comments: Non-timber prescriptions or LUD's (most commonly Primitive or Semi-primitive Recreation; or now Remote or Semi-remote Recreation)) are favored for this area, especially around Lisianski Inlet and River. Important subsistence values, wildlife habitat, fishing and recreation (including a kayak route), and scenic quality (for both locals and tourists) were reasons given. The Soapstone area (VCU 253) is an important anchorage and kayak destination: give it high protection. MA C25 should have "far less logging than planned," and many places should be allocated to Primitive Recreation. (SC-J) The City of Pelican (Planning Commission) requests that the Forest Service pursue the purchase of the University of Alaska property on north Yakobi Island, to be managed as Wilderness.

The 1996 comments are similar to those above regarding protection. Additional comments requested protection from logging in Idaho Inlet, and stated that the community of Elfin Cove believed the maintenance of the LUD II area was of utmost importance to the community.

Response: All National Forest lands in this area (including MA C25 and VCU 253) that are not Wilderness or Legislated LUD II have been allocated to Semi-remote Recreation, recognizing their undeveloped character, and recreation, scenic and subsistence values. A Yakobi Island land exchange is outside the scope of the Forest Plan.

Point Adolphus and Vicinity

Comments: The coastal areas not allocated to LUD II (Legislated LUD II) are important for fishing and subsistence and should be in non-timber LUD's. The south edge of the LUD II area should include the adjacent lakes in a LUD II-type allocation (as in Alternative D). The Semi-primitive (now Semi-remote) portion of C28 is not warranted. (AFA, APC)

The 1996 comments are similar to those above. An additional comment requested protection from logging on Icy Strait because of heavy use by the tourism industry for wildlife viewing, kayaking, camping, and fishing.

Response: The coastal and inland area between the Point Adolphus Legislated LUD II area and the private land to the east is allocated to Old-growth Habitat. This will serve to provide for the scenic qualities associated with the cruise ship and recreational boating uses of Icy Straits. (This area was in Semi-remote Recreation in the DEIS.) The lands adjacent to the Legislated LUD II area along the southeast have existing roads accessing suitable timberland and are allocated to Timber Production. Congress chose not to include these lands in the Point Adolphus Legislated LUD II area.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Three Hill Island: Small cruiseship shorewalks (25)

Response: This AVA site is located within a Semi-Remote Recreation LUD. The stated activities and activity levels are generally allowable in a Semi-Remote Recreation LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following developments for Gull Cove and Idaho Inlet: Small cruiseship shorewalks (25)

Response: These sites are located within a TTRA LUD II. The stated activities and activity levels are generally allowable in a TTRA LUD II.

Sitkoh Bay

Comments: This area is highly important for commercial fishing, year-round recreation, and subsistence uses (ADF&G study submitted), and contains private lands. Recreation and tourism uses are increasing. It should have protection from further timber harvesting. Basket and Sitkoh Bays are traditional use areas for the people of Angoon. To maintain subsistence opportunities, existing roads should be closed and no timber harvest should occur. The LTF shown on the map is no longer under permit and should be removed (from the map).

Response: Sitkoh Bay has been allocated to Modified Landscape to provide a setting for the recreational uses of the bay, but allow timber harvest. The inland areas are assigned to Timber Production, where the existing road system accesses much suitable timberland. Basket and Little Basket Bays are in Scenic Viewshed and Old-Growth Habitat, with Kook Lake in Modified Landscape.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following developments at Sitkoh Bay, Basket Bay and Sitkoh Lake: Day-use recreation (150), day-wildlife observatory (30), backcountry recreation lodge (50), small cruiseship shorewalk (25).

Response: This AVA site includes Old Growth Habitat, Modified Landscape, Timber Production and a small amount of Scenic Viewshed LUDs. The stated activity is generally allowable in all four LUDs although the stated activity levels would exceed guidelines for all day-use recreation and lodge facilities in the Old Growth Habitat LUD.

Other areas

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for the West Chichagof outside waters: Backcountry recreation lodge (150), day-use recreation (150), hut to hut kayaking (50), day-use wildlife observatory (50), overnight wildlife observatory (50), leased proprietary camp (15P), heli-hiking (30), equipment storage facility (3000), flight-seeing landings (100), day-boat docks (50), boardwalks, paths and trails (A).

Response: This AVA site is predominantly within a Wilderness LUD but also includes Semi-Remote Recreation and TTRA LUD II areas. None of the stated activities are allowable in Wilderness except for flight-seeing landings and boardwalks, paths and trails. Stated levels for flight-seeing landing in Wilderness exceed guidelines. The stated activities are generally allowable in Semi-Remote Recreation LUDs although the stated activity levels would only be allowable as enclaves. Stated activity levels would exceed guidelines in TTRA LUD II areas for all activities except day-use wildlife observatory and leased proprietary camps.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Indian River drainage: Backcountry recreation lodge (100), hut to hut hiking (25), Mt. biking.

Response: This AVA site includes Old Growth Habitat and Timber Production LUDs. The stated activities are generally allowable in these LUDs although stated activity levels exceed guidelines for lodges in an Old Growth Habitat LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Iyoukeen Peninsula: Hut to hut hiking, kayaking, canoeing (25), leased proprietary camp (15 P/S).

Response: This AVA site is located in an Old Growth Habitat LUD. The stated activities are generally allowable in this LUD although stated activity levels slightly exceed guidelines for the LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Pavlof Harbor: Day-use recreation (100), leased proprietary camp (15 S/P), boardwalks, paths and trails (A&B)

Response: This AVA site is located in an Old Growth Habitat LUD. The stated activities are generally allowable in this LUD although stated activity levels exceed guidelines for day recreation in this LUD.

Additional comments by Management Area (MA) or VCU:

Comments:

- extend the 85341 road along the ridge between VCUs 210 & 211; extend the 8529 road along the ridge between VCUs 212 & 213.
- MA's C30 and C31: bear/human conflicts are increasing, road closures are needed. Limit logging here.
- MA's C34 and C37 should be managed to emphasize subsistence and wildlife. (SSPB)
- MA's C27, C30 and C37: all should be in Timber Production; there is no justification for the Scenic Viewshed or Modified Landscape allocations. (AFA, APC)
- MA's C24, C27, C28, C30 and C31 should have "far less logging than planned," and many places should be allocated to Primitive Recreation. MA's C26, C35, C36 and C37a should have "no roads, period." (SC-J)
- no timber harvest in VCU 202; the shoreline of MA C29 should be allocated to the Modified Landscape LUD; VCU 202 should be in Scenic Viewshed.

Responses:

- MA's C24-26 - these areas are in Legislated LUD II or Semi-remote Recreation, with no logging or roads planned.
- MA's C27-28 - these areas, with existing road systems accessing suitable timberland, are mostly in Timber Production, with Scenic Viewshed along Icy Straits (cruise ship route and recreational boating) and Old-Growth Habitat around Neka Bay. See Point Adolphus above.
- MA C29 (VCU 202) - most of the shoreline and the Portage area are in Scenic Viewshed, to provide a scenic backdrop to recreation uses.
- MA's C30-31 - these areas, with existing road systems accessing suitable timberland, are mostly in Timber Production, with Scenic Viewshed along Icy Strait and Old-Growth Habitat along Chatham Strait (cruise ship and ferry route, and recreational boating). Freshwater Bay and Whitestone Harbor are in Scenic Viewshed. Any additional roads (VCU 210) would be determined through planning for individual timber sale projects. Road closures are normally a Ranger District level decision.
- MA's C35-36 and 37a - these are all in Legislated LUD II: no roads are planned in these areas.
- MA C37 - this area, with existing road systems accessing suitable timberland, is mostly in Timber Production, with Scenic Viewshed and Old-Growth Habitat along Chatham and Peril Straits (marine highway), with Modified Landscape around Sitkoh Bay and at Kook Lake (recreation uses).

Chilkat Peninsula, including Point Couverdon

General Summary: Most commenters, including the Gustavus Community Association and many Gustavus residents, felt strongly that this area should have no more timber harvest. The main reasons given were: it's visually sensitive (Gustavus/Glacier Bay air and sea routes); it's an important hunting/subsistence area for Gustavus (and these activities are restricted elsewhere due to National Park policies); and significant wildlife reductions are projected from additional timber harvesting. The area has more clearcutting scheduled, ignoring the previous requests of the Gustavus community. Some commenters stated that the entire Icy Straits area should have no clearcutting, or clearcutting should be deferred until the potential effects can be better analyzed. A few commenters wanted logging to continue in the area.

The 1996 comments were similar to those above. One commenter requested protection from logging on Icy Strait because of heavy use by the tourism industry for wildlife viewing, kayaking, camping, and fishing. Another recommended putting Point Couverden, associated islands, and adjacent mainland areas into LUD II or similar protection.

Response: The land use designations for the Chilkat Peninsula have been changed since the Supplement based on several of these concerns. Timber harvest will continue to be a consideration, but this is limited to a smaller area, primarily where existing roads provide access to suitable timber. The shoreline areas of the Peninsula, comprising the main viewshed for cruise ships and recreational boaters, are in the Scenic Viewshed LUD to provide emphasis for scenic values in considering timber harvest proposals. Some areas further inland are in Timber Production. The remainder of the Chilkat Peninsula is in Semi-remote Recreation, with the islands off Point Couverdon in Remote Recreation. Pleasant, Lemesurier and other islands in Icy Strait are now Wilderness, and Point Adolphus and Mud Bay (on Baranof Island) are in Legislated LUD II. These are all areas reported as important to Gustavus for hunting and subsistence.

Following are more detailed comments on specific areas:

Pt. Couverdon/Homeshore area

Comments: Many persons were concerned with the proposed timber harvest for this area:

- enough damage has been done there already: abandon your plans for any more harvest; don't expand the long-term contract into this area
- I don't want to spend my tax dollars to clearcut my backyard: if you want to benefit the economy, localize the cutting (and manufacturing); the community of Gustavus does not benefit from Homeshore logging (no purchases) - in fact, while this logging creates stability for Sitka, it is de-stabilizing for Gustavus
- the proposed timber harvest is estimated to have substantial reductions in wildlife habitat (old growth) (reduced by over one-half according to the EIS): this will have drastic effects on subsistence use by Gustavus residents (it's the only nearby place)
- cancel sales 10 & 19 (Homeshore); no roads, no logging. (SC-J)
- MA's C18 and C19 should be developed for more timber harvest: utilize the barge facilities and road system already in place. Modified Landscape above 1,800 feet is appropriate. (AFA, APC)
- the area should be in Scenic Viewshed rather than Modified Landscape: this is an important recreation area for Juneau people

Response: Several points are raised in these comments. It is true that the long-term estimates of wildlife reductions (deer) for the lower Chilkat Peninsula, based on a worse-case scenario, are large. The effects estimated for the next two decades are much less, and these effects will be monitored, and evaluated for each Revision of the Forest Plan. Our data (ADF&G statistics and TRUCS information) shows that the Chilkat Peninsula is less important for Gustavus subsistence/hunting uses than several other nearby National Forest areas (see previous response). These other areas, which are all in LUD's with no timber harvest, plus the private lands opposite Hoonah, are used

much more, and with greater hunting success. This information was taken into account in deciding to continue timber harvest in the Homeshore area.

The local harvest and manufacture of timber is a decision of the private sector. The Chilkat Peninsula has a relatively small amount of suitable timber, probably not enough to support a local business. As mentioned above, the shoreline areas of the Peninsula have been placed in the Scenic Viewshed LUD to provide for scenic quality for tour ships and recreational boaters. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Excursion Inlet: leased proprietary camps (15 P/S).

Response: This AVA site is located within a Modified Landscape LUD. The stated activities and activity levels are generally allowable in this LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development at Pt. Couverdon: Day-use wildlife observatory (50), backcountry recreation lodge (50), heli-hiking (20).

Response: This AVA site includes Old Growth Habitat, Semi-Remote Recreation, Scenic Viewshed and Timber Production LUDs. The stated activities are generally allowable in these LUDs. The stated activity levels are allowable as enclaves in Semi-Remote Recreation LUDs, but exceed guidelines for lodges in an Old Growth Habitat LUD.

Glacier Bay (and the Chilkat Peninsula)

Comments: The Friends of Glacier Bay expressed concern over the integrity of Glacier Bay National Park as a "natural, healthy ecosystem." Glacier Bay is "not an island," and the eastern boundary is political and unnatural. Thus, Chilkat Peninsula (MA's C18 and C19) activities will affect the Park.

- the predicted effects on deer, marten and bear habitat from proposed timber harvest are substantial, and will spill over into the Park
- Glacier Bay is a Biosphere Reserve, and the Couverdon/Homeshore area a part of a "biological gateway corridor" (migration route): thus the integrity of Glacier Bay depends on the integrity of the lower Chilkat Peninsula
- recognize the Chilkat Peninsula as part of the Glacier Bay ecological province, and manage in "natural setting" LUD's

Response: We find it unlikely that "the integrity of Glacier Bay depends on the integrity of the lower Chilkat Peninsula." Most of the boundary between the eastern portion of Glacier Bay National Park and National Forest land is the crestline of the Chilkat Range, a natural barrier. The National Forest lands along this boundary, from the Endicott River Wilderness down to Excursion Inlet, are allocated to the Semi-remote Recreation LUD. The National Forest lands along Excursion Inlet, the only low-elevation connection, are in the Scenic Viewshed LUD, where timber harvest would be constrained by visual quality considerations, or in Old-Growth Habitat. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

Cleveland Peninsula

General Summary: Most comments to the 1991 and 1996 TLMP revision about the Cleveland Peninsula asked for either no future logging, a deferral of logging plans, or less intensive logging than planned. The main reasons given were the protection or retention of roadless recreation opportunities (hunting, fishing, scenic viewing) and old-growth wildlife habitat (Cleveland Coalition). The Cleveland Peninsula is one of the last large, unfragmented old-growth areas left, with high wildlife values (deer range), important subsistence values, and importance for biodiversity. (TCS) The proximity of the area to Ketchikan (roadless recreation and tourism) was another reason often mentioned. Many Meyers Chuck residents and the Meyers Chuck Community Association are concerned with water quality and development near them, and asked for no timber harvest or roads in the vicinity of Meyers Chuck, especially their watershed. Some commenters felt that some timber harvest could occur as long as coastal areas and lakes were not disturbed; others asked that logging go ahead on the Peninsula. Some thought that roaded recreation (following timber sale development) would be good, others wanted the area kept roadless. One commenter felt that the Cleveland Peninsula would be a good place to practice ecosystem management.

Response: Cleveland Peninsula's value as a special place for recreation, wildlife, and fish habitat has been recognized by both the public and the Forest Service. The southern third of Cleveland Peninsula including Helm Bay, Caamano Point, Clarence Strait shoreline to Lemesurier Point, and Union Bay have been allocated to Semi-Remote Recreation to provide for scenic and roadless recreation values.

From Helm Point northward along Behm Canal including Port Stewart to Snail Point, the shorelines and visible slopes have been allocated to a mixture of Modified Landscape and Old-growth Habitat to provide for scenic, recreation, and wildlife values while allowing timber harvest to be considered in a manner that minimizes visibility of activities.

Along Ernest Sound from near Cannery Creek to Eaton Point north of Emerald Bay, the shorelines and most visible slopes have been allocated in a similar fashion. Most of the inland areas and Spacious Bay are in Timber Production to provide timber harvest opportunities. The National Forest lands around Meyers Chuck watershed are in Semi-Remote Recreation, while the north shore of Vixen Inlet is allocated to Old-growth Habitat. In addition, whenever the LUD selected for an area allows development activities, the Beach and Estuary Fringe Forest-wide standards and guidelines apply to all streams, beaches, and estuaries.

Following are more detailed comments on specific areas:

Behm Canal

> **Comments:** This area has important tourism use (charter guides, fishing lodges, etc.), and the scenic values here and along the marine highway are important. Protect the roadless recreation values (hunting, fishing, scenery) of Helm, Spacious, Bailey and Short Bays, and Port Stewart. There should be no timber harvest in VCU's 716, 717, 719, 722 and 723.
>
> **Response:** The lands surrounding Helm Bay (VCU 716) are in Semi-Remote Recreation. Spacious Bay (VCU 722) is in Timber Production, including Square Island. Yes Bay, lower Bailey Bay, and Short Bay are in Semi-Remote Recreation. The head of Bailey Bay and nearby Lake Shelokum is also a Special Interest Area. The Semi-Remote Recreation LUD in lower Behm Canal and along Clarence Strait will provide for scenic values along the marine highway. VCU's 717 and 719 have Modified Landscape along the coast and Timber Production inland, and all of VCU 723 is in Old-Growth Habitat.

Meyers Chuck

Comments: Leave a large protected area (no roads, no logging) around Meyers Chuck, its water sources and nearby creeks. Meyers Chuck doesn't want any roads into or near it. (MCCA) The Cleveland Peninsula is an important subsistence area for Meyers Chuck residents (the subsistence data for that community is not reliable, the use was understated).

Response: The National Forest lands adjacent to Meyers Chuck, including all of Lemesurier Point, have been allocated to Semi-Remote Recreation, and will have no timber harvest or associated activities. Union Bay and nearby areas are in Semi-Remote Recreation and Modified Landscape. The latter LUD will provide a visual quality emphasis in design of any ground disturbing management activities. See also the response to the "General Summary" above.

Union Bay and Bear Creek

Comments: Protect the valleys with Primitive Recreation LUD. The Minerals Rx at Union Bay is inappropriate: water quality and fishing should be the prime considerations there. One commenter was concerned with the subsistence effects of the proposed Union Bay Timber Sale. VCU's 709, 710 and 720 should all be in Timber Production to take advantage of the high timber volumes and provide for economic timber sales. (AFA, KPC) There should be no timber harvest in VCU 710.

Response: Union Bay is in Semi-Remote Recreation, including the (Black) Bear Creek valley and all of VCU 709. VCU 710 (northeast Union Bay and Cannery Creek) has Modified Landscape along the coast and Timber Production inland. VCU 720 is a combination of Modified Landscape and Old-Growth Habitat along the coast and on some visible slopes with Timber Production inland. Any potential subsistence effects of the project level activities will be evaluated during the environmental analysis for that project. The Minerals LUD is applied at Union Bay to recognize the high development potential of the Union Bay tract. There are no development proposals at present, and environmental analyses for any future development would evaluate potential effects to water quality and fish.

Upper Cleveland Peninsula

Comments: Places such as Frosty Bay, Santa Anna Inlet and Deer Island should have no logging. The existing habitat capabilities of Wildlife Analysis Areas 1815 and 1902 (Deer Island) are low, and no further sales should occur there: viability will be a concern if any habitat is lost. (WRC) MA S30 and VCU 725 should be in Modified Landscape to facilitate future road and recreation developments. There should be no timber harvest in VCU 721. Whatever LUD's are assigned for MA's S30 and K31, they should readily allow for transportation and utility development, and roaded access for recreation. (AFA, KPC)

Response: Frosty Bay and Deer Island have Modified Landscape on both the shoreline and most visible slopes with Timber Production inland. Santa Anna Inlet is in Modified Landscape with Santa Anna Creek and Lake as a Scenic River LUD. VCU 721 is allocated to Old-Growth Habitat along the coast with Timber Production inland.

Dall Island

General Summary: In 1991 several commenters (including the National Audubon Society and Petersburg Fish and Game Advisory Board) asked for no logging on the west side of the island. The area (unlogged portions) is an outstanding wilderness resource: very remote, with craggy headlands, sandy beaches, caves and archaeological sites, trail potential, and good access from the protected bays, plus high recreation and wildlife values. The intact habitat, unexplored caves, many archaeological sites, and recreational experiences of "dramatic headlands, sandy beaches, and wild remoteness" make the area worth protecting. There's been too much harvest on Dall already, reducing the eastside abalone beds drastically: don't let the same thing happen on the west side of the island. Preserve west Dall Island as a Wilderness. West Dall should be part of an "outer coast wildlife refuge system" for migratory species: the timber is marginal, but the wildlife values are high.

The Alaska Visitor Association (AVA) in 1996 proposed the following development somewhere on the west side of Dall Island: Hut to Hut Hiking (25 people), Equipment Storage Facility (3000 square feet), Boardwalks, Paths, and Trails, plus 10 Flight Seeing Landings.

Response: Most National Forest lands on Dall Island south of Diver Bay have been allocated to Old-growth Habitat and Semi-remote Recreation to maintain the many natural values mentioned in the comments. In addition, several cave areas are included in the Karst Areas Geological Area (Special Interest Area LUD). The lands north of Diver Bay are in Modified Landscape, which will help maintain scenic and recreation values while allowing some timber harvest to be considered.

This area is allocated to a Modified Landscape and Semi-Remote Recreation LUDs. In the Modified Landscape LUD, certain recreation facilities are consistent with the LUD. However, timber harvest is a goal for this LUD and the Roaded Modified recreation setting is common. In the Semi-Remote Recreation LUD, compatible facilities would include small scale, rustic developments such as recreation cabins, shelters, and docks; and occasional enclaves of concentrated recreation and tourism facilities. Proposed projects would likely be considered compatible within this LUD.

Etolin, Wrangell and Zarembo Islands

General Summary: Most comments, including those by the Wrangell Resource Council and several residents of Thoms Place, were in opposition to logging in specific areas of these islands, especially south Etolin Island and Zimovia Strait. Scenic quality and subsistence hunting were the main reasons. More specific comments, and our responses, follow:

North Etolin Island

> **Comments:** Primitive Recreation LUD is recommended for Roadless Areas 232 and 233 on north Etolin: protect the unfragmented old growth for wildlife, subsistence and sport hunting. (WRC) No logging in Olive Cove, King George or Kunk Lake drainage: these are important recreation areas. Modified Landscape in King George is not appropriate, should be Semi-primitive. MA S23 should all be in Timber Production to allow for a sustainable, economic timber sale program: standards and guidelines and Best Management Practices are enough to protect the other resource values. (AFA, KPC) Except for some Scenic Viewshed or Modified Landscape along the ferry route, all of S23 should be in Timber Production: keep the harvest economic in these already-developed areas. (APC) The heads of most inlets, including Steamer Bay, Mosman Cove and Burnett Inlet, should be in the Semi-primitive LUD to protect the anchorages and undeveloped recreation areas.
>
> **Response:** North Etolin is all of MA S23, and also mostly covered by Roadless Areas 232 and 233. All coastal areas, and most inlets and bays, have been allocated to either Scenic Viewshed (marine highway and some of Zimovia Strait) or Modified Landscape (bays and inlets) to provide for scenic and recreation values while allowing timber harvest. Some inland areas and the interior of Anita

Bay are in Timber Production, where timber harvest will be emphasized. Several timber sales are scheduled for the island over the next decade. The National Forest lands in Olive Cove and at King George are in Scenic Viewshed. Kunk Lake watershed is allocated to Old-growth Habitat. Steamer Bay is in Scenic Viewshed, and Mosman Cove (or Inlet) and Burnett Inlet are in combinations of Scenic Viewshed and Modified Landscape. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Rocky Bay: hut to hut hiking for 25 people a day and an equipment storage facility of 1,000 cubic feet.

Response: The uplands on this part of Etolin Island are allocated primarily to Old-Growth Habitat with some Scenic Viewshed and some Modified Landscape.
The small islands immediately offshore are allocated to Semi Remote Recreation. These land allocation would permit the sorts of activities and facilities proposed.

South Etolin Island

Comments: No logging on Whale Tail Peninsula or in Menafee Inlet. Concerned with timber harvest planned for Whaletail Cove and Menafee Inlet areas, and in viewshed of Thoms Place: the subsistence, recreation and scenic quality needs of Thoms Place aren't adequately considered in any alternative. Logging and roading these areas would seriously affect the residents, as well as the many boaters and tourists in Zimovia Strait.

Response: The east (Zimovia Strait) side of Whaletail Peninsula is in Scenic Viewshed, to maintain scenic quality while allowing some timber harvest. The Menafee Inlet side of Whaletail is in Modified Landscape, which will help maintain recreation values adjacent to the South Etolin Wilderness while allowing timber harvest.

Woronkofski Island

Comments: This is an important deer hunting area for Wrangell residents. Deer habitat has suffered, and all sales in Wildlife Analysis Area 1904 (this and neighboring islands) should be deferred indefinitely. The island should be allocated to Primitive Recreation. (NAS, TCS) Except for some Scenic Viewshed or Modified Landscape along the ferry route, all of S22 should be in Timber Production: keep the harvest economic in these already-developed areas. (APC)

Response: All of Woronkofski Island (MA S22), and the smaller islands to the north greater than 1,000 acres (except Kadin Island, a Research Natural Area), are in the Scenic Viewshed LUD. This will allow timber harvest to continue while providing for scenic quality and other values.

Wrangell Island

Comments: The cumulative effects of the many small sales, especially on habitat fragmentation, are of concern. These need to be evaluated before you plan so many small sales. Assign Primitive Recreation to Roadless Areas 227 and 229. (WRC) The heads of Fools Inlet, Southeast Cove and East West [Earl West Cove?] should be in the Semi-primitive LUD to protect the anchorages and undeveloped recreation areas. MA S25 should all be in Timber Production to allow for a sustainable, economic timber sale program: standards and guidelines and Best Management Practices are enough to protect the other resource values. (AFA, KPC) Except for some Scenic

Viewshed or Modified Landscape along the ferry route, all of S25 should be in Timber Production: keep the harvest economic in these already-developed areas. (APC)

Response: MA S25 is all of Wrangell Island. The north portion of the island (Roadless Area 227) is all in Scenic Viewshed: it is surrounded by private or State lands. Other areas south of Wrangell and along the west side of the island are mainly allocated to Modified Landscape, Timber Production, and Old-growth Habitat. Most of the eastern shoreline and area around the mouth of Fools Inlet are allocated to a combination of Scenic Viewshed and Old-growth Habitat. The lands adjacent to the road system are mostly in Timber Production. Other lands in the interior are in Timber Production (including most of Roadless Area 229), except for Old-Growth Habitat in the vicinity of Thoms Lake. Southeast Cove is in Timber Production, as is most of Earl West Cove. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

Zarembo Island

Comments: Roadless area 237 should be in Primitive Recreation. (WRC) MA S19 should all be in Timber Production to allow for a sustainable, economic timber sale program: standards and guidelines and Best Management Practices are enough to protect the other resource values. (AFA, KPC) Except for some Scenic Viewshed or Modified Landscape along the ferry route, all of S19 should be in Timber Production: keep the harvest economic in these already-developed areas. (APC)

Response: This is MA S19, and is all in the Timber Production LUD except for the north, east and south shorelines (marine highway viewshed). The island has an extensive road system accessing suitable timber land, and a history of timber management. Roadless Area 237, roughly the southern third of the island, is mostly in Timber Production. There are two areas allocated to Old-growth Habitat in the southern half of the island.

Honker Divide

General Summary: Most of the many commenters, including Greenpeace, the Audubon Society, and the Tongass Conservation Society, asked for protection for the area's roadless recreation values and opportunities (including a popular canoe route), old-growth habitat and fisheries. Many asked that the area have full ridge-to-ridge protection from further logging or roading (entire canoe route). Some felt that the "outstandingly remarkable" recreation and scenic values were not being adequately recognized; others see Honker Divide as the last large, uncut area on North Prince of Wales, with important wildlife habitat values. A few commenters felt that logging should continue in the area, most favoring some protection for the canoe route itself. Individual comments included:

I believe that many special areas across the Tongass need to be set aside [including] Honker Divide on Prince of Wales. These have all been identified by communities, and the wishes of those communities should be recognized. Areas like ... Honker Divide should be given absolute protection. I support protection of special places like Honker Divide here on POW Island.

I think we need at least one lengthy canoeable and kayakable lowland waterway on the Tongass which is not logged off and that waterway has to be the remnants of the Sweetwater-Thorne River System, the Honker Divide.

Habitat reserves, including ridge-to-ridge protection for Honker Divide ..., need to be extensive enough to guarantee protection of wildlife habitat as recommended by the biologists who studied these and other areas.

Response: Honker Divide is the name generally applied to the river system that flows south from above Thorne Lake into Thorne Bay (the Thorne River), and north from Honker Lake (also called Lake Galea) into Sweetwater Lake and Barnes Lake (between Coffman Cove and Whale Passage), with a narrow land "divide" between the two headwaters. This river system, including Sweetwater Lake, is recommended for inclusion in the National Wild and Scenic Rivers System as a Scenic and Recreation River. Several land use designations have been allocated to Honker Divide. A habitat reserve (Old-growth Habitat LUD) encompasses more than 80,000 acres of Honker Divide as a part of the wildlife viability strategy of the plan. No timber harvesting is scheduled in the old-growth LUD and roads will be located outside the area when feasible. Outside the Old-growth Habitat LUD, to the east and west, have been allocated to scenic viewshed and modified landscape, for which the primary emphasis is maintenance of the characteristics of the landscape. The "outstandingly remarkable" recreation and scenic values have been recognized. The area's roadless recreation values and opportunities will be protected with these allocations.

Following are more detailed comments (for comments about Wild and Scenic proposals for Thorne River and Hatchery Creek, see the Wild and Scenic section):

Comments:

- The Honker Divide area should be managed as a "special management area" (proposal submitted), especially for its recreational, wildlife and biodiversity values. This would include Primitive Recreation and Old-growth Habitat allocations, and no more logging. There is no such large, protected area between Karta and Calder-Holbrook. (TCS) Honker Divide should all be in LUD-II-type designations.
- This area, including Sweetwater and other lakes, is "among the most prolific wildlife areas in southern Southeast Alaska," of great regional ecological importance, and nationally significant. Honker Divide is especially deserving of protection for its unfragmented, productive and biodiverse habitat.
- All timber harvest and road building in VCU's 574, 575, 578 and 597 (east portion), and the majority of MA's K08 and K15, should halt. We are "prepared to defend" these areas. (GP)
- Some commenters felt that logging should proceed in the area, with protection for the river corridor. One proposed a 400-year rotation for the drainage and viewshed outside a 1/2-mile corridor, others use of the Modified Landscape or Scenic Viewshed LUD's.
- The canoe route should have a 1/2-mile corridor on each side, the rest can be in Timber Production LUD. The whole area should be in Timber Production. All of VCU's 552 and 573-575 should be in Timber Production. The area is not suited for roadless recreation, should be available for timber harvest, jobs and roaded recreation. Most of the Scenic Viewshed proposed is not visible from the rivers or lakes. There are many other "gigantic set aside areas" in all directions. (AFA, KPC)
- The Alaska Visitor Association (AVA) in 1996 proposed the following development in Honker Divide: hut to hut canoe system for 25 people, Backcountry lodge resort for 30 people.

Response: It should be noted that there has been some timber harvest in the area referred to as Honker Divide, the ridge to ridge definition. No timber harvest is scheduled for the vast majority of this area which is recommended for inclusion in the Scenic and Recreation River or contained in the Old-Growth LUD. The remaining periphery of this area has been allocated to LUD's such as scenic viewshed and modified landscape. Timber harvest and roads are allowed in these LUD's. In the areas allocated to scenic viewshed management activities will not be apparent to the casual observer in the near distance. In the middle to background, management activities will be subordinate to the landscape character. The area allocated to modified landscape will be managed for a variety of uses. Timber harvest is permitted, but will be subordinate in the near ground. In the middle and background, timber harvest activities will be managed to be compatible but may dominate.

In addition the area at the northwest end of Honker Divide, have been allocated to old-growth LUD's. This area with inclusion of the Sarkar Lakes Remote Recreation area and part of VCU

549.2, Old-growth Habitat LUD, will improve landscape connectivity between Honker Divide and the north end of Prince of Wales Island all the way to Point Baker.

Honker Divide has been allocated to Old-Growth LUD, recommended as a Scenic and Recreation River, Scenic Viewshed and Modified Landscape and a portion of Timber Production LUD. The ROS class of primitive states the user will meet less than 3 parties per day, no other parties are within sight or sound of dispersed campsites or cabins. Maximum party size is generally 12 people. an site recreation developments do not exceed minimum site modification, rustic/rudimentary improvements for site protection only, except for public recreation cabins.

Juneau area (except Mansfield Peninsula)

General Summary: Many letters received about the Juneau area, opposed the application of the Minerals Rx (or LUD) in the area. Mentioned in particular were the greater importance of scenic and recreation values, with which mining would conflict. Several local conservation groups (including Alaskans for Juneau, Audubon, Sierra Club, Taku Conservation Society, SEACC) stated strongly similar concerns. Specific areas such as the Eagle and Herbert Glacier trails, to the entire area from Pt. Bishop to Berners Bay, were mentioned for withdrawal of the LUD. (See also Minerals and Recreation sections of the Resource/Issue summaries.) Many commenters also opposed any timber harvest allocations (especially on Douglas Island and at Cowee Creek), citing recreation and hunting/subsistence conflicts. Goldbelt Corporation is concerned with the designations for the Echo Cove, Lemon Creek and Douglas Island areas, wanting them to be compatible with the possible development of their lands.

Additional comments on Juneau area mining and recreation included:

- recreation prescriptions and emphasis are more important around Juneau ("a state capital with a 1/4-million recreation visitors annually")
- the growing and long-term recreation values around Juneau will be more beneficial and lasting than any short-term gains from a "boom-bust" mining economy
- mining should not be allowed on/in any trails and recreation sites in the Juneau area (booklet "90 Short Walks Around Juneau" was included as a list by one group) (JSPB, TAKU); the entire area shown on the Juneau Recreation Road Guide (a map) should be managed for/designated as recreation, not mining
- specific areas most often mentioned where recreation values should take precedence were Eagle and Herbert Glacier trails and rivers, Spaulding Meadow, and the Point Bishop trail. Other areas include Windfall Lake, and the ocean shoreline from Tea Harbor north.
- one opposite opinion: "The Eagle River Mine and Herbert Glacier areas ... should be classified as areas in which minerals development in conjunction with hiking trail enhancement within the near future is encouraged."

The 1996 comments were similar to those above. One addition was a request to create a "wilderness jogging trail" from Bishop Point to Echo Cove.

Response: Most of the National Forest lands in the vicinity of Juneau have been allocated to the Semi-remote Recreation LUD to emphasize the numerous and varied recreation opportunities and scenic values of this area. Lands north of Eagle Beach to the Berners Bay Legislated LUD II area (near Echo Cove), at Pt. Bishop, and on southwest Douglas Island, have been placed in Scenic Viewshed to provide for scenic values while maintaining the option for timber management in the future (no sales are currently scheduled). The Minerals LUD is applied to most National Forest lands within the high-potential Juneau gold belt, but excluded from this LUD are the popular hiking trails (such as Eagle and Herbert Glacier trails and Pt. Bishop trail), beach areas (Eagle Beach and Auke Rec.), and other recreation areas and facilities (such as Spaulding Meadows and Windfall Lake). In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas. The National Forest lands at Lemon Creek are also in Semi-remote Recreation. For more on the mining/recreation issue, please see responses in the Minerals and Recreation sections of the Resource/Issue comments.

Following are other comments on specific areas:

Douglas Island

Comments: The National Forest land is important locally for recreation, hunting and food gathering, much more so than for its limited potential for marketable timber, and should be managed for Semi-primitive recreation (as a minimum). Douglas Island is on the ferry and cruise ship routes and thus an important tourist viewshed; logging would not be appropriate. How the National Forest land is designated here is important to Goldbelt Corporation, and will influence how they manage their lands. (GOLD)

Response: All National Forest lands on Douglas Island are in Semi-remote Recreation, which will maintain recreation values and opportunities.

Point Bishop

Comments: This is one of the few wild, trail-accessible seashores in the area. It should have no logging (or mining), is most valuable as a recreation place. The Pt. Bishop area should be managed as in Alternative B, except with Scenic Viewshed along the shoreline.

Response: The Point Bishop area is in Scenic Viewshed, overlain by the Minerals LUD except for the Point Bishop trail. The Scenic Viewshed LUD will provide for scenic and recreation values while recognizing the development potential of the Juneau gold belt.

Kuiu Island (including Rocky Pass)

General Summary: Kuiu Island, including the Rocky Pass area, received the most comments of any area on the 1990 DEIS, and many on the Supplement as well. Practically all the comments (including those from several representatives of the Kake Native community, Narrows Conservation Coalition, Sitka Conservation Society and Point Baker Community Council) were for protection (no logging) for specific portions of the island; the major concerns were for primitive recreation opportunities, scenic quality, subsistence uses, and fish and wildlife habitat. Concerns over salmon numbers, and the area's history of landslides, were also noted. The Rocky Pass area, and several bays of East Kuiu, were noted for their recreation values, especially kayaking. All or portions of South Kuiu, and bays of West Kuiu (including Bay of Pillars), were noted for a combination of wildlife habitat, old growth, and recreation and scenic values. Bays of North Kuiu, especially Security Bay (many commenters, including the City of Kake), were cited as highly important subsistence areas where too much development has already occurred. The Primitive Recreation and Old Growth Rxs or LUD's were most commonly requested (other than just "no logging"). A few commenters wanted logging to continue on Kuiu Island. Some requested that all areas not Congressionally set aside be placed in Timber Production: the "more restrictive" LUD's would force the areas into a below-cost situation; normal protective measures are enough to protect the resource values (AFA, KPC)

The summary above covers the 1996 comments with the exception of the additional comment that south Kuiu Island has several important anchorages providing protection from winter storms.

Response: The land use designations for Kuiu Island, particularly the northern and eastern portions, reflect many of the above concerns in specific areas, although timber management (under the Timber Production LUD) remains the emphasis for much of the northern and eastern land base. Areas recognized for their scenic, recreation and/or subsistence values and uses include the west side of Security Bay, Kadake Bay, the Bay of Pillars, and the entire Rocky Pass area, most of which are in Semi-remote or Remote Recreation. The eastern coastline from Threemile Arm south has been allocated to Modified Landscape to provide for scenic and recreation values. In addition, whenever the LUD selected for an area allows

development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas. Southern Kuiu Island, south of the new Kuiu Wilderness, is allocated to Semi-remote Recreation which will preclude any logging and protect the values people are most concerned about in that area.

Following are more detailed comments on specific areas:

East Kuiu (including Rocky Pass)

Comments:

- protect the east coast of Kuiu: a prime area for recreation (esp. kayaking); no more logging on East Kuiu (No Name Bay, Rocky Pass, Port Camden and south), protect the kayaking opportunities
- the following areas are important for scenic quality and primitive recreation, and should be managed for those values: Rocky Pass, Port Camden, Three-Mile Arm, and No Name Bay
- manage Rocky Pass as Primitive Recreation (NAS) or Old Growth (many commenters); manage Rocky Pass and Hamilton Bay in an equivalent-LUD II status (fish, wildlife, scenic & recreation values; exceptional kayak route); provide Old Growth (Rx) protection for Rocky Pass
- preserve Seclusion Harbor and Salt Lagoon as natural areas
- the following areas made Wilderness would combine with Tebenkof Wilderness "into a true jewel of the Tongass": Seclusion Bay (a remarkable tidal lagoon), Alvin, No Name and Reid Bays (and their VCU's)
- "The Point Baker Community Council hereby resolves that East Kuiu Island must be given the land use prescription of OLD GROWTH or PRIMITIVE RECREATION" (VCU's 416-418). Cited are fishing, hunting, the migratory flyway and wintering habitat for waterfowl, and marbled murrellet concentrations. (PBCC)
- other comments by VCU or MA:
- MA's S9 and S12 should all be in Timber Production. (APC); area S12 should be LUD II or Wilderness
- VCU's 416-418: preserve what remains of the old growth; VCU's 416-418 should be in LUD II-type prescriptions; manage VCUs 416-417 as Prim. Rec. or Old Growth Rxs: don't let what happened to the north end of Kuiu happen here (SCS); Scenic Viewshed is recommended for VCUs 416-19; no timber harvest in VCU's 419 and 420
- retain VCU's 427-28 in LUD II (these are narrow fringes of land surrounding water); place VCU 428 in LUD IV to maximize timber harvest

Most of these points were also mentioned in 1996.

Response: The Rocky Pass area (southern 2/3 of MA S12, VCU 428) is allocated primarily to Remote Recreation to preserve the natural values and recreation opportunities. There is some Modified Landscape along the outer edges. Big John Bay and eastern Keku Strait (northern 1/3 of MA S12, VCU 427) are allocated to Semi-remote Recreation for the same reasons. The following bays and inlets (in VCU's 416-419, MA S9) are allocated to Modified Landscape to provide for scenic quality and recreation uses while allowing timber harvest: Threemile Arm, Seclusion Harbor and Salt Lagoon, No Name Bay, Alvin Bay and Reid Bay. The land between these and Tebenkof Bay Wilderness is in Timber Production, except for Semi-remote Recreation at Alecks Lake. Port Camden and surrounding lands (VCU 420) are in Timber Production, except for Modified Landscape at the head of the bay. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in the Salt Lagoon area: a leased proprietary camp with a capacity for 15 camp units and an overnight wildlife observatory with a capacity for 50 people.

Response: Much of this area is in a Timber Production or Modified Landscape allocation although the area to the north of Salt Lagoon and Seclusion Harbor is allocated to Old Growth Habitat. Developments of the type proposed would be quite limited if allowed at all in the Old Growth Habitat land allocation. They would, however, be compatible with the Timber Production and Modified Landscape land allocations. As with any development in any land allocation care would have to be taken to protect the existing resources.

North Kuiu, including Security Bay and Bay of Pillars

Comments:

- all north Kuiu bays and inlets, especially Rowan, Pillar, Tebenkoff and Kadake's, should be protected from timber harvest. (KTC); manage all of North Kuiu for Primitive Recreation (NCC)
- Seclusion Harbor: a beautiful place, with a unique inner bay/lake bordered by meadows. Cancel sale #29. Highly important subsistence and fishing area for the people of Kake: should have no more logging. (KTC)
- the following areas are important for scenic quality and primitive recreation, and should be managed for those values: Saginaw Bay and Bay of Pillars; provide Old Growth (Rx) protection for Bay of Pillars; manage Bay of Pillars in an equivalent-LUD II status (fish, wildlife, scenic & recreation values; exceptional kayak route)
- Security Bay: protect this area for subsistence use (they suggest a Wilderness designation), it is "the most important subsistence area left to the Village of Kake." (C-Kake); provide Old Growth (Rx) protection for Security Bay (the salt chuck and west shoreline in particular); Security Bay is important for subsistence (residents and Kake), commercial fishing and to Alaska Natives: it should have no more logging. "It is criminal what happened in Security Bay. We have two archeological sites, a State marine park, major subsistence streams for Kake Natives, several streams that are a must to the commercial and sport fishing interests, and private property."
- other comments by VCU or MA:
- all of MA's S4 and S5 should be in Timber Production. There's "no justification" for other classifications: continued development will extend the life of Rowan Bay. (APC); MA S5 should be in Primitive Recreation LUD; area S05 should be LUD II or Wilderness
- no timber harvest in VCU's 398, 399, 400, 402 and 421
- retain VCU 403 in LUD II (a narrow fringe of land surrounding water); Primitive Recreation is recommended for VCU 403; place VCU 403 in LUD IV to maximize timber harvest

Response: Many of the lands of north Kuiu Island, where considerable suitable timber is accessed by an existing road system, are currently being managed for timber harvest. This will continue under the Timber Production allocation for much of the area (MA S4, VCU's 398-402 and 421). The western and southern portions of Security Bay (VCU 400) are in Semi-remote Recreation, for the values commented on above, and also include the recommended Fall Dog Creek Wild River. The western coast of the Island adjacent to this (VCU 401) is in Semi-remote Recreation. The Keku Islets and Cornwallis Point are combined as the Keku Islets Geological and Natural Area (Special Interest Area LUD). Kadake Bay is all in Semi-remote Recreation, to emphasize recreation and subsistence values, and Kadake Creek is recommended as a Wild and Scenic River. The Bay of Pillars (MA S5, VCU 403) is in Remote and Semi-remote Recreation for its scenic and recreation values and uses.

South Kuiu

Comments:

- all of South Kuiu is important for scenic quality and primitive recreation, and should be managed for those values (WRC)
- South Kuiu is important to the residents of Port Alexander for hunting, fishing and camping - don't log it
- the following areas made Wilderness would combine with Tebenkof Wilderness "into a true jewel of the Tongass": Louise Cove, Table Bay, Cape Decision and Affleck Canal (and their VCU's) (see similar comment under East Kuiu)
- "The Point Baker Community Council hereby resolves that South Kuiu Island must be given the land use prescription of OLD GROWTH or PRIMITIVE RECREATION" (VCU's 410-412 and 414). Cited are fishing, hunting, the migratory flyway and wintering habitat for waterfowl, and marbled murrellet concentrations. (PBCC)
- other comments by VCU or MA:
- VCU's 413-415 should be in LUD II-type prescriptions; manage VCUs 411-414 as Prim. Rec. or Old Growth Rxs: don't let what happened to the north end of Kuiu happen here (SCS); Primitive Recreation is recommended for VCUs 410-14
- MA's S7 and S8 should be in Primitive Recreation LUD: this is prime country for that use ; MA's S07 & S08: add to adjacent Wilderness; manage as Wilderness; MA S7 should be in Timber Production: it's an excellent area for small sales (APC); areas S07-09 should be LUD II or Wilderness

The comments above are similar to those received in 1996. One addition was the following: "I am quite familiar with the anchorages on the south end of Kuiu. Many a winter gale and storm has been safely rode out... To consider logging...is unthinkable to me. The resulting wind pattern changes would surely make these safe havens no longer safe."

Response: Southern Kuiu Island, south of the new Kuiu Wilderness (which includes VCU's 408-409 and 415), has been allocated to the Semi-remote Recreation LUD. Timber harvest is not allowed under this allocation. The scenic, recreational, and wildlife values people are most concerned about should be maintained under this land allocation. This is all of the area in MA's S7 and S8, VCU's 410-414, and includes Louise Cove, Table Bay, Cape Decision and lower Affleck Canal.

Kupreanof Island (except Rocky Pass and Wrangell Narrows)

General Summary: The Duncan Canal area received many comments, usually requests for protection, in the form of LUD II-type Rxs or LUD's, for specific areas along the canal. Recreation, scenic, wildlife and roadless values were the main reasons given. A few other areas of Kupreanof Island were mentioned, most with requests to protect wildlife, fisheries and old growth habitats; a few asked that timber harvest continue on the Island.

Response: The lands surrounding Duncan Canal in the north and west (not counting the Wilderness) are allocated primarily to the Semi-remote Recreation LUD, to protect the many scenic, recreation, wildlife and subsistence values of the area. Most other lands along the canal are in Modified Landscape or Scenic Viewshed, which will provide for scenic and recreation values while allowing timber harvest. Between these coastal areas and the Rocky Pass area (see Kuiu Island) most of the Island's somewhat scattered concentrations of suitable timber are in the Timber Production LUD. The northeast shoreline, along the marine highway, is in Scenic Viewshed, with Modified Landscape and Scenic Viewshed around Portage Bay and near the private lands opposite Petersburg. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

Following are more detailed comments on specific areas:

Duncan Canal

Comments:

- all of the shoreline of MA S13 (including the east side) should be in Semi-primitive LUD: need to preserve the important scenic and recreation values. Manage all of S13 as LUD II or Wilderness: it's a "valuable recreation resource." Manage S13 as Primitive Recreation (reasons: recreation uses, cabins and its proximity to Petersburg)
- Duncan Canal and Salt Chuck must be protected: important for recreation, subsistence and wildlife values. Manage as in Alternative B. Upper Duncan Canal is the largest estuary in Southeast Alaska: its east shore should be in Primitive Recreation. (NCC)
- give the strongest possible protection to Towers Arm
- the following Duncan Canal areas should have LUD II-type prescriptions: VCUs 434-5 and 437-40. Apply Primitive Recreation LUD to VCUs 434-8 and 440.
- protect the Castle River, and Duncan and West Duncan Canals, for their locally-important fisheries, hunting and recreation values
- Castle River, and Kah-Sheets Creek and Lake, are important to Petersburg residents and for fish and wildlife habitat: manage for Primitive Recreation. (NCC)
- Castle River is a favorite place: "Please keep your roads and Japanese owned timber corporations the hell away from this very special area."
- manage Duncan Canal drainages for Old Growth Rx
- there's "no justification" for Semi-Primitive along Duncan Canal (APC)

The 1996 Comments reflected similar concerns as those stated above. An additional comment was that Castle River should receive Scenic River status to protect its recreational and fishery qualities, but not prevent logging in the upper drainages. It was also stated that Petersburg Creek/Duncan Salt Chuck Wilderness should be expanded south into Duncan Canal. Another suggestion was that instead of building new trails, cabins, etc. in the Wilderness to meet the needs of more visitors, development activities in undeveloped areas of Kupreanof should be restricted to account for the need and demand for natural settings on the island. Another comment asked that current structures be maintained adequately before new ones are built.

Response: Most of the above concerns are reflected in the land use designations around Duncan Canal (the eastern portion of MA S13). In the north, the Duncan Canal salt chuck is already in Wilderness, and Towers Arm (a portion of VCU 440) is in Semi-remote Recreation. The western shore, including the lower Castle River and its bay (VCU 435), is also in Semi-remote Recreation, down to Little Duncan Bay. These designations will prevent logging and protect the scenic, recreation, wildlife and subsistence values of these areas. Inland areas to the north and south of Castle River (VCU 435) are in Modified Landscape, Little Duncan Bay is in Scenic Viewshed, and the eastern shoreline south of the Wilderness (west side of VCU's 437 and 439) is in Modified Landscape, allocations that will help maintain scenic and recreation values while providing for timber harvest. Kah Sheets Creek and Lake are recommended as a Wild and Scenic River; Kah Sheets Bay and areas inland are in Semi-remote Recreation (VCU 434). The proposed LUDs on Kupreanof will provide for many natural settings. Maintenance of existing recreation facilities is a priority for management.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development: hut to hut canoeing between Towers Arm in Duncan Canal and the Hamilton Bay on the west side of Kupreanof Island with a daily capacity of 25 people.

Response: This area is allocated to a combination of Old-Growth Habitat and Semi-Remote Recreation on the Towers Arm side and Timber Management and Old-Growth Habitat on the Hamilton River side which is already roaded. A network of huts along these two rivers would be compatible with these land allocations.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Totem Bay: hut to hut canoeing with a daily capacity of 25 people.

Response: This area is allocated primarily to Timber Management with some Semi Remote Recreation on the small islands just off shore as well as in the adjacent Kah Sheets Bay. Hut to hut canoeing is consistent with this land allocation. Timber harvest may also occur in this area, but would likely have minimal impact on the potential for recreation. This part of Kupreanof Island is rather flat so timber harvest would not likely be visible from the water. The 1,000 foot beach buffers and scattered nature of the timber in this area would further isolate the timber harvest from areas most likely visited by recreationists.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Castle River: a day use wildlife observatory with a capacity of 25 people.

Response: This area is allocated to Semi Remote Recreation and a wildlife observatory would be compatible with this land use allocation.

Lindenberg Peninsula

Comments: No LTF in VCU 446: the area is used heavily by whales and is on the ferry route. The portions of those areas seen by Petersburg residents should be spared from logging. Give the strongest possible protection to Five-Mile Creek, and Petersburg Creek and Mountain. Defer harvest plans for Lindenburg Peninsula for 10-15 years.

1996 Comments: Duncan Pass is a valuable area for wildlife as well as humans. The loop trail offers the only long-distance loop trail in Southeast Alaska. The trail and its associated viewshed should be off-limits to further logging and road construction. Additional visual impacts to Wrangell Narrows and Duncan Canal are unacceptable.

Response: Areas in the north along Frederick Sound, including Five-Mile Creek, are in the Scenic Viewshed LUD, with the land adjacent to the City of Kupreanof (Petersburg Mountain) in Semi-remote Recreation. (Petersburg Creek is already in Wilderness, and is also being recommended as a Wild River.) One sale is scheduled for the northern peninsula in the next decade; a decision on the proposed LTF will be made at that time. The Duncan Pass portion of the "loop trail" is no longer maintained and not an official Forest trail. It never actually connected with the Portage Mt. Loop Trail to the north. There was about a 6-mile gap on the west side.

The proposed management of the seen area along Wrangell Narrows is Scenic Viewshed which is intended to maintain scenic values along the travel corridor. The vast majority of land along the Wrangell Narrows on Mitkof Island is national forest land. Visual sensitivity or "sensitive viewpoints" are established based upon the degree of concern, use volume, duration of view, and other similar factors.

See also the following response.

Other areas

Comments:

- MA S10 should be managed for visual quality and wildlife habitat; manage the drainages from Bohemia Basin for Old Growth Rx: wildlife habitat values and little decent timber
- no logging was also requested for the smaller islands in Frederick Sound, including Turnabout; Turnabout and Porpoise Islands are too small to log without drastic impacts; Turnabout Island is a harbor and a landmark: it shouldn't be logged.
- there should be no road connection between Petersburg and Kake. A road would result in many adverse effects to the Kake and Kupreanof communities. (C-KP) There should be no road connection between Portage Bay or Petersburg and Kake. Tie Kake to Duncan Canal with a road system (this would require "hard money," but some timber pockets could be developed "along the way") (APC)
- everything west of Duncan Canal not Congressionally set aside should be managed for Timber Production: don't put the areas into a below-cost situation by "more restrictive" classifications. (AFA, KPC)
- MA's S11 and S13 should all be in Timber Production: develop them for timber and roads. (APC)
- Visual-Timber Rx for VCUs 430-433.

The 1996 comments were similar to the above.

Response: The eastern portion of MA S10 is discussed under Lindenberg Peninsula above. There is one sale scheduled for the Bohemia Basin area over the next decade. Turnabout Island is allocated to Semi-remote Recreation. The central and southern portions of Kupreanof Island (most of MA's S11, S13 and S20 west of the Duncan Canal allocations) are mainly in Timber Management, and there are several independent timber sales scheduled there over the next decade. A potential road connection between Kake and Petersburg has been identified by the State of Alaska, and is recognized by the Transportation and Utility Corridors LUD. The State has no development proposal at this time.

Lynn Canal (See also Chilkat Peninsula, Juneau area, Mansfield Peninsula)

General Summary: Most general comments about Lynn Canal (commenters included Lynn Canal Conservation and Juneau Sierra Club) requested non-timber harvest Rxs or LUD's for most areas, and some wanted proposed Semi-primitive areas changed to Primitive Recreation or Old Growth. The main reasons given were recognition of the important hunting and hiking uses, and to preclude future road development or possible timber salvage. Many felt that logging in this area (and further south along the marine highway) was not compatible with the spectacular scenery. Berners Bay and Sullivan Island were the areas most often mentioned. One commenter felt the entire west shore of Lynn Canal should be developed for timber harvest and motorized recreation, and to allow a north-south road connection. (APC)

The 1996 comments are similar to those above. Additional comments about Lynn Canal called it "the great tourist and scenic corridor in Southeast Alaska" and "one of the most spectacular water corridors in the world."

Response: The shoreline of the west side of Lynn Canal is in Semi-remote Recreation and Scenic Viewshed. It is Modified Landscape behind Sullivan Island. On the east side, the shoreline at and just north of Berners Bay is in Modified Landscape, then in Semi-remote Recreation all the way to Skagway. All of these allocations recognize the importance of the scenic qualities of Lynn Canal (marine highway and cruise ship route), and the recreational uses of the bays and inlets. The Modified Landscape allocations are made to facilitate possible mineral development while providing for scenic quality; the Minerals LUD is also

applied to the high-potential mineral tracts in these two areas. Inland from these areas on the west side the land is allocated to Semi-remote Recreation, and on the east side to Remote Recreation. Much of Berners Bay is now in the Legislated LUD II LUD; Sullivan Island is in Semi-remote Recreation. The Transportation and Utility Systems LUD is overlain on the above LUD's on both sides of the Canal to recognize the potential for a transportation route identified by the State of Alaska. The State has no proposals for development of such a route at this time.

Following are more detailed comments on specific areas:

Berners Bay

Comments: This is a unique river valley with spectacular scenery, high bald eagle concentrations, and considerable recreation use. The LUD designations of Alternatives A and P are good, but remove the Minerals LUD. (See also Wild and Scenic River comments.) Berners Bay should have no Minerals LUD, no timber harvest LUD's, and no roads. (FBB, SC-J)

The 1996 comments are similar to those above, and call for protection of the complete Berners Bay area, not just the LUD II area. One commenter requested that Sawmill Creek be designated as LUD II.

Response: The Legislated LUD II LUD covers the interior portions of Berners Bay, including much of the Berners and Lace Rivers, and the mouth of the Antler River. This will of course protect the scenic and wildlife features and recreation opportunities. The northwest portion, which includes the Kensington minerals tract, is in Modified Landscape, overlain with the Minerals LUD, to facilitate mining development while recognizing the scenic and recreation values of this and adjacent areas. No roads are planned for the area, except in connection with minerals development. See previous response for discussion of transportation routes. That portion of Sawmill Creek located on National Forest System lands is within the Berner's Bay LUD II area.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for North Side Berners Bay, Pt. St. Mary's, Slate Cove: Day-use recreation (150 or more), leased proprietary camp (15 P/S).

Response: This AVA site includes both Old Growth Habitat and Modified Landscape LUDs. The stated activities are generally allowable in these LUDs. The stated activity levels exceed guidelines for day use facilities in an Old Growth Habitat LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following developments for the Upper Berners Bay drainages/Juneau Icefields: Backcountry recreation lodge (50/100), hut to hut hiking, skiing, rafting, kayaking, canoeing (25), heli-hiking/skiing (10/20/30), leased proprietary camp (15), equipment storage facility (500/1000), flight-seeing landings (10/150), boardwalks, paths and trails.

Response: This AVA site includes TTRA LUD II as well as Remote Recreation, Semi-Remote Recreation and Scenic Viewshed LUDs. The stated activities and activity levels are generally allowable in Semi-Remote Recreation (lodge as an enclave) and Scenic Viewshed LUDs except for flight-seeing landings which are limited to 100 per day. While all stated activities would also be allowable in TTRA LUD II, the stated activity levels for the backcountry lodge and flight-seeing landings exceed allowable levels.

Sullivan Island

Comments: Several requests for protection from logging (some for "permanent" protection as Wilderness), citing deer hunting (importance to Haines community), scenic quality (ferry and air routes), and recreation uses. Sullivan Island is the only deer hunting place in upper Lynn Canal and for the residents of Haines; it is a "spectacular old growth area," used for hunting and Primitive recreation, and should be preserved from logging for use by the general public. Sullivan Island should be managed for scenic quality: it's a popular anchorage and on the ferry route, and deserves protection. Some felt the proposed Semi-primitive Recreation designation (1991 Supplement) should be changed to Primitive to exclude the possibility of road building in the name of salvage logging.

The 1996 comments are similar to those above.

Response: All National Forest land on Sullivan Island has been allocated to the Semi-remote Recreation LUD, which will fully protect the hunting and other recreation values of the island, its old growth, and its scenic quality. Road construction in a Semi-remote Recreation LUD is only allowed for access across it to adjacent designations, and would not be allowed for salvage logging or other activities within the LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for the West Coast of Lynn Canal and Sullivan Island: Boardwalks, paths and trails (A&B), Backcountry recreation lodge (100), leased proprietary camp (15 P/S), Day use recreation area (150).

Response: This AVA site is located within a Semi-Remote Recreation LUD. The stated activities and activity levels are generally allowable in this LUD. Enclaves of concentrated use are allowable in a Semi-Remote Recreation LUD.

Westside of Canal

Comments: The Chilkat Range should not be developed for timber harvest: it has high scenic value, and is important wildlife habitat. The eastside of the Chilkat Range should all be in Primitive Recreation. Protect Boat Harbor: it is a Marine Park and popular recreation area. Manage the coast, Pt. Howard to St. James Bay, as in Alternative B but with a wider Semi-primitive zone: this area has high scenic and roadless values, and many good small boat anchorages.

Response: As mentioned above, the westside of the Canal is primarily in Semi-remote Recreation and Scenic Viewshed along the shore (with Modified Landscape in the north), and in Semi-remote Recreation inland. The Scenic Viewshed LUD will provide for the scenic and recreation values of the shore areas, bays and inlets while also maintaining the option for future timber harvest. No timber sales are scheduled north of the Chilkat Peninsula over the next decade. The National Forest lands of the bays mentioned are all in Scenic Viewshed.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Endicott River: Backcountry recreation and lodge (50), Boardwalks, paths and trails, leased proprietary camps (15 P/S).

Response: This AVA site is located partially within a Semi-Remote Recreation LUD and partially within a Scenic Viewshed LUD. The stated activities and activity levels are generally allowable in both LUDs.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development near St. James Bay: Boardwalks, paths and trails, heli-hiking, heli-skiing (50), backcountry recreation lodge (100), leased proprietary camp (15 P/S), day-use recreation (150).

Response: This AVA site is located partially within a Semi-Remote Recreation LUD and partially within a Scenic Viewshed LUD. The stated activities and activity levels are generally allowable in Semi-Remote Recreation and Scenic Viewshed LUDs.

Eastside of Canal

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Katzahin River/Meade Glacier: flight-seeing landings (25), Hut to hut hiking, rafting, skiing (25), leased Proprietary Camp (15 P/S), Backcountry recreation lodge (50), Heli-hiking/skiing (10/20/30), equipment storage facility (500/1000)

Response: The Katzehin River traverses two different TLMP Land Use Designations (LUDs); Semi-Remote Recreation and Remote Recreation with a portion of the river within a Wild River LUD. The Meade Glacier is located within the Remote Recreation designation. The stated activities and activity levels are generally allowable in a Semi-Remote Recreation LUD as enclaves. The stated activity levels exceed guidelines for flight-seeing and permanent overnight facilities in Remote Recreation and Wild River LUDs.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Eagle Point and north 15 miles along the coast: Kayaking, backcountry recreation lodge (50), hut to hut hiking (25).

Response: This AVA site includes Old Growth Habitat and Scenic Viewshed LUDs. The stated activities are generally allowable in Old Growth Habitat and Scenic Viewshed LUDs. The stated activity levels are allowable as enclaves in Semi-Remote Recreation LUDs, but exceed guidelines for lodges in the Old Growth Habitat LUD.

Mainland: Port Houghton, Cape Fanshaw and Farragut Bay

General Summary: Most of the over 100 commenters on these areas cited the recreation, tourism and scenic values of Cape Fanshaw, Farragut Bay, Port Houghton and/or Sandborn Canal, and desired more protection for these qualities and no timber harvest. Many Petersburg residents, the Narrows Conservation Coalition, and the Juneau Sierra Club mentioned the importance of these areas for fishing, recreation and subsistence. Others felt that these high-use areas, with many popular anchorages, should have non-development LUD's assigned, not timber harvest LUD's.

Response: The portions of these mainland areas facing Stephens Passage and Frederick Sound have been allocated to the Scenic Viewshed LUD, to provide for scenic quality along the marine highway and cruise ship routes, or to the Old-growth Habitat LUD. This includes all of Cape Fanshaw, where both LUD's will also help maintain the recreation setting and values. The Port Houghton area, which contains good timberlands, is mainly allocated to Timber Production inland, but the salt chuck, Sanborn Canal, and the shoreline areas are in Scenic Viewshed to provide for scenic and recreation values, or Old-growth Habitat. Farragut Bay (MA S2) is allocated to Semi-remote Recreation.

Following are more detailed comments on specific areas:

Cape Fanshaw (and Bay)

Comments: This area is viewed from the cruise ship line, and is a major anchorage, recreation place, and commercial fishing area: it shouldn't have any timber harvest. Fanshaw Bay is highly important as an anchorage for recreation and commercial boats, and for its scenic values and whale watching: save it for tourism and the future. Fanshaw is important to the moose and deer populations of lower Farragut River, and to offset the losses of habitat at Hobart Bay. "In addition to the Alternative A allocations," no timber harvest in VCU's 85, 86 and 89. MA S1 should have LUD II-type allocations. Don't build the LTF proposed inside Fanshaw: it's a stupid place, the scenic values and crab habitat are more important.

Response: As mentioned above, most of Cape Fanshaw (VCU 85), including the bay, is in Scenic Viewshed or Old-growth Habitat, which will provide for scenic and recreation values. This allocation extends southward along the shoreline down to and including the North Arm of Farragut Bay (VCU 89). Inland from this in VCU 86 is Modified Landscape, and in VCU's 87 and 89 Timber Production. The Cape Fanshaw Research Natural Area is also in VCU 85. The preceding comprises MA S1. Any decision to build an LTF in Fanshaw Bay would be made during site-specific timber sale planning, after an analysis of potential environmental effects.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Cape Fanshaw: day use recreation with a capacity of 2,800 visitors per day.

Response: This area is allocated to old-growth habitat which will protect the values which make it attractive to recreationists. Minor recreation and tourism developments may be compatible with this land allocation but would have to be evaluated on a case by case basis. Depending upon the facility and anticipated activities, a capacity of 2,800 may conflict with the objective of maintaining old-growth habitat.

Farragut Bay

Comments: Why was Farragut Bay taken out of LUD II (1991 SDEIS): there should be no cutting there. It's a unique place: large waterfowl populations, many salmon, moose and bear hunting. The timber values are low, and concentrated on the river edge where harvest would be detrimental; the slopes appear to have unstable soils. It has many tourism and recreation values: should continue to be managed in a LUD II-type way; MA S2 should have LUD II-type allocations. If Fanshaw is managed for timber (LUD III-type), then the boundary between it and Farragut Bay (S2) should be moved so that the north arm of Farragut Bay is in LUD II to protect herring spawning and the seal haul-out. Logging and an LTF would adversely impact the seals. Allocate this area to the Timber Production LUD: Scenic Viewshed is too restrictive, will mean economic problems for timber harvest. (AFA, APC)

Response: Farragut Bay (all of MA S2) has been allocated to Semi-remote Recreation to recognize and protect the many values mentioned above. The Farragut River is recommended as a Wild River. The North Arm of the bay (VCU 89 in MA S1) is in Scenic Viewshed, which will provide for scenic and recreation values. Any decision to build an LTF in the North Arm would be made during site-specific timber sale planning, after an analysis of potential environmental effects.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Faragut River: hut to hut rafting, canoeing, kayaking, and a leased proprietary camp with capacity for 15 camp units.

Response: Farragut River is being recommended for Wild River designation over most of its length with a less restrictive Scenic Rover designation near its mouth. The area in the immediate vicinity of the mouth is in private ownership and the area of National Forest land surrounding the river corridor is allocated to Semi Remote Recreation. The developments proposed by AVA would be consistent with these land allocations although the 15 camp units may be very difficult to design in a manner consistent with the objectives of the Wild River designation.

Port Houghton and Sanborn Canal

Comments: Management area C14 should have LUD II-type LUD's assigned. "In addition to the Alternative A allocations," no timber harvest in VCU's 77, 80 and 82. Remove Sandborn Canal and Port Houghton salt chuck from timber LUD's. Don't "trade" Port Houghton to APC: save it for tourism. Sanborn Canal has rare old growth: preserve it for research and recreation for future generations. Assign the Old Growth LUD to: 1) the salt chuck and estuary at the head of the North Arm (the only mainland salt chuck in Southeast, thus rare and unusual), and 2) Sanborn Canal, an important salmon area with unstable soils. MA C14 should all be in Timber Production. There is little "tourist traffic," and the road system could tie into that at Hobart Bay in the future. (AFA, APC)

The 1996 comments were similar to those above.

Response: As mentioned above, most of the inland portion of the Port Houghton area (MA C14, including all of VCU's 77 and 80) has been allocated to Timber Production, to emphasize timber management of the suitable timberlands. However, the Port Houghton salt chuck, Sandborn Canal (VCU 84), and all shoreline areas are in Scenic Viewshed to provide for recreational uses, or Old-growth Habitat. VCU 82 has Scenic Viewshed and Old-Growth Habitat facing Stephens Passage. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following developments at Port Houghton: Leased proprietary camp (15P), day-use wildlife observatory (30), overnight wildlife observatory (30).

Response: These AVA sites include Old Growth Habitat, Scenic Viewshed and/or Timber Production LUDs. The stated activities are generally allowable in these LUDs although the stated activity level exceeds guidelines for overnight facilities in the Old Growth Habitat LUD.

Mainland: South of Farragut Bay (except Cleveland Peninsula)

General Summary: Scenic quality and recreation values were cited in support of non-timber Rxs or LUD's for LeConte and Thomas Bays, and coastal areas in between, and more generally for all coastal areas between Farragut Bay and the Stikine River. The Bradfield Canal area received many comments (including the City of Petersburg and Ketchikan Gateway Borough) in favor of maintaining options for power and utility corridors, and a possible road connection to Canada. (See also the Transportation section of the Resource/Issue summaries.) Several commenters asked for no or reduced logging in the Hyder area.

Many similar comments were made in 1996. Some people also commented that there should be no roads or transportation corridors allowed in Anan Creek. Comments were also made in favor of protecting the views from Frederick Sound.

Response: All of the mainland shoreline from Farragut Bay south to the Bradfield Canal (excluding the Stikine-LeConte Wilderness) is allocated to Scenic Viewshed, Old-growth Habitat, or Semi-remote Recreation. These allocations will help maintain the scenic and recreational features of the shoreline areas. Thomas Bay is in Scenic Viewshed and Semi-remote Recreation for its many recreational uses. LeConte Bay is within a Wilderness LUD. There are no roads allowed in the Anan watershed due to its status as a Congressionally designated LUD II (roadless area). One of the alternatives under consideration for the Tyee Intertie (proposed powerline connecting hydro-electric facilities at Tyee and Swan Lake) is located across the southern end of the Anan VCU.

Following are more detailed comments on specific areas:

Bradfield River and vicinity

Comments: Recognize and don't restrict future development of the Bradfield Canal Resource Road and the Tyee Lake/Swan Lake Power Intertie and Transportation Project. (C-P, KGB) Don't restrict a possible road system connecting Ketchikan with Canada through the Bradfield area. The Bradfield River should not have a transportation corridor or road, and should not be under the Minerals LUD. Manage the Harding River to keep it as pristine as possible. Manage Roadless Area 207 in the Primitive Recreation LUD: it contains large old-growth habitat blocks and outstanding recreation, subsistence and commercial fishing values. (WRC) This area is pristine and has a greater value for primitive recreation than for timber harvest. The habitat capability of Wildlife Analysis Areas 1813 and 1814 is a concern. Possible future development would conflict with sport fishing, charter boat and guide services: no road to benefit Canadian mining interests is needed. (WRC)

Response: Some of the potential road and utility systems mentioned in the comments have been assigned the Transportation and Utility Systems LUD to recognize this potential. All of the land use designations in the revised Forest Plan allow, at a minimum, access through them for these types of developments, even Wilderness (which in Alaska has some special exceptions under the Alaska National Interest Lands Conservation Act). Some LUD's (such as Wilderness or Remote Recreation) encourage the use of alternative routes and require that these be evaluated first. In several areas (VCU's 511-513 and 518, for instance) the Semi-remote Recreation LUD was selected for all or part of the area, rather than the Remote Recreation LUD, to be more compatible with possible future road or utility development, while at the same time maintaining a natural, undisturbed recreation setting. The Minerals LUD is not applied to this area. Roadless Area 207 covers a large area on both sides of the Canal: it has Modified Landscape along the Canal, with Remote and Semi-remote Recreation in the north, Timber Production in the south. Wildlife Analysis Area 1813 contains a mixture of Timber Production and Semi-remote Recreation; Area 1814 contains Remote and Semi-remote Recreation, Timber Production and Modified Landscape. In addition, whenever the LUD selected for an area allows development activities, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in the Upper Bradfield Canal: trails, day use wildlife observatory with a daily capacity of 50 people, day use recreation facilities to support 100 people a day, boat dock to support 50 people per day and an overnight wildlife observatory to support 50 people.

Response: This area is allocated primarily to Timber Production with some Remote Recreation and some Semi Remote Recreation. This area could support each of these activities although the

overnight facility is probably not compatible with the Remote Recreation land allocation. The Timber Harvest allocation does permit a high level of development which could conflict with a remote recreation experience. However, at this point in time no such developments are anticipated for this area.

Misty Fiords

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Winstanley and Nooya Lakes: Small Cruiseship Shorewalk - up to 25 persons

Response: These are fresh and salt water locations within the Wilderness National Monument LUD. This LUD specifies to manage use and activities to meet levels of social encounters, on-site developments, methods of access, and visitor impacts indicated for the Primitive and Semi-Primitive ROS classes. Major and Minor recreation-related developments are not allowed by law or regulation or are not consistent with agency policy and regulations. Therefore, these activities and use levels are typically inconsistent with this LUD

Thomas Bay

Comments: Should be designated as a future hydroelectric facility. VCU 486 should be in a LUD that will allow hydro development and a utility corridor. (AFA, KPC) Management Area S35 should emphasize scenic quality and wildlife habitat. The area around Thomas Bay is part of one of Southeast's most beautiful corridors, the premier mainland/coast range outside Misty, and should have no logging. Protect the roadless recreation values of "what is left of Thomas Bay." Protect the viewshed, Cape Fanshaw to Thomas Bay: this is one of the last strips of coast on the ferry route with minimal damage. (See also the Special Areas section of the Resource/Issue summaries.)

Response: The marine highway/cruise ship "viewshed" between Cape Fanshaw and Thomas Bay is all in the Scenic Viewshed LUD, which will provide for the scenic qualities of the area. The lands around Thomas Bay (most of MA S35) are either in Scenic Viewshed (all of the southern portion, and the northern outer bay, which also has a backdrop of Modified Landscape) or Semi-remote Recreation (the interior portions, including all of VCU 486). The Scenic Viewshed allocation in the south will help maintain the roaded recreation values, and the Semi-remote Recreation allocations will protect the roadless and wildlife values of the interior. Hydroelectric development would not be precluded by the Semi-remote designation.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Thomas Bay: lease proprietary camp with a capacity of 15 tent platforms.

Response: This area is allocated primarily to Scenic Viewshed with a small area of Modified Landscape. These land allocations do allow for developments such as a camp. Timber harvest is also permitted in this LUD but with an emphasis on maintaining scenic quality.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Cascade Creek: a small cruiseship shorewalk.

Response: This area is allocated to Semi Remote Recreation which is compatible with the type of activity and facility proposed by AVA.

Other areas

Comments:

- MA S29 adjacent to Misty should be managed as in Alternative A
- Kate's Needle area (ANILCA Wilderness proposal) - keep the wilderness option open here: manage for primitive recreation
- Virginia Lake (VCU 502) is the heaviest used recreation cabin on the Wrangell Ranger District. The area should be in Semi-primitive Recreation
- manage Roadless Areas 204 and 205 (opposite Wrangell Island) in the Primitive Recreation LUD: they contain large old-growth habitat blocks and outstanding recreation, subsistence and commercial fishing values. (WRC)
- MA's S26 and S27 should be available for unrestricted timber harvest and roading. (AFA, APC)

Responses:

- MA S29 is allocated to Timber Production, where existing roads access suitable timberland. No timber sales are scheduled here over the next decade.
- the Kate's Needle area (MA S3) is all in Semi-remote Recreation.
- Virginia Lake is part of the recommended Virginia Lake and Creek Recreation River. The Scenic Viewshed and Modified Landscape LUDs are allocated outside the river/lake corridor.
- Roadless Area 204 is primarily in Scenic Viewshed (including all shoreline areas), with some Modified Landscape and Timber Production inland. It also contains Virginia Lake - see previous item. Roadless Area 205 is all in Remote or Semi-remote Recreation, and also contains the recommended Aaron, Orens and Berg Creeks Scenic and Recreation River.
- MA S26 is the area discussed in the previous item. MA S27 is in Remote and Semi-remote Recreation.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for the Stikine River: rafting, kayaking, flight seeing landings, day boat docks, lease proprietary camp, and day use recreation with a daily capacity of 100 people.

Response: This area is in a Congressionally designated Wilderness. Many of the suggested activities currently take place there now; some with the assistance of commercial guides. However, because it is a designated Wilderness, commercial developments are generally not compatible. National wilderness management policy specifically discourages boat docks in wilderness. Some developments can be implemented but must be primitive in character and address subsistence needs (as provided be ANILCA), resource protection, or health and safety concerns. Visitor use capacities in the wilderness are determined on a case-by-case basis and favor primitive and semi-remote or remote recreation experience with low visitor densities.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Anan Creek: a day use wildlife observatory with a daily capacity of 50 and an overnight wildlife observatory with a capacity of 50 people.

Response: This area is a legislated LUD II area. This land is allocation is compatible with, and currently supports a day use wildlife observatory. There is also a recreation cabin on the site that is available for over night use. However, the sort of facility that would be required to house 50 people at a time is generally is generally excluded from this land allocation. Even if not excluded by the land allocation, there is some doubt that such a development would be compatible with the management of the unique wildlife (black and brown bears) on the site.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Marten Creek and Lake: boardwalk and paths, day use wildlife observatory with a daily capacity of 30 people, day use recreation facilities to support 100 people a day, boat dock to support 50 people per day, a leased proprietary camp with a capacity of 15 tent platforms, and a backcountry lodge with a capacity of 150 people.

Response: The area from the shore line to the lower end of Marten Lake is allocated to Semi Remote Recreation. The rest of the area is allocated to Remote Recreation. In the Remote Recreation land allocation, major recreational developments are generally not compatible with the objective of providing a primitive recreation setting. Minor developments may be compatible and would be considered on a case by case basis. The kinds of facilities proposed may be compatible with the Semi Remote land allocation below Martens Lake. The exact kind and number of users supported would have to be analyzed on a case by case basis, but generally enclaves of concentrated use are permitted.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Harding River: boardwalk and paths, day use wildlife observatory with a daily capacity of 50 people, day use recreation facilities to support 100 people a day, boat dock to support 50 people per day.

Response: The area surrounding the Harding River is allocated to Semi Remote Recreation and the river itself is being recommended to Congress for designation as a Scenic River as part of the Wild and Scenic Rivers system. The kinds of activities and facilities recommended be AVA are generally consistent with this kind of setting.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Eagle Creek: boardwalk and paths, day use wildlife observatory with a daily capacity of 50 people, and day use recreation facilities to support 100 people a day.

Response: Eagle River is within an area allocated to Semi Remote Recreation. This land allocation would support any of the facilities suggested by AVA.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in LeConte Bay: equipment storage facility of 1,000 cubic feet, a leased proprietary camp with capacity for 15 tent platforms, day use recreation facilities for 150 people, and hut to hut hiking for 25 people.

Response: LeConte Bay is within a Congressionally designated Wilderness area. With the possible exception of the hut to hut hiking, the facilities suggested by AVA are not compatible with a wilderness designation. There is privately owned land near the mouth of the bay that could be a potential location for such facilities.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Aaron, Oerns and Berg Creeks: a leased proprietary camp with a capacity for 15 camp units.

Response: These three streams, which converge in form a single system, are in an area allocated to Semi Remote Recreation. This stream system is also recommended for designation as a Wild River. The proposal for a proprietary camp is consistent with the Semi Remote Recreation designation. It may also be compatible with the Wild River designation although any considerable care would be needed in the design of a facility inside the river corridor in order to maintain a rustic atmosphere.

Mainland: Taku Inlet to Hobart Bay

General Summary: Commenters, including the Juneau Sierra Club, were concerned in general with the scenic qualities and recreation and tourism values of many locations along Stephens Passage. Some commented that this is one of Southeast's most beautiful corridors, the premier mainland/coast range area outside of Misty, and should have no logging. Areas mentioned for no logging included: Taku Inlet and the Taku River, Holkham Bay and the mouths of Tracy and Endicott Arms, Windham Bay, and Port Snettisham. Unique wildlife values were also noted for several of these areas; others cited this portion of the mainland as an ecologically important area that must include protection of the coast and bays as well as the mountains. It should be preserved without logging, without roads, with limited recreational developments, and limited mining. Manage all the bays, inlets and arms for Primitive Recreation; manage all of MA's C7, C10, C12 and C13 as Primitive Recreation. (SC-J).

One additional 1996 comment requested that no logging or development take place adjacent to Tracy Arm-Ford's Terror Wilderness.

Response: All the mainland shoreline between Taku Inlet and Hobart Bay is in Scenic Viewshed or Old-Growth Habitat. This will provide for the scenic qualities associated with the cruise ship, ferry and recreational boating uses of Stephens Passage. The lower part of Taku Inlet (C7) is also in Scenic Viewshed, with the upper part in Semi-remote Recreation. The only part of Holkham Bay (C12) not in Wilderness (Endicott Arm and most of Tracy Arm are in the Wilderness) is in Semi-remote Recreation; the interior of Windham Bay is also Wilderness, and the mouth is allocated to Scenic Viewshed. The outer portion of Port Snettisham is in Modified Landscape, Old-Growth Habitat and Scenic Viewshed. See below for discussions of MA's C10 and C13.

Following are more detailed comments on specific areas:

Hobart Bay

> **Comments:** Has had far too much logging on the private land; the surrounding Forest Service land must be preserved to maintain wildlife habitat and reduce cumulative effects. (AFSEEE) Management Area C13 should emphasize scenic quality and wildlife habitat. Harvest the Forest Service timber; use the existing road (extend it) and facilities. (GOLD) All of MA C13 should be in Timber Production, since it's adjacent to developed lands. (AFA, APC) Include upper Laura's Creek in the non-timber allocation.
>
> **Response:** The National Forest lands in MA C13 are mostly in Timber Production, with Scenic Viewshed along the shore. The suitable timber lands to the north and south of Hobart Bay can be accessed by extending the road system from the private lands already under timber management. To the east of Hobart Bay and MA C13 the lands are all now in Wilderness.

Holkham Bay area

Comments: The mouths of Tracy and Endicott Arms (C12) should be made Wilderness to protect the entire fjord systems. Retain VCU 64 as LUD II. Opposed to logging adjacent to Tracy Arm/Fords Terror Wilderness: preserve the entire ecosystem (the Wilderness portion being largely rock and ice).

Response: As mentioned above, all lands in Holkham Bay and Tracy and Endicott Arms not already in Wilderness (MA C12 and VCU 64) have been allocated to Semi-remote Recreation. This will maintain this unroaded area for recreation and for users of the Wilderness.

Port Snettisham and Whiting River area

Comments: Manage Port Snettisham for its scenic and recreational values: either in non-timber LUD's, or the same as Alternative B with more Scenic Viewshed. The Whiting River area has excellent wilderness potential, low timber values. It should be classified as "wilderness recreation" - there's also the possibility of a joint wilderness with British Columbia in the future. Opposed to sale #13 (incorrect on map - actually sale #5). Manage C10 as either Wilderness, Primitive Recreation or Old Growth to preserve its high value wildlife potential. Manage for Primitive Recreation, at least along the shores of the Whiting River. Manage Taku Harbor and Limestone Inlet for their scenic and boating values: at a minimum, should be in Scenic Viewshed. The western half of MA C10 is ideal for timber production: second growth would be comparable to island second growth: placing it in Scenic Viewshed or Modified Landscape will make it harder (costlier) to develop. (AFA, APC)

Response: Management Area C10 includes Port Snettisham, coastal areas to the north and south, and the Whiting River area. The northwest portion of Port Snettisham is in Modified Landscape, the outer south side has Scenic Viewshed backed by Modified Landscape, and the interior is in Semi-remote Recreation. These LUD's will provide for the scenic and recreation values of this area, and any timber harvest done in the western portions will be designed to minimize the visibility of activities. The suitable timber lands on the west side of Gilbert Bay are in Timber Production, as are the lands inland from the Scenic Viewshed designation in Slocum Inlet. All of the area inland on both sides of the Whiting River, is in Semi-remote Recreation. These areas have little suitable timber land, and high roadless recreation and scenic values. Taku Harbor and Limestone Inlet are in Scenic Viewshed and Old-Growth Habitat, except for the Limestone Inlet Research Natural Area.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Whiting River: Hut to hut hiking, canoeing, rafting, kayaking (25), backcountry recreation lodge (50), leased proprietary camp (15 P/S), flight-seeing landings (25).

Response: This AVA site is within a Semi-Remote Recreation LUD. The stated activities are generally allowable in Semi-Remote Recreation LUDs although the stated activity levels would only be allowable as enclaves.

Taku Inlet and River

Comments: Recreation, tourism and summer homes should take precedence over logging here. The area (Inlet and River) should be protected; no transportation corridor. Manage the Taku River to keep it as pristine as possible. Slocum Inlet should be in Scenic Viewshed like the rest of the mainland: it can be seen from downtown Juneau! Manage the shores of the river for its scenic and boating values: at a minimum, should be in Scenic Viewshed (and inland as in Alternative B). Don't restrict possible road development or access: the Canadians have a treaty right to access tidewater. (See also Wild and Scenic River comments.)

Response: Taku Inlet includes MA's C7 and C9. The lower portion (most of MA C7) has been allocated to Scenic Viewshed, to provide for scenic quality and recreation uses while maintaining the option for future timber harvest. Scenic Viewshed also applies to the C7 portion of the Juneau Goldbelt, which also has the Minerals LUD. The interior portion of Taku Inlet and the Taku River (MA C9) are all in the Semi-remote Recreation LUD, for the many recreation and tourism values and uses. Slocum Inlet is in Scenic Viewshed.
The Transportation and Utility Systems LUD is overlain on both sides of the Inlet and River, to recognize the potential transportation tie to Canada as identified by the State of Alaska. The State has no development proposal at this time.

Other areas

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Windham Bay: Backcountry recreation lodge (50), leased proprietary camp (15 P/S).

Response: This AVA site includes Old Growth Habitat, Scenic Viewshed and Timber Production LUDs. The stated activity and activity level are generally allowable in all three LUDs although the stated activity level for the lodge exceeds guidelines in the Old Growth Habitat LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Gilbert Bay: Small cruiseship shorewalk (25).

Response: This AVA site is located within Semi-Remote Recreation and Timber Production LUDs. The stated activity and activity level is generally allowable in both LUDs.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following developments for Sweetheart Bay and Williams Cove: Backcountry recreation lodge (150), hut to hut hiking, kayaking, canoeing (25), heli-hiking(30), boardwalks, paths and trails; and small cruiseship shorewalk (25).

Response: This AVA site includes Semi-Remote Recreation, Modified Landscape and Timber Production LUDs. The stated activity and activity levels are generally allowable in all three LUDs. The stated activity level for the lodge would be allowable in the Semi-Remote Recreation LUD as an enclave.

Mansfield Peninsula

Comments: Most of the over 100 commenters (including several local conservation groups, the National Audubon Society, and the Friends of Mansfield Peninsula) asked for non-logging Rxs or LUD's for Mansfield Peninsula, citing its importance for recreation and tourism (proximity to Juneau and being on the ferry route), scenic viewing, and as fish and wildlife habitat (deer and brown bear in particular). Many also felt that the subsistence and recreation values far outweighed the timber values. Residents of Funter Bay localized these concerns to their immediate vicinity. The City and Borough of Juneau restated its 1989 resolution for protection of Mansfield Peninsula. More specific comments included:

- Mansfield Peninsula is important locally for recreation, hunting and food gathering, much more so than for its limited potential for marketable timber: the entire area should managed for Semi-primitive recreation (as a minimum). "The value of this area for uses involving recreation, scenic viewing, fish and wildlife use and conservation far exceeds that value derived from timber harvest in any part of this area." (FBRA)

- preserve the entire shoreline and mid-slope timber of the area around Funter Bay as Beach Fringe or Old Growth (Rxs) (reasons: a marine park, deer and brown bear habitat, much not feasible to log); timber Rxs around Funter Bay are not appropriate, the area should be Semi-primitive Recreation within site of the bay (reasons: recreation use, important deer and fish habitat).
- no road building in the NW or NE sides of the peninsula
- preservation of Mansfield Peninsula would "complete protection for all public land on Admiralty Island."
- "multiple use management" should continue for Mansfield Peninsula
- all of Mansfield Peninsula should be in non-logging prescriptions: it is an important wildlife habitat and recreation area
- leave VCU 125 in Modified Landscape, put the rest of Mansfield into Timber Production. The area should be developed for timber and roaded recreation, with a road system tying to the Greens Creek road. (AFA, APC)
- make the following LUD changes (for preferred alternative):
- Barlow Cove: Modfied Landscape (ML) to Semi-primitive (SP)
- Hawk Inlet: ML to SP or Scenic Viewshed
- Funter Bay and most of the rest of Mansfield: change to SP or Primitive Recreation except for the areas with mining potential
- the Minerals LUD is appropriate for Mansfield, and should be expanded to cover all areas with active claims. The Moderate Development LUD will protect "the values" and hunting without overly burdening mineral activity.

Response: For many of the reasons presented above, the allocations for Mansfield Peninsula have been changed since the Supplement (Alternative P). All of the Peninsula (including VCU 125 and the islands to the north) is now allocated to Semi-remote Recreation. This will protect the scenic, recreation, wildlife and subsistence values of the area, including the lands around Funter Bay, Barlow Cove and Hawk Inlet. No timber harvest or associated ground disturbing management activities will occur in these areas. Access to the Greens Creek mine and for possible future minerals development will still be allowed. The Minerals LUD is applied to the high potential Funter Bay tract as well as the portion of the Greens Creek tract not included in Admiralty Island National Monument.

Other comments:

> **Comment:** The Alaska Visitor Association (AVA) in 1996 proposed the following development for the Mansfield Peninsula: Heli-hiking, heli-skiing (50), day-use recreation (150), day-use wildlife observatory (30), trails, paths and boardwalks A & B.
>
> **Response:** This AVA site is within a Semi-Remote Recreation LUD. The stated activities are generally allowable in Semi-Remote Recreation LUDs although the stated activity levels would only be allowable as enclaves.

Mitkof and Woewodski Islands, including Wrangell Narrows

General Summary: Most commenters (including Narrows Conservation Coalition and Wrangell Resource Council) requested non-timber Rxs or LUD's for much of Mitkof Island, especially the Blind Slough and Crystal Mountain area. Natural values, scenic quality, and recreation and hunting were given as reasons. Some felt that Mitkof Island should have at least some unroaded areas protected; others wanted timber harvest to continue on the island. Scenic quality in the Wrangell Narrows, and preservation of Woewodski Island, were also of concern.

Many of these concerns were repeated in 1996, especially concern about timber harvest on Woewodski and southeast Mitkof Islands, which many commenters opposed because of the scenic and recreational values.

Response: The LUD allocations for Mitkof Island reflect the concerns expressed during the Mitkof Landscape Analysis for scenic quality, recreation opportunities and natural values while maintaining timber harvest and a small-sales timber sale program. Scenic Viewshed or Modified Landscape is applied adjacent to private lands in the north and west, to all of the southwest portion of the island, and along much of the road system, which has become increasingly popular with recreationists. Ideal Cove and vicinity is in Semi-remote Recreation, and the Blind Slough/Crystal Mountain area is proposed as a Special Interest Area. The remaining lands of the eastern half of the island are allocated to Timber Production and Old-Growth Habitat. Most National Forest lands along Wrangell Narrows, and on Woewodski Island, are in Scenic Viewshed, with the remainder in Modified Landscape, in both cases to provide for scenic values and recreation opportunities.

Blind Slough and Crystal Mountain

Comments: Crystal Mountain should be preserved for its visual qualities and roadless recreation values (winter sports, alpine recreation). Manage the summit of Crystal Mountain as Wilderness or Primitive Recreation: it's the highest peak on the island, and the largest contiguous alpine system accessible by road. Protect Blind Slough for its fishing, hunting & recreation values, managing it under the Semi-Primitive LUD. Apply the Old Growth or Primitive Recreation LUD's to the "remaining uncut drainages into Blind Slough"; apply these LUD's to the Blind Slough/Ohmer Creek area, to protect the fish and wildlife, and recreation, values and make up for the effects of past logging. (WRC) The area is a unique ecosystem: too unique for any more logging. (NCC) (See also the Special Areas section of the Resource/Issue summaries.)

Response: The Crystal Mountain/Blind Slough area is proposed as the Blind Slough Scenic and Zoological Area, to be managed under the Special Interest Area LUD. This will provide protection for the area's unique ecology, valuable wildlife habitat and recreation values. Included are the recreation facilities at Ohmer Creek. In addition the Blind River is recommended as a Recreation River under the National Wild and Scenic River System.

Woewodski Island

Comments: Over 50 persons requested protection for Woewodski Island: it is an ecosystem in itself, is right on the ferry route, and is too small to be logged without major impacts to fish and wildlife. This is an important recreation and subsistence area for Petersburg. Cancel sale #36. Don't have a timber sale on Woewodski: it would be a deficit sale, and is in the viewshed of Petersburg residents and recreationists. The area has year-round small boat access, the timber values are low, and the deer have only just returned to a harvestable population: no logging. If Woewodski were logged, the potential for future guiding services and lodges would be lost. These comments were repeated in 1996, with additional comment that the island should be a habitat reserve.

Response: Woewodski Island is allocated primarily to Scenic Viewshed, with some Modified Landscape inland. These LUD's will provide for scenic and recreation values, with any timber harvest done in a manner that minimizes the visibility of activities and is sensitive to other resource values. The island does not have enough high-quality old-growth habitat to make it suitable as a habitat reserve.

Wrangell Narrows

Comments: Wrangell Narrows has already suffered much damage: protect it. Green Rocks is the prettiest place in Wrangell Narrows, a much-traveled waterway. Cancel sale #35.

Response: The National Forest lands adjacent to Wrangell Narrows (most of the eastern shore, and some of the west, is in private ownership) are allocated primarily to Scenic Viewshed, with some inland areas in Modified Landscape. These LUD's will help maintain the scenic values along the marine highway, with timber harvest done in a manner that minimizes the visibility of activities. The Green Rocks Lake area is allocated to Scenic Viewshed.

Other Mitkof Island areas

Comments:

- the portions of those areas seen by Petersburg residents should be spared from logging (including Brown's Cove, Five Mile, Frederick Point and Dry Bay)
- manage the Twin Creeks recreation places (VCU 447) as Semi-Primitive
- give the strongest possible protection to Sand, Hill and Crane Lakes (and associated watersheds), and to the Ravens Roost viewshed. The Bear Creek drainage and Three-Lakes Loop Trail area shouldn't be in timber production: the recreation values should be protected. (NCC)
- all of MA's S16 and S17 should be in Timber Management: the area is already developed, continue to manage it for timber harvest and motorized recreation. (AFA, APC)

Response:

- Brown's Cove and Dry Bay (both across from Petersburg on the mainland), Five Mile (north on Kupreanof Island), and the National Forest lands near Frederick Point are all in the Scenic Viewshed LUD. This will help maintain scenic quality while providing for timber harvest in these areas.
- Twin Creeks is within a Scenic Viewshed allocation, which will help maintain scenic values for the recreation places.
- Sand, Hill and Crane Lakes, and the Three-Lakes Loop Trail, are within a Semi-remote Recreation allocation. Raven's Roost is in Modified Landscape, but some of the "viewshed" is either private land, or is in the Municipal Watersheds LUD (allowing no timber harvest or roads).
- timber harvest and motorized recreation will continue in MA's S16 and S17. Much of this will be within areas allocated to Scenic Viewshed or Modified Landscape, which will provide for scenic and recreation values while allowing timber harvest. Some Timber Production is allocated within MA S17.

Prince of Wales Island (except Honker Divide)

General Summary: In 1991, the majority of commenters about Prince of Wales Island mentioned specific areas, including many bays and inlets, sounds, and nearby islands, for which they requested non-timber management. Some commenters (including the City of Thorne Bay, Alaska Forest Association and Ketchikan Pulp Corporation) wanted logging to continue at present levels; others (including Tongass Conservation Society and some local Fish and Game Advisory Boards) felt that too much logging had already occurred, and that harvest levels should be reduced. Other commenters asked that the major Prince of Wales roads be kept open and maintained, both for community needs and to provide access to recreation opportunities; residents of Lab Bay want a connection to the rest of the island's road system. In 1996 the comments were generally of the same nature and scope. (See specific sub-headings following the first response.)

Response: Based on the many and diverse comments a variety of land use designations have been allocated to different areas on Prince of Wales Island. Prince of Wales Island is a large and diverse area. It has a history of timber management, and a more extensive road system than the rest of Southeast Alaska. There is a growing interest in the scenic and recreation opportunities on the island, and for maintaining the natural conditions of many specific areas. The land use designations chosen for Prince of Wales Island reflect these and other uses, opportunities and concerns. Most of the lands currently being managed for timber harvest, particularly those with roaded access in the northern two-thirds of the island, will continue that activity. Roaded access, both between communities and for resource activities and uses, will be maintained. Many coastal areas, bays and inlets with suitable timber lands where recreation and subsistence are primary uses, and/or where scenic qualities are important (such as along the marine highway and cruise ship routes), will continue to have timber harvest, but modified to minimize the visibility of activities. These areas include:

- Port Protection
- Red Bay and Lake
- Thorne Island and the central eastern shoreline
- southeast side of Trocadero Bay and the Hydaburg Road
- areas west of Hollis, and north of Thorne Bay
- Wolf Lake Area
- West Arm of Cholmondeley Sound
- eastern Suemez Island
- San Juan Bautista Island
- north end of Dall Island

Other areas, where recreation and other uses are associated with natural values, are given the more protective Remote or Semi-remote Recreation allocations. These include:

- lands north and south of Sarkar Lakes
- Salt Lake Bay
- San Fernando Island
- Kegan Lake and vicinity
- the Hessa Lake/Cape Chacon area
- south end of Dall Island

Several areas are proposed as Special Interest Areas, and several rivers or river/lake systems are recommended for inclusion in the National Wild and Scenic Rivers System (see also Honker Divide). These are:

- Karst Areas Geological Area
- Arena Cove/Cape Felix Geological Area
- Soda Springs Geological Area
- Salmon Recreation River
- Sarkar Lakes Wild, Scenic and Recreation River

Following are more detailed comments on specific areas:

Coffman Cove

> **Comment:** And one of them is there's critical habitat area in VCU 582. This habitat area is to protect the deer coming down off the mountain to the beach. And it has basically blocked the beach road that would go from Eagle Creek to Ratz Harbor. And this is something that our community has been looking forward to seeing built for at least 16 years. They surveyed it 16 years ago. And I would like to see the critical habitat area shifted enough to allow the construction of that road, the beach road from Coffman Cove to Thorne Bay. And that way, we could use the beach road in the wintertime, all year long, to go back and forth for sports, school activities, social activities, and it would benefit our community greatly.

- An active city council has pursued plans to develop Coffman Cove as a community with a diverse economy base. Well, maybe we are, but without our timber jobs, we can't have any other industry here.

- And Coffman Cove is a timber-dependent community, and there's been lots of study on deer and wildlife, but not much data on the economic impact that the preferred alternative is going to do these communities and how it's going to affect jobs.

Everyone in Coffman Cove (and Alaska) (excluding natives) is from another state. Traditional lifestyles does not apply here.

Response: The area in VCU 582, Baird Peak which was impacting the road corridor has now been allocated to modified landscape which allows timber harvest and road construction. In addition, the specific road route has been added as Transportation Utility Corridor. Portions of VCU's 572, 581 and 580 have been allocated to Timber Production. This LUD emphasizes industrial wood production. The Alaska National Interest Lands Conservation Act (ANILCA), provides that each rural resident is eligible for subsistence gathering. Coffman Cove is considered a rural community and each resident is covered under the Subsistence regulations. The allowable sale quantity is calculated on a Forest basis. Timber sales are scheduled in the Coffman Cove area but not at the same levels of the 1970's and 1980's. Timber industry employees may be required to travel and work away from their homes to continue employment in the industry. The socio-economic effects on the town of Coffman Cove are displayed in the FEIS and were part of the criteria used in selecting an alternative.

Craig and Vicinity, including Islands to the West

People had this to say about Craig in 1991: The National Forest lands in the Craig watershed should be given the Enacted Municipal Watershed designation (and be so designated) to protect the Craig water supply. (C-C) The Soda Bay/Tlevak Strait/Ulloa Channel area has valuable wintering range for deer and furbearers: recommended is a 1,000-foot no-harvest buffer along the Prince of Wales shoreline opposite Suemez and Dall Islands. No timber harvest in VCU's 633-635 (Suemez Island). Manage Suemez Island as Primitive Recreation or Old-growth Habitat. VCU's 591 & 592: protect Harmony Islands and the scenic shoreline for its many boaters and important wildlife and subsistence values; no more logging in the Harmony Islands area. San Fernando Island: should develop some recreation cabins there. The scheduled timber harvest for the Trocadero Bay area is inconsistent with the subsistence and multiple-use needs of the people of the island. Additional comments specific to Craig were not received in 1996.

Response: The Craig watershed, which supplies Craig City water is in the Municipal Watershed LUD which does not have programmed timber harvest. Recreation use is not expected in the area as public access is restricted across adjacent private lands. The Riparian Forest-wide standards and guidelines apply to all streams in the area. The National Forest lands opposite Suemez and Dall Islands are mostly in the Timber Production and Old-growth Habitat LUDs. The Beach and Estuary Fringe Forest-wide standard and guideline applies to all shoreline areas: an average of 1,000 feet for beaches and 1,000 feet for estuaries. This allows no timber harvest other than salvage logging in these buffers. Suemez Island has three allocations: Modified Landscape on the east side, Timber Production in the northwest, and Special Interest Areas (Arena Cove/Cape Felix) in the south. Salt Lake Bay and the adjacent Harmony Islands (portions of VCU's 591 and 592) are in Semi-primitive Recreation. San Fernando Island, which is allocated to Semi-Remote Recreation, does have one existing cabin (at Point Amargura). Trocadero Bay is allocated to Semi-Remote Recreation, Old-growth Habitat, Scenic Viewshed, and Modified Landscape to provide for subsistence opportunities and scenic and recreation values.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Steamboat Bay: Small Cruiseship Shorewalk (25 people).

Response: This area is allocated to a LUD II. Primitive recreation facilities, such as recreation cabins, boat docks, moorings and trails may be constructed and maintained. Minor developments may be compatible with the LUD objectives depending on the scope, purpose, and magnitude of the proposal. A small cruiseship shorewalk may be consistent with the LUD II (determined on case-by-case basis). However, there is a large amount of private land in Steamboat Bay and the development may be more appropriate on private lands.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Warren and Coronation Islands: Day use Wildlife Observatory for 50 people.

Response: Warren and Coronation Islands are designated by Congress as wilderness. Wilderness is designated as primitive recreation. The ROS class of primitive recreation states the user will meet less than 3 parties per day, no other parties are within sight or sound of dispersed campsites or cabins. Maximum party size for Warren and Coronation wildernesses specifically is 6 people. Structures and other activities are dependent upon ANILCA provisions. Provide primitive facilities that are in harmony with the natural environment and promote primitive and semi-primitive recreation and tourism experiences.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development on Baker Island: Day Use Recreation (150 people) and Day Use Boat Docks (50 people).

Response: This area is allocated to a LUD II. Major recreation developments, designed for the comfort and convenience of more than 12 people are typically discouraged in LUD IIs. Minor recreation developments are evaluated on a case-by-case basis, emphasizing maintenance of a Semi-Primitive ROS setting. Day-use recreation and boat docks may be consistent with the LUD II at reduced use levels.

Hollis area

In 1991 this is what people said about the Hollis Area. Several Hollis residents and the Hollis Community Council submitted maps with proposed no-harvest areas in the Hollis vicinity (the Hollis watershed and areas across the water). Another group of 16 Hollis residents submitted a proposal for a "bio-buffer" around Hollis: all of VCU 611 and parts of 621 and 622 to be in "natural setting" LUD's (map also submitted). The importance of these areas to Hollis residents for subsistence, recreation, and domestic water were mentioned; also cited were fish and wildlife habitat values (a concern that deer populations would suffer) and tourism (scenic quality). Several commenters (including the American Institute of Fisheries Research Biologists) asked that Indian Creek near Hollis be managed for primitive recreation or as a natural area, so that research of unlogged watersheds started there in the 1950's can continue. There should be more developed recreation opportunities at Karta River. MA K17 should remain in timber production: it is already ecologically compromised, and contain valuable strata C and D timber.

In 1996 this is what people said about the Hollis area. I support any future timber harvest on this island (Hollis). There are certainly areas that should be logged. I think there can be selective logging. I don't believe that the large thousand-acre clearcuts have -- are precedented, and I believe that the giveaway of our woods is criminal. Scale has to be taken into consideration, and when you go in and selectively cut and you keep that timber in local economies and throughout the state, then I think that you have management plans that will take into consideration the needs of the forest.

Response: The National Forest lands to the west (most of VCU 622), and some on the north, of Hollis are in Modified Landscape, where recreation and scenic values will be provided along with allowing timber harvest. Also on the north is the Maybeso Experimental Forest, now somewhat inactive after heavy logging in the past. Beyond that to the northeast (VCU 611) the lands are in Scenic Viewshed and Modified Landscape. To the south and along Twelve mile Arm (the rest of VCU 622, and VCU 621) the main allocation is Old-growth Habitat, with Modified Landscape at the head of the Arm. In addition, whenever the LUD selected for an area allows development activities, the Riparian Forest-wide standards and guidelines apply to all streams, and the Beach and Estuary Fringe Forest-wide standard and guideline applies to all beach and estuary shoreline areas. Indian Creek, beyond private land, is about half in Modified Landscape and half in Timber Production (with the Riparian Area LUD applied along the creek). The Karta River is now within Wilderness, where developed facilities would not be allowed. Thousand acre clearcuts do not conform to the standards and guidelines. The Forest Service considers a variety of harvest options when planning timber sales. The foregoing describes most of MA 17.

Comment: (1996) One example that the Forest Service has done what I feel is really good science, and it addresses specifically the issue of HCAs ... the Forest Sciences Lab in Juneau...has had 15 plots (HCA's) on this island...These plots include in clearcuts, in pre-thinned areas, in commercially thinned areas, including areas down where the 60-year old-growth is on the Harris River.

Response: The Forest Sciences Laboratory is still maintaining these plots, and are expected to continue to study them.

Comments: (1996) I wanted to testify about closing Kasaan Bay to commercial fisheries so we can get our subsistence.

Response: This comment is outside the scope the Forest Plan document, however, the Alaska Department of Fish and Game regulates the commercial fisheries in saltwater. Please contact the State regarding your concerns.

Hydaburg and Vicinity, including Cordova Bay

Comments: Haida Corporation had several concerns about proposed Forest Service management in the Hydaburg area (1990 DEIS; they did not comment on the Supplement). They felt that areas important to Hydaburg and the Native community were not being recognized for their recreation and subsistence values in any of the alternatives. These areas include several islands (Goat, South Pass, others) which should be managed for scenic quality and recreation, other areas where non-intensive timber harvest may be O.K. (Sukkwan Island), and also the 11 "Haida traditional sites." Manage Sukkwan Island as Primitive Recreation or Old-growth Habitat. VCU's 685, 688 & 689: make them LUD II or add to adjacent Wilderness. The Haida Inlets should have no logging, due to their cultural and other values, and importance to the Haida people. Halt logging plans immediately at Sulzer Portage and Klakas Lake.

Response: Based on these comments, the National Forest lands on the east side of Sukkwan Island and on Goat Island, and most of the smaller islands nearby, are allocated to Semi-remote Recreation, as are the National Forest lands in Hetta Inlet. They will be managed for their recreation and subsistence values and scenic qualities. The "Haida Inlets" include Nutkwa and Keete Inlets (VCU 685), Mabel Bay (VCU 688), and Kassa Inlet (VCU 689). National Forest lands in Nutkwa Inlet are now within a Legislated LUD II area and fully protected. Kassa Inlet, Mabel Bay, and Hassiah Inlet are in the Timber Production LUD. Keete Inlet is in Old-growth Habitat which will provide continued subsistence use opportunities in a natural setting. Standards and guidelines for

the identification and protection of cultural sites apply to all land use designations, and cultural resource inventories are conducted before any ground-disturbing activities take place. Klakas Lake is in the Wilderness, and Sulzer Portage is in private ownership where the Forest Service has no jurisdiction.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development at Hessa Bay: Backcountry Recreation Lodge (480 people).

Response: This area is allocated to a Wilderness LUD. No new permanent facilities are to be constructed in Wilderness, except as consistent with ANILCA, Sections 1303, 1306, 1310, and 1315. A backcountry recreation lodge would be inconsistent with the objectives of the Wilderness LUD.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Hunter Bay: Day-Use Recreation (150 people).

Response: This area is allocated to a Wilderness LUD. A party size of no more than 12 is allowed for outfitter/guide operations within designated Wilderness. Day-use recreation would be compatible with the Wilderness LUD, but not at the amount proposed. Development of Day Use Facilities would likely be considered inconsistent with this LUD.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Brownson Bay: Backcountry Recreation Lodge (480 people).

Response: This area is allocated to a Wilderness LUD. No new permanent facilities are to be constructed in Wilderness, except as consistent with ANILCA, Sections 1303, 1306, 1310, and 1315. A backcountry recreation lodge would be inconsistent with the objectives of the Wilderness LUD.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following developments in Mabel Bay and Kasook Inlet: Backcountry Recreation Lodge (480 people).

Response: These areas are allocated to a Timber Production LUD. The goals of this LUD focus on timber production. While recreation management is considered, the recreation setting in the area would likely be roaded modified (RM). A Backcountry Recreation Lodge of this size would be permissible within this LUD, however, recreation settings in this LUD are frequently classified as Roaded Modified.

Point Baker/Port Protection and Vicinity

Comment: A "huge" amount of logging has already been permitted in this area, to the distress of local residents (Pt. Baker, Port Protection). It is time to stop. Cancel sale #61. Protect from timber harvest and dedicate to subsistence use the drainages into Port Protection, Merrifield and Shipley Bays, and into Red Bay and Red Bay Lake. (SSFG) No logging in Red Bay. Eliminate from timber harvest all unharvested Mt. Calder areas. (SSFG)
There should be better trails and cabins for Calder and Red Bays. Many comments from Lab Bay residents desiring a road tie to the main Prince of Wales road system (to Calder road or elsewhere). El Capitan Pass is a narrow, intricate and scenic waterway: cancel sale #113. No logging in VCU's 527 and 529: they are over-harvested now, and the little wildlife habitat remaining is highly important. VCU's 537 & 549: add to Calder-Holbrook LUD II area, they are part of an important

wildlife migration route and have scenic values. All north Prince of Wales VCU's not legislatively protected should be in Timber Production: the area is roaded, allowing for economic harvests; most of the recreation use there is motorized use; the "special" areas are now protected (by Legislated LUD II); local residents (Lab Bay) don't object to clearcuts, so scenic restrictions aren't needed. (AFA, KPC) VCU 549 is already roaded and should be in Timber Production. (AFA, KPC)

In 1993 the Pt. Baker Community Council passed a resolution asking the Forest Service to expand the Memorial Beach Park to incorporate the Humpy/Alder Creek headland to the east and run west to the State of Alaska boundary. We view this area as an important one and becoming more so every year. To sweeten the deal we are even agreeable to a small, primitive four campsite campground to be located in or near this area.

Response: National Forest lands near Port Protection and Point Baker (VCU 527) are allocated to Semi-Remote Recreation. VCU 528 and 529 are allocated to modified landscape, timber production and special area LUD's. Red Bay and adjacent lands are allocated to Modified Landscape with a portion west of Red Bay allocated to Old-growth Habitat. The area surrounding Red Lake has been allocated to scenic viewshed. The Scenic Viewshed and Modified Landscape LUD's will provide for the scenic and recreation values of these areas while allowing timber harvest and associated activities to continue. The area in Shipley Bay not in Legislated LUD II designation has been allocated to Old-growth Habitat LUD. In addition, the Riparian Forest-wide standards and guidelines apply to all streams, and the Beach and Estuary Fringe Forest-wide standard and guideline applies to all beach and estuary shoreline areas, within these LUD's, and within the Timber Production LUD wherever it occurs.

The west face of Mt. Calder, and the lands between there and the west coast, are within a Legislated LUD II area. The east face of Mt. Calder is allocated as a Special Interest Area to protect high value karst lands. Lands adjacent to this to the east are in Timber Production. Purue Peak and El Capitan peak have been allocated to a Special Interest Area designation for the karst features. El Capitan Passage (VCU's 537 and 549) between Tenass Pass and Aneskett Point is mostly in Timber Production, with Modified Landscape to the north and old-growth LUD to the south of Sarkar Cove. The area from Shakan Strait to the El Cap Work Center is allocated to Modified Landscape on the north, and Legislated LUD II on the south. The remainder of northern Prince of Wales is mostly in Timber Production, Modified Landscape or Scenic Viewshed (the latter two applied to other bays and shoreline areas and along portions of the road system). Any additional road construction would be done in conjunction with timber sale activities. Trail and cabin maintenance and construction is normally a Ranger District or Administrative Area responsibility.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Shakan Bay: Day-use recreation site for 300 people; and for El Capitan Passage: Overnight Wildlife observatory for 50 people and a backcountry recreation lodge for 50 people.

Response: Shaken Bay, and El Capitan Passage have been designated Modified Landscape to the north and Congressional Designated LUD II (Roadless) to the south. Modified Landscape uses the ROS class Roaded Modified, which permits rustic and rudimentary improvements for site protection and some comfort for users. Minor recreation and tourism developments may be compatible with the LUD objective depending on the scope, purpose, and magnitude of the proposal. Proposals will be evaluated on a case-by case-basis. Project level planning would be required to assessed the impacts of this proposal. The Congressional Designated LUD II provides Primitive and semi-primitive recreation opportunities requiring wildland character. Major concentrated recreation facilities will generally be excluded.

Comment: One of my favorite view spots is Calder Bay. Calder Bay is now closed because of private ownership of the Bear Valley Lodge and because the Forest Service closed roads that went around Bear Valley Lodge.

Response: Road access management is not a forest plan level issue. Road access is managed at the project level. Calder Bay itself is allocated to the Modified Landscape LUD. This LUD allows for timber harvesting but requires the size, shape and location of the harvest units to be modified to mitigate the visual impacts. The areas surrounding Calder Bay are either allocate to LUD II or Special Interest Areas which preclude commercial timber harvest.

Prince of Wales - Southeast (Kasaan Bay to Cape Chacon)

Comments: Kegan Lake: preserve this prime recreation area. Moira Sound: VCUs 691-2 should be in a LUD II-type prescription; retain VCU 684 as LUD II, to give protection for roadless recreation values. The west half of VCU 684 could be in Modified Landscape: it's not readily seen, and this would provide some harvest and access to an LTF. Since Polk Inlet has been heavily logged, leave nearby McKenzie Inlet alone. No timber harvest in VCU's 618-620 (esp. S & W McKenzie and Polk Inlet), 678, 679, 694 and 695. Put MA's K18, K19 and K24 in Timber Production. (AFA, KPC) Cholmondeley Sound: don't give the Native corporations any more land in this area, and no more clearcutting of the Sound; manage the area for recreation; the area is already overlogged: VCUs 674-5 should be in a recreation Rx. No logging in Hunter Bay; halt logging plans immediately at Johnson Lake. Protect the Eudora Roadless Area to maintain the ecological integrity of South Prince of Wales Wilderness. The Niblack area has important mineral values and many claims: leave the area in a LUD IV-type allocation, don't restrict mineral access. The Minerals Rx should not be applied at Kasaan, Bokan and Niblack-Dolomi: protection of water quality and the fishery should be the prime consideration. Change the LUD designation for Cape Chacon from Semi-primitive to Modified Landscape. (USGS) Comments specific to southeast Prince of Wales were not received in 1996.

Response: Based on these comments, Kegan Lake and Dickman Bay (VCU 684) are allocated to Old-growth Habitat and Semi-remote Recreation. This will provide for recreation uses. The North Arm of Moira is also allocated to Old-growth Habitat. The remainder of Moira sound is in the Timber Production LUD. Polk and McKenzie Inlets (north part of MA K18, VCU's 618-620) are both allocated to Timber Production, except for the Old Tom Creek Research Natural Area and Old-growth Habitat on the west side of McKenzie Inlet and in Goose Bay. The West Arm of Cholmondeley Sound (south part of MA K18, VCU's 674 and 675) is in a combination of other ownership timber production and Modified Landscape. The remainder of the National Forest lands in the Sound, including the South Arm and Kitkun Bay (MA K24, VCU's 677-679), are in Timber Production. There are still unconveyed Native land selections in Cholmondeley Sound: these are not within the jurisdiction of the Forest Service. MA K19 is all in Timber Production and Old-growth Habitat. VCU's 694 and 695, along the coast, are in Timber Production and Old-growth Habitat.

Hunter Bay is within Wilderness. The Niblack minerals tract is assigned the Timber Production LUD, overlain with the Minerals LUD. The Minerals LUD is also allocated to the Kasaan, Bokan and Dolomi tracts/areas, to recognize their high potential for development. There are no development proposals at this time, however. Whenever the LUD selected for an area allows development activities, the Riparian Forest-wide standards and guidelines apply to all streams, and the Beach and Estuary Fringe Forest-wide standard and guideline applies to all beach and estuary shoreline areas. The southeastern-most portion of Prince of Wales Island, including Cape Chacon, is allocated to Semi-remote Recreation and Old-growth Habitat. Lands further to the north include timber harvest, remote recreation, and modified landscape LUDs.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development in the Kegan Lake area: Hut to Hut Hiking (25 people) and Day Use Boat Docks (50 people).

Response: This area is allocated to a Semi-Remote Recreation LUD. Facilities compatible with this LUD would include small scale, rustic facilities such as recreation cabins, shelters, and docks. Occasional enclaves of concentrated recreation and tourism facilities may exist. Proposed projects would likely be considered compatible within this LUD.

Salmon Bay and Lake

Comments: Many commenters (including Petersburg Fish and Game Advisory Committee, Narrows Conservation Coalition, and Salmon Bay Protective Association) asked for no logging or roading in the Salmon Bay watershed (beyond the area legislated as LUD II). Cited were the unstable soils and the concern for protecting important subsistence, fisheries and recreation values. One commenter asked for logging prescriptions (LUD IV type) for the areas outside the legislated LUD II portion. The Salmon Bay area should be protected from logging due to its Old-growth Habitat, high populations of fish and wildlife, and highly erodible soils. The entire 36,000-acre watershed (VCUs 534-5) should be protected from development: the area has important commercial and sport fishing, recreation, and subsistence values (PFG, NCC) There should be better trails and cabins for Salmon Bay.

Response: The area adjacent to the Salmon Bay Legislated LUD II and within the Salmon Bay Lake watershed (VCU 534) is mostly allocated to the Scenic Viewshed LUD, with the remainder in old-growth. These LUD's provide for scenic and recreation values by minimizing the visibility of timber harvest activities. In addition, the Riparian Forest-wide standards and guidelines apply to all streams, and the Beach and Estuary Fringe Forest-wide standard and guideline applies to all beach and estuary shoreline areas. Areas with highly erodible soils are not included in the suitable timber land base. VCU 535, to the east of the above area, is in a combination of Scenic Viewshed, Modified Landscape and Timber Production. Trail and cabin maintenance and construction is normally a Ranger District or Administrative Area responsibility.

Sarkar Lake

Comments: Save it! Sarkar Lake deserves protection: it is one of ADF&G's "gold pin" sportfish areas, has populations of wintering swans and other birds, has a canoe route, and contains unfragmented Old-growth Habitat. Give it the Scenic Viewshed LUD. More recreation facilities at Deweyville and Sarkar Coves. There should be more developed recreation opportunities at Sarkar Lake. Manage in Primitive Recreation the entire unfragmented block (MA K06); leave it in a LUD II-type designation. (NAS) The blowdown in VCU 554.1 could be harvested: should be either Scenic Viewshed or Modified Landscape. (AFA, KPC)

For another part of the Tongass, I do support the wild and scenic river designation on the Thorne River and the Sarkar Lakes on Prince of Wales Island. I think that's an appropriate designation for that area.

Response: The lake and stream system of Sarkar Lakes is recommended as a Wild, Scenic and Recreation River for its fish, wildlife and other values. The rest of Management Area K06 (VCU 554.1) is allocated to Remote Recreation to further maintain these values and the unroaded recreation opportunities in that area. The National Forest land around Sarkar Cove is in Old-growth Habitat. That area between MA K06 and the coast, is allocated to Old-Growth LUD and Timber Production. Recreation facilities at Sarkar Lakes, or for Deweyville or Sarkar Coves, would be a consideration for the Ranger District or Administrative Area levels. Developed facilities at Sarkar Lakes may be appropriate within the Recreation or Scenic River portions.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Sarkar Lake: hut to hut canoe system for 25 people and a backcountry resort for 100 people.

Response: VCU 554.1, Sarkar Lakes has been allocated to the Remote Recreation LUD and the Lake system is recommended for inclusion in the Wild, Scenic and Recreation River system. The Remote Recreation LUD provides for extensive, unmodified natural settings for primitive types of recreation and tourism. A goal of this LUD is to provide opportunities for independence, closeness to nature, and self-reliance in environments offering a high degree of challenge and risk. Recreation is managed to provide infrequent encounters and a high degree of solitude. Hut to hut recreation would be allowed but encounters would be limited according to the ROS classifications. Minor recreation and tourism developments may be compatible with the LUD objective depending on the scope, purpose, and magnitude of the proposal. Proposals will be evaluated on a case-by case-basis. Project level planning would be required to assessed the impacts of this proposal.

Sea Otter Sound

Comments: No more logging for northwest Prince of Wales, including the Sea Otter Sound islands. The Alternative P allocations for the islands in Sea Otter Sound are good. The islands here have had enough logging: it's time to stop. Concern with the effects on subsistence uses in Sea Otter Sound from any more timber harvest: the area has had too much logging already, it can't take any more. (NCC) The Old-growth Habitat wildlife habitat left should be preserved; if any more harvest, should only be from small sales. The islands to the West of Prince of Wales should have no more logging. (ANBK) The area called Bald Meadows on the SE side of Bald Mountain (Hecata Island) deserves special protection for its scenic and unique vegetative and geologic aspects. The scheduled timber harvest for the Naukati area is inconsistent with the subsistence and multiple-use needs of the people of the island. No logging in Scott Lagoon. MA's K4 and K11, and part of K7 (VCU's 587-589) should all be in Timber Production; Hecata Island is too exposed for much recreation use. VCU 556 can mostly be in Modified Landscape: it's a good area for small sales, easy to log. (AFA, KPC)

Response: The Sea Otter Sound area, including Kosciusko and Heceta and Tuxekan Islands, and Prince of Wales Island south of Naukati, has an extensive transportation network (roads and log transfer facilities) accessing suitable timberlands, and most of the area is allocated to Timber Production to maintain a timber harvest emphasis. Several timber sales are scheduled for the islands over the next decade (MA's K4, K7 and K11). Kosciusko Island, south of the Mount Calder/Holbrook TTRA LUD II is allocated as Timber Production. Portions of VCU's 541 and 543 are allocated as an Old-Growth LUD. Heceta Island is allocated as Timber Production with a medium size Old-Growth LUD allocated in VCU 563 and a portion of VCU 561 (southeast area of the Island, including the south side of Bald Mountain). Tuxekan Island (including Scott Lagoon) is in Timber Production. Whalehead, Whitecliff, Green, Eagle, Dove, Hoot, Owl, Cap and Clump Islands have been allocated to scenic viewshed. El Capitan, Sand, Teal, Flat, Keske, Singa, Scowl, Brockman, Spanberg, Scott, Tenass, Clam, Graveyard, Burnt and Sangao Islands have been allocated to Semi-Remote Recreation LUD to maintain the subsistence and recreation values. Marble Pass has been allocated to Modified Landscape. The remainder of Marbel and Orr Islands are allocated to Timber Production. The northeast portion of Orr Island has been allocated to Semi-Remote Recreation. Staney Creek (portions of VCU's 587 and 588) is in Scenic Viewshed and Modified Landscape. In addition, whenever the LUD selected for an area allows development activities, the Riparian Forest-wide standards and guidelines apply to all streams, and the Beach and Estuary Fringe Forest-wide standard and guideline applies to all beach and estuary shoreline areas. In addition all Islands less than 1,000 acres in size will have no scheduled timber harvest, including many of the islands in Sea Otter Sound.

Comment: We have a road to Cape Pole that extends from West Edna over. I'd like to see that this road is maintained and left open so that we have access to Cape Pole. The forest is not being used especially in Edna Bay and Kosciusko Island.

Response: Road access management is not a forest plan level issue. Road access is managed at the project level. The area between Edna Bay and Cape Pole has been allocated for Timber Production to be managed for industrial wood production. The area north of the Trout Creek including Mount Francis and along Shipley Bay has been allocated to Old-growth Habitat. This area includes high-vulnerability karst lands and wildlife habitat. This area will be managed to provide a diversity of old-growth habitats. No timber harvest will be permitted in the Old-growth Habitat LUD.

Comments: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Port Alice: Backcountry Recreation lodge for 400 people.

Response: Port Alice on Heceta Island has been allocated as Timber Production. This LUD provides Roaded Modified recreation opportunities. Major and minor recreation and tourism developments may be compatible with the LUD objective depending on the scope, purpose, and magnitude of the proposal. Proposals will be evaluated on a case-by case-basis. Project level planning would be required to assessed the impacts of this proposal.

Thorne Bay

Comments: Most commenters who mentioned Thorne Bay expressed concern about it's economic future due to anticipated declines in timber harvesting. Individuals were also concerned about local recreation opportunities for the local residents. Examples of these comments include:

Tourists are overcrowding Thorne River, large numbers of tourists are having a negative environmental impact on this river. Recreational experience will suffer if resource development is phased out and tourism expanded.

The community of Thorne Bay is dependent on timber - KPC - main source of income, it also keeps the small mills producing. Thorne Bay started as a logging camp. What tradition is here that would obviously be adversely affected by your proposal.

Response: The National Forest System lands adjacent to Thorne Bay are allocated to Modified Landscape, Timber Production and Recreation River along the Thorne River. The land use designation of Timber Production emphasizes management to maintain and promote industrial wood production. These lands will be managed to advance conditions favorable for the timber resource and for long-term timber production. Other land use designations also identify timber harvest opportunities. If the Thorne River is adopted as a Recreation River, a River Management Plan will be completed addressing recreation use.

Comment: Additional protection for Eleven Mile is favored for fish, wildlife, recreation, subsistence, and cultural purposes. The Eleven Mile area on Prince of Wales Island is highly valued by folks all over Prince of Wales for subsistence. That should not be logged. No further logging of Eleven-Mile on Prince of Wales Island. Keep out of Eleven Mile -- people have logged all along the shore and have destroyed some of the grave markers that are there.

Response: The Eleven Mile area is allocated to Semi-Remote Recreation, providing motorized and non-motorized recreation opportunities in natural appearing environments. Interaction with others is low and the opportunity for independence and self-reliance is moderate to high. This

allocation will maintain the area in its current condition for subsistence and recreation opportunities. Timber harvest is limited to salvage of catastrophic events or beachlog recovery. The Forest Service is required by law to protect cultural sites. The Beach and Estuary buffer will also serve to protect cultural sites.

Comment: The following should all be in Timber Production, as noted (AFA, KPC): VCU's 554.2, 557 and 571 - these areas are already roaded, have good timber sale economics; VCU's 572 and 581-585 - a road along the beach connecting Thorne Bay with Coffman Cove would provide year-round access and recreation opportunities; VCU's 576, 577, 590, and 594-596 - this is the core of Ketchikan Pulp's operations out of Thorne Bay.

Response:

- VCU's 554.2, 557 and 571 are all, or substantially all, allocated to Timber Production emphasizing industrial wood production. The only exception is for small Old-growth Habitat Reserves which are needed to maintain wildlife viability.
- VCU's 572 and 581-585, along the coast between Coffman Cove and Thorne Bay, are primarily in Scenic Viewshed and Modified Landscape, with some Timber Production inland and scattered small Old-growth Habitat reserves. These areas are along the marine highway and cruise ship routes, and are important for scenic quality and recreation. These allocations would not preclude completion of a road along the coast. The route proposed for the road linking Coffman Cove with Thorne Bay is allocated as a Proposed Road Corridor.
- VCU's 577 and 590 are all, or substantially all, in Timber Production. The only exception is two small Old-growth Habitat reserves in upper Logjam Creek and Staney Creek as part of the wildlife viability strategy. The major portion of VCU 576 has been allocated to Old-Growth LUD, and a Research Natural Area (lower Rio Roberts) and a portion allocated to Modified Landscape. This was needed as a portion of the Honker Divide large Old-growth Habitat reserve for the wildlife viability strategy. Portions of VCU's 595 and 596 are allocated to Modified Landscape or Scenic Viewshed to provide a scenic setting for several popular recreation areas; other portions are in Timber Production. In addition, the area just north of Control Lake was allocated to the Old-growth Habitat LUD to serve as a small reserve for the wildlife viability strategy.

Whale Pass and vicinity

Comments: Commenters were opposed to logging near Whale Pass subdivision, concerned about: scenic quality (including visual effects of logging on Thorne Island), property values, water quality, eagle nests, noise. They were also concerned with impacts to the recreation and tourism industry of Whale Pass from logging in the general area (including Neck Lake and recreation use there). VCU 551 (Thorne Island) and the area to the west of Whale Pass should be in Scenic Viewshed to protect the tourism and scenic values. Logging in Whale Pass will effect hunting and trapping, especially Thorne Island where there are three wolf packs.

Response: National Forest lands adjacent to Whale Pass are in Modified Landscape and Timber Production. Modified Landscape will provide for scenic and recreation values while allowing timber harvest. Lands to the east and northwest are in Timber Production. Within these LUD's the Riparian Forest-wide standards and guidelines apply to all streams, and the Beach and Estuary Fringe Forest-wide standard and guideline applies to all beach and estuary shoreline areas. Eagle nests are always protected with a no-harvest buffer. Thorne Island is allocated to Modified Landscape, which will help maintain scenic and recreation values. The area south of Whale Pass (Mable Creek) and VCU 553 are allocated to Old-Growth LUD which does not schedule timber harvest and will maintain scenic and recreation qualities.

Revilla Island (and nearby islands)

General Summary: Several commenters (including Tongass Conservation Society) asked for the protection of natural values, especially roadless recreation, in several areas including Orchard Lake and Carroll and George Inlets. Others felt that a better road system on Revilla Island (also often Gravina Island) would benefit Ketchikan residents by creating more recreation opportunities. A petition signed by over 700 Ketchikan residents stated:

"We the undersigned, recommend a Tongass Land Management Plan change or alternative that expands and disperses recreational opportunities on lands near Ketchikan by expanding the existing road system to connect with the roads at Margarita Bay, Traitor Cove, Neets Bay and Shrimp Bay on the north and the existing roads connecting with those in George Inlet, Carroll Inlet and Thorne Arm to the south."

A few commenters opposed expansion of the road system: they'd like more trails. Some (including Alaska Forest Association and Ketchikan Pulp Corporation) wanted timber harvest emphasized in certain areas or throughout the island.

Response: Areas on Revilla (short for Revillagigedo) Island having suitable timber land accessed by an existing or approved road system (these are mainly in the northwest and south central portions of the island) are allocated to LUD's which provide for timber harvesting. Modified Landscape is allocated in many of the bays and shoreline areas (including Carroll Inlet) to help maintain scenic qualities associated with recreation use, otherwise, the allocation is usually Timber Production. Other areas with high recreation values are allocated to Semi-Remote Recreation (including Orchard Lake, Naha Bay and some of Gravina Island) or Remote Recreation (including Swan Creek above Swan Lake and upper Orchard Creek). Areas with high scenic values, particularly near Ketchikan or associated with popular recreation places, are in Scenic Viewshed. A potential transportation route north from Ketchikan to the Bradfield River has been identified by the State of Alaska, and is within an identified Transportation and Utility Corridor. The State has not funded for additional road corridor studies at this time. National Forest roads are normally developed only in conjunction with individual timber sales. In the past, for the areas mentioned in the petition, log transfer facilities have been more economical to use than a road connection to Ketchikan.

Following are more detailed comments on specific areas:

> **Comment:** The trans/utility corridors near Ketchikan should be in Modified Landscape LUD (if not TM)
>
> **Response:** The Transportation and Utility Systems Corridor from Ketchikan north is underlain by several different LUD allocations, depending on the resource values and proposed uses of specific areas. Most of these are explained above. None of these LUD's would preclude development of such systems. The segment of the corridor which runs along Carroll Inlet intentionally had the Old-growth Habitat LUD pulled back from the shore line to not obstruct the corridor.
>
> **Comment:** The Township of Loring stated that logging within their watershed (Sections 17, 20-22, 28 and 29 of the Ketchikan C5 quadrangle) was not acceptable. Also, Indian Point and east is important for subsistence use and should have no logging or road building.

Response: All of the Loring watershed, in the north side of Naha Bay as described above, is allocated to Semi-Remote Recreation. No logging or road construction will occur there. This includes the area east of Indian Point.

Comment: Orchard Lake was mentioned for protection of its wildlife, subsistence and recreation values: it's an important recreation place, easily accessible. Protect the roadless recreation values of Orchard Lake: manage it as Primitive Recreation or Old-growth Habitat, leaving it in a pristine condition for recreation use. (TCS) Halt logging plans immediately at Orchard Lake and Creek; others said defer harvest for at least 10-15 years. Some roads and trails would be O.K. in this area, but no "commercial development." All of MA K32 should be in Timber Production, otherwise it will be uneconomic for KPC to log it. (AFA, KPC)

Response: Orchard Creek and Lake itself is allocate to Recreation and Wild River. The area surrounding the Wild & Scenic River recommendation is allocated to Semi-Remote Recreation. Shrimp Bay is in Modified Landscape with Timber Production inland. Timber sales are scheduled north and south of the area. The rest of MA K32 is in Timber Production, except for Modified Landscape in bays and coastal areas where scenic quality and recreation values are important and a network of small Old-growth Habitat reserves needed as part of the wildlife viability strategy..

No timber harvest in VCU's 746, 753 and 756 (including sale #68). Manage Carroll and George Inlets for recreation. Most Revilla Island VCU's, including Carroll and George Inlets, should have the Timber Production LUD; all of MA K35 should be in Timber Production to provide an economic timber program. (AFA, KPC) Manage VCU's 758 and 760 as LUD IV to maximize timber harvest. VCU 747 should be in Timber Production or Modified Landscape: private land logging has made managing for scenic quality "futile." (AFA, KPC) Others said defer harvest for at least 10-15 years: the area is important as a habitat retention area.

Comment: Carroll River Flats was mentioned for protection of its wildlife, subsistence and recreation values.

Response: Carroll Creek is all within the Timber Production LUD, except for Modified Landscape at its mouth. Within these LUD's, the Riparian, and Beach Fringe and Estuary, Forest-wide standards and guidelines apply. The west fork of Carroll Creek is allocated to Old-growth Habitat due to its high wildlife, fisheries and subsistence values.

Response: The east side of Carroll Inlet is in Modified Landscape, with Timber Production inland. This will help maintain the recreation setting of the inlet while providing for timber harvest. The west side of Carroll Inlet is allocated to Old-growth Habitat to serve as a small Old-growth Habitat reserve as part of the wildlife viability strategy. The lands adjacent to George Inlet are in non-National Forest ownership, except where George and Carroll Inlets meet (VCU 758), which is in Semi-Remote Recreation for its scenic and recreation values. VCU 747, behind the head of George Inlet, is in Modified Landscape around the State lands. North of that, and west in the adjacent portion of VCU 746, the area visible from Saddle Lakes is in Scenic Viewshed. Upper Thorne Arm (including VCU 756) has Modified Landscape along the shore and Timber Production inland. The Cone Point area (VCU 760) is allocated to Scenic Viewshed along the coast and visible slopes, with Timber Production inland. MA K35, consisting of Carroll Inlet and Thorne Arm, is mostly described above. The remaining lands are in Timber Production, except for Semi-Remote Recreation in the Coho Cove/Moth Bay area (marine highway and cruise ship routes).

Comment: the Naha LUD II area should not have a road corridor: find another route. (TCS)

Response: The potential Ketchikan-to-Bradfield transportation route, as currently identified, runs through the narrow southern extension of the Naha Legislated LUD II area for about one mile. There are no proposals at this time, but if such a route were to be developed, this and all feasible alternate routes would be thoroughly evaluated before the actual route was located.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in the Naha area: Day-use Wildlife Observatory - up to 25 persons

Response: This area contains a day-use shelter, three lake recreation cabins, stream and lake fishing, high-use trail, saltwater boat dock at trailhead. The LUD for this area is Wild and Scenic River. This LUD specifies to manage use and activities to meet levels of social encounters, on-site developments, methods of access, and visitor impacts indicated for the Semi-Primitive ROS class. River generally is in an unmodified, free-flowing condition. Moderate user contact is expected. Minimal facilities and structures rustic in appearance are typically allowed. The activities proposed are generally consistent with this LUD.

Comment: Individuals in 1996 requested that VCU 731 be managed as LUD IV to maximize timber harvest; put VCU 731 into Modified Landscape to allow for utility corridor and road development, and roaded recreation.
Halt logging plans immediately at Bell Island and Anchor Pass

Response: VCU 731 is allocated to Semi-Remote Recreation, including Bell Island Hot Springs, for the recreation uses and opportunities associated with primitive settings in this area. Timber values are low, and this designation would not preclude a utility or transportation corridor development. Bell Island is part of VCU 731 just discussed. Anchor Pass is also allocated to Semi-Remote Recreation which precludes timber harvest.

Comment: Manage Hassler Pass as in Alternative B: recognize its recreation potential

Response: Hassler Island is allocated to Scenic Viewshed along Hassler Pass, and Modified Landscape along Gedney Pass. These LUD's will maintain the area's recreation values and uses.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Portage Cove, Swedish Meadow, and Herman Creek and Lake: Boardwalks, Paths, Trails; Day Boat Dock - 6 to 20 persons; Flight-Seeing Landings - 10 to 50 per day; Day-use Recreation - 10 persons.

Response: The current LUD for these areas is Wilderness Monument. This LUD intent is to manage use and activities to meet levels of social encounters, on-site developments, methods of access, and visitor impacts indicated for the Semi-Primitive ROS class. Minimal facilities and structures rustic in appearance are generally permitted. The proposed activities and use levels are generally inconsistent with this LUD

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Lake Grace and Manzanita Bay: Small Cruiseship Shorewalk - up to 25 persons

Response: These are fresh and salt water locations within the Wilderness National Monument LUD. This LUD specifies to manage use and activities to meet levels of social encounters, on-site

developments, methods of access, and visitor impacts indicated for the Primitive and Semi-Primitive ROS classes. Major and Minor recreation-related developments are not allowed by law or regulation or are not consistent with agency policy and regulations. Therefore, these activities and use levels are typically inconsistent with this LUD

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Long Lake: Paths, Trails, Day Boat Dock (6 to 20 people), Flight-Seeing Landings (10 to 50 per day), and Day-use Recreation (10 people).

Response: This area currently contains a day-use shelter, lake fishing, and a primitive trail. The area is in the Semi-Remote Recreation LUD. As such it will manage use and activities to meet levels of social encounters, on-site developments, methods of access, and visitor impacts indicated for the Semi-Primitive ROS class. Generally in an unmodified natural environment with infrequent user contact and minimal structures with rustic appearance. The proposed activities, facilities & use are consistent with this LUD.

Comment: Allow small-scale logging on Gravina Island. (KPC)

Response: Gravina Island is allocated to Semi-Remote Recreation and Scenic Viewshed along the shorelines and visible slopes of lower Nichols Passage and along Clarence Strait to Grant Cove. A small Old-growth Habitat reserve is allocated to Old-growth Habitat. Timber Production is allocated to its inland areas and north end of Bostwick Inlet. This allocation will allow for small scale logging.

Comment: Some of the safe harbors of Duke Island should be open for limited development (such as fishing lodges, moorage buoys or floats)

Response: Duke Island and adjacent islands is proposed for the Special Interest Area LUD. Moorage buoys or floats for recreation access would be allowed, but not developments such as lodges.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Duke Island and Pond Bay: Backcountry Recreation Lodge - 480 person capacity

Response: This area has an unique topography with many potholes that rarely freeze in winter; used extensively by wintering waterfowl, including trumpeter swans; surrounding waters used by marine mammals as haulouts. The LUD for this area is a Special Interest Area (Zoologic). This LUD is for area possessing unique or unusual biologic, sociologic, or geologic attributes. Designation and management objectives are to protect these characteristics, to foster public use and enjoyment, and scientific use, where appropriate. Resources contained within these areas are not available for development. The proposed Lodge would not typically be consistent with this LUD.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Hall Cove on Duke Island: Day-use Wildlife Observatory (50 people).

Response: This area has an unique topography with many potholes that rarely freeze in winter; used extensively by wintering waterfowl, including trumpeter swans; surrounding waters used by marine mammals as haulouts. The LUD for this area is Special Interest Area. This LUD is for areas possessing unique or unusual biologic, sociologic, or geologic attributes. Designation and management objectives are to protect these characteristics, to foster public use and enjoyment, and

scientific use, where appropriate. Resources contained within these areas are not available for development. The proposed activity and use is consistent with the LUD

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Mary's Island and Custumhouse Cove: Backcountry Recreation Lodge - 480 person capacity

Response: This area has an unique topography with many potholes that rarely freeze in winter; used extensively by wintering waterfowl, including trumpeter swans; surrounding waters used by marine mammals as haulouts. The LUD for this area is a Special Interest Area (Zoologic). This LUD is for area possessing unique or unusual biologic, sociologic, or geologic attributes. Designation and management objectives are to protect these characteristics, to foster public use and enjoyment, and scientific use, where appropriate. Resources contained within these areas are not available for development. The proposed Lodge would not typically be consistent with this LUD.

Tenakee Inlet

Comments: Many commenters (including the City of Tenakee Springs, Taku Conservation Society, Juneau Sierra Club, National Audubon Society, and Tenakee Fish and Game Advisory Board) stated that the important scenic, wildlife, fishing and (especially) subsistence values and habitats of Tenakee Inlet must be protected. They felt that the area has many natural values warranting protection, that there is much public support for protection and for reducing timber harvest. Some questioned why the preferred alternative (1991 Supplement) was the only alternative offering "NO" protection for the area (also in contrast to last year's preferred). (TAKU) Other general comments: no protection is offered for the important recreation and subsistence areas; Tenakee Inlet is a nature observers paradise, with an incomparable aesthetic quality (except for the few logged areas). (See also Subsistence comments.)

Specific areas mentioned as needing protection (or no clearcutting) are:

- the drainages of Seal and Long Bays (which have some of the highest concentrations of deer in the Tongass) and Goose Flats: Goose Flats, Seal Bay and Long Bay are "beyond value" as fish and wildlife habitat
- all important deer wintering habitat in Crab and Saltery Bays
- no timber harvest in VCU's 202 and 223
- the shoreline of MA's C29 and C34 should be allocated to the Modified Landscape LUD; VCU's 202 and 224 should be in Scenic Viewshed
- as a minimum, VCU's 225, 226, 228 and 229 should have the "strongest possible protection." This area is highly important for subsistence, hunting and fishing, and for the value of the wildlife habitat: there are projections (by ADF&G) of serious declines if more logging occurs. (TSFG)
- manage MA C29 as Wilderness, Primitive Recreation (NAS) or Old Growth, for its high-value wildlife habitat and high scenic value
- manage MA C29 in Timber Production: this is needed for an economic harvest; there isn't much use of this area. (AFA, APC)
- MA C34 should be managed to emphasize subsistence and wildlife. (SSPB)
- MA C32 should be in Timber Production; there is no justification for the Scenic Viewshed or Modified Landscape allocations. (AFA, APC)

The 1996 comments are similar to those above. Additional comments concerned the "world class" brown bear habitat on Chichagof Island, particularly in Upper Tenakee Inlet, Ushk Bay, Deep Bay, and Poison Cove; also that because of Native corporation logging around Hoonah, Upper Tenakee Inlet needs to be protected to provide habitat.

Response: (For VCU 202 and the Port Frederick portion of Management Area C29, see Chichagof Island.) Basically, all the shoreline of Tenakee Inlet (from Tenakee Springs in the north around the upper inlet and down to the Kadashan Legislated LUD II area on the south) is allocated to Old-growth Habitat or Modified

Landscape, and all the inland areas to Old-growth Habitat or Timber Production. Modified Landscape provides for scenic and recreation values, with timber harvesting done to minimize the visibility of activities. Within the Modified Landscape and Timber Production LUD's, the Riparian standards and guidelines apply to all streams, and the Beach and Estuary Fringe standards and guidelines apply to all beach and estuary shoreline areas, providing additional protection for the associated fish, wildlife and subsistence resources outside the Old-growth Habitat LUD areas. The foregoing applies to Saltery and Crab Bays (MA C34), and to Goose Flats (VCU 224) to the Tenakee Inlet portion of MA C29, and to VCU's 223, 225 and 226. Seal and Long Bays (VCU's 229 and 228) are in Old-Growth Habitat. In MA C32, Old-Growth Habitat replaces Modified Landscape.

Other areas

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development in Sand Bay: Leased proprietary camp (15 P/S)

Response: This AVA site includes both Old Growth Habitat and Scenic Viewshed LUDs. The stated activity and activity level are generally allowable in these LUDs.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for Tenakee Trail: Small cruiseship shorewalk (25).

Response: This AVA site is located within Old Growth Habitat and Timber Production LUDs. The stated activity is generally allowable in both LUDs although the stated activity levels would exceed guidelines for all activities except day-boat docks in the Old Growth Habitat LUD.

Yakutat area

Comments: The City of Yakutat asked that the Yakutat Forelands be managed for fish and wildlife, subsistence and scenic quality. Timber sales should not be permitted, except for small sales and personal use. They don't want even the possibility of future timber development, citing adverse effects to tourism and saying they've "had enough." The general area (especially near the Alsek River) should be preserved for its educational and recreation values (no more logging).
Off-road vehicle restrictions are needed to protect fragile areas. No timber harvest in VCU's 364 and 373. The Situk and Ahrnklin headwaters should be in Primitive Recreation. (NAS) (See also Wild and Scenic River comments.)

Response: Most National Forest lands in the Yakutat area, outside of Wilderness and Legislated LUD II, have been allocated to the Remote and Semi-remote Recreation LUD's, including all lands along or near the Alsek River. Pike Lakes and vicinity is proposed as a Special Interest Area (Pike Lakes Recreation Area). A few areas with suitable timber lands and roaded access (including VCU's 364 and 373) are in the Timber Production or Scenic Viewshed LUD's. No timber sales are scheduled for any of these areas during the next decade. All of the Situk River outside the Wilderness is in a Semi-remote LUD, as is most of the Ahrnklin. Portions of the Ahrnklin headwaters are in Scenic Viewshed or Timber Production: the Riparian standards and guidelines also apply to these portions. Off-road vehicle management is normally a Ranger District level responsibility.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development at Russell Fiord (SW corner) (access via roads and trails). Boardwalks, paths and trails (A & B)

Response: This AVA site appears to include Wilderness and Timber Production LUDs. The stated activities and activity levels are generally allowable in these LUDs.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development for the northwest coast of Yakutat: Hut to hut (25).

Response: This AVA site includes Old Growth Habitat, Scenic Viewshed and Semi-Remote Recreation LUDs. The stated activity is generally allowable in these LUDs although the stated activity level slightly exceeds guidelines for Old Growth Habitat and Semi-Remote Recreation LUDs.

Comment: The Alaska Visitor Association (AVA) in 1996 proposed the following development at Dangerous River Bridge, including the airstrip: Backcountry recreation lodge (100).

Response: This AVA site appears to be located within a Scenic Viewshed and/or Semi-Remote Recreation LUD. The stated activity and activity level is generally allowable, or allowable as an enclave, in either LUD.

Wild and Scenic Rivers

Comments on rivers included here are general comments and “lists” without individual discussion. Comments on groups of rivers from 1996, however, are included in the Wild and Scenic Rivers section in the Resource/Issue comments summaries. Comments by individual river are included with the river descriptions in Appendix E.

Comment: Several commenters (including the Tongass Conservation Society) said they supported the Alternative A recommendations for rivers, or “all eligible rivers.” A few supported the Alternative P recommendations, usually with additions (noted below).

No rivers should be recommended for inclusion in the National Wild and Scenic Rivers system. (AFA, AMA, SEA, STATE, others). (See Wild and Scenic Rivers comments in the Resource/Issue section for more discussion.)

No Tongass rivers qualify for inclusion in the National Wild and Scenic Rivers system. I support Alternative C for rivers. Also, over half the eligible rivers are in areas already protected by Congressional designations: there’s no need for another designation, and the standards and guidelines will protect river values anyway.

Response: We believe the Wild and Scenic Rivers Act obligates us to examine the eligibility and suitability of rivers on the Tongass for their consideration as additions to the National Wild and Scenic Rivers System. Many view this as an opportunity to preserve rivers in their free-flowing condition, and highlight their outstandingly remarkable values. Others may view this as a constraint to future development opportunities, and federal interference. The revised Forest Plan recommends designation of 28 rivers with a total of 484 miles, as additions to the national system. These recommendation were made after careful consideration of the outstandingly remarkable values of each eligible river and the representation by geographic province, and opportunities which may be foreclosed or enhanced by designation. The 28 rivers provide representation within six of the seven Geographic Provinces in Southeast Alaska. We agree, the standards and guidelines maintain many of the river values, however designation will ensure maintaining the free-flowing character, and provide management to maintain specifically identified outstandingly remarkable features for each of the 28 rivers.

Comment: The following rivers should be given the "fullest protection possible" as Wild and Scenic Rivers:

Barnes Lake	Canoe Point Stream
Harris River	Honker Divide
Hunter Bay Lake and Stream	Salmon Bay and Lakes
Sarkar Lake and Stream	Shipley Creek
Soda Creek and Lake	Sweetwater Lake
Thorne River and Hatchery Creek	

Response: Sarkar Lake and Streams, Thorne River and Hatchery Creek, and Salmon Bay Lake and Stream, are recommended in the revised Forest Plan as additions to the National Wild and Scenic Rivers System. Barnes and Sweetwater Lakes are included in the Thorne River and Hatchery Creek recommendation, as a Recreational classification, while most of the river is recommended as Scenic. This includes much of the area known as Honker Divide. Sarkar is recommended as a combination of Wild, Scenic, and Recreational classification, its highest level of eligibility. Salmon Bay Lake and Stream is recommended as a combination of Wild and Scenic classifications, its highest level of eligibility. Shipley Creek is within a legislated LUD II, and part of Hunter Bay Lakes and Streams is within a Wilderness. The remainder of Hunter Bay Lakes and Streams is within a Semi-remote Recreation land use designation thus primarily maintaining the area as a natural setting, unless minerals development should occur in the future. Soda Creek and Lake is within a Special Interest Area land use designation in the revised Forest Plan, which would likely maintain the river values. Harris River and Canoe Point Stream are in land use designations which permit timber harvest, and will be managed in accordance with Riparian Forest-wide standards and guidelines.

Comment: The following rivers should be included in the preferred as Wild Rivers:

Castle River	Duncan Salt Chuck Creek
Fall Dog Creek	Kakoo Creek
Kashaks Creek and Lake	Kooshnie Hen Creek
Scenery Creek	Tootney Hen Creek

Response: Fall Dog Creek, and most of Kah Sheets Creek and Lake, are included in the revised Forest Plan as Wild Rivers. A major tributary of Kah Sheets Creek is recommended as Scenic. The remaining rivers are considered, but others were recommended instead in the revised Forest Plan to represent the particular geographic province.

Comment: The Narrows Conservation Coalition supports all the river recommendation in Alternative A for the Stikine Area, with the exception that all 16 miles of the Harding River should have the Wild designation. Other Alternative A rivers supported by this group are: Chuck River, Kadashan River (but the major northwest tributary to the Kadashan should have been determined eligible), Salmon Bay Lake and Stream, and Sarkar Lakes.

Response: Of the 39 eligible rivers identified in Alternative A for the Stikine area, 13 are recommended for designation in the revised Forest Plan to represent their respective geographic provinces. Fifteen miles of the Harding River are included in this recommendation, as a Scenic River, to allow for future fish enhancements and possible transportation needs. The Kadashan River is recommended as Scenic in the preferred alternative as opposed to Wild in Alternative 1 (formerly A). We assume the major northwest tributary mentioned is Tonalite Creek, which was not found to possess any outstandingly remarkable feature thus was found not eligible. Salmon Bay Lake and Stream and Sarkar Lakes are also recommended for designation in the revised Forest Plan. The Chuck River was considered but was not recommended in the revised Forest Plan for designation.

Comment: Support Wild and Scenic status for: Naha, Stikine, Blossom, Blue, Chikamin, Essowah, Orchard, Sarkar, and Thorne rivers.

Response: The Naha, Blue, Chickamin, Sarkar, and Thorne Rivers are all recommended in the revised Forest Plan for Wild and Scenic Rivers designation. The others were not found suitable.

C. Agency and Elected Official Letters

This part of Appendix L includes copies of all letters and hearing testimony received from Federal, State of Alaska, and city or borough agencies and elected officials during the three public comment periods. The letters are presented in chronological order. All substantive comment from the letters is included in the previous summaries.

302234

CITY OF PORT ALEXANDER

P.O. Box 8725 Port Alexander, AK 99836 909/568-2211

August 15, 1990

Tongass National Forest
Forest Plan Interdisciplinary Team
8465 Old Dairy Road
Juneau, Ak. 99801

Dear Gentlemen:

The City of Port Alexander has the following comments on the Tongass Land Management Plan Revision:

The most obvious is that this 2,000 page, 20 pound document is difficult to read and understand. Even the summary we found confusing. For a document that will so directly affect the lives of Southeast Alaskans for the next 15 years, we think it should have been better organized.

We are especially critical of this new Forest Plan because it largely embraces status quo management on the Tongass. For example, the preferred alternative promotes continued high-grading of valuable, high-volume old-growth stands along low-elevation valley bottoms and river corridors; it provides no mandatory protection of 100 foot buffer strips along salmon streams; and protection of high-value fish and wildlife watersheds is only temporary (10 to 15 years).

We are also concerned that this new plan is not as site-specific as the original plan. Whereas the first Tongass Land Management Plan contained a comprehensive schedule of where and when timber sales, roads and log dumps were planned, the revised plan contains no such schedule, nor does it make any assessment of local impacts, both immediate and cumulative, that will be associated with these activities. This flaw needs to be corrected in the new plan. The public deserves to know exactly what activities are planned for each watershed and when they are scheduled.

Finally, we are concerned that the public is being shut out of decision-making on the Tongass. For several years now the public has demanded better fish and wildlife protection measures. In response to this demand, the U. S. House of Representatives and the U. S. Senate have both passed bills that go considerably further than this Forest Plan in providing habitat protection. For reasons unknown, the Forest Service has not yet responded to this overwhelming public sentiment, and until they do, we can expect nothing but continued devisiveness in Tongass management.

Sincerely,

Lorraine E. Hughes

Lorraine E. Hughes, Mayor

L-294

12 PAT ROWLAND: Okay. I'm Pat Rowland. I'm the
13 mayor of Coffman Cove. I'm past president of Alaska
14 Woman in Timber. And I'm part of the community of
15 Coffman Cove and people that live in Alaska.
16 After reading Mike Barton's recommendations on
17 the Tongass Land Management Plan revision, I am proposing
18 for your consideration no major changes in the management
19 of the Tongass National Forest. I propose Alternative C.
20 My family has lived in the Tongass since 1975.
21 We have lived on Grindall, Hecata, and Prince of Wales
22 Island. We lived on these islands because we worked on
23 these islands.
24 I agree with Mike Barton that wise management
25 of these resources requires striking a delicate balance
1 among competing demands for resources.
2 In the past fifteen years I have watched the
3 fishing industry prosper. The current land management
4 plan has contributed to the fishing industry's
5 prosperity. In the past fifteen years tourism and
6 recreation have boomed, or is booming, has become
7 increasingly important to the economy. The current land
8 management plan has contributed to that.
9 After my fifteen years in the Tongass, the
10 timber industry accounts for one-quarter of Southeast
11 Alaska's economy. The current land management plan
12 maintains our jobs in the timber industry. In the past
13 fifteen years mining has been relatively inactive. Now
14 it is started. The current land management plan
15 contributed to its start.
16 Subsistence opportunities for local residents
17 has been provided with the current land management plan.
18 After fifteen years the Tongass provides habitat for
19 species of national interest, such as the brown bear and
20 bald eagles; also, deer, marten, beaver, mink and many
21 others. The current land management plan has contributed
22 to the abundance of these animals.
23 The past fifteen years I have watched new
24 communities grow, new cities begin. And all the people
25 of the communities and cities need jobs. I believe that
1 the current plan, the jobs were being provided. If we
2 have more wilderness areas, more protected areas, more --
3 some wild and scenic rivers, more set asides, there will
4 not be enough timber for us to have jobs. And I think
5 it's very important that we all have jobs.
6 That's it.

2 ESTELLE THOMPSON: My name is Estelle Thompson.
3 I am the mayor of the community of Kasaan and also serve
4 on the board of directors for Kavilco Incorporated.
5 My thoughts were in line with the -- with this
6 plan over here. Again, to --
7 KEN ROLLINS: That's the preferred alternative?
8 ESTELLE THOMPSON: Preferred alternative plan,
9 right. And again, I'd like to stress the road connecting
10 to Kasaan, that some way the Forest Service sees a way
11 with the logging roads that are there now and with their
12 small timber base. We were promised by the Forest
13 Service that this would happened. In fact, the mill,
14 pulp mill backed it and several others. The community of
15 Thorne Bay has backed it. And all of a sudden it
16 stopped. We did not receive a letter saying why that
17 plan has been pulled or what was coming of it until
18 recently. We again are pressing with Thorne Bay in
19 trying to get that road connected.
20 I see the fact that because of health, elderly
21 people living here, education, other prospects -- we need
22 jobs -- and with the road open to the island, we would
23 have better services for that. We would also be able to
24 plan this oncoming solid waste program that's coming
25 down. All these things are happening. There was within
1 a time limit -- and within the next five to ten years,
2 these things can be in place. But we do need the help of
3 the Forest Service to -- along with us to get this.
4 Also I'm concerned about blow down such as the
5 Karta River, which is a national forest or a national
6 park. I again state in testimony that I think it should
7 be cleaned up so that the trees can regrow in a natural
8 growth pattern, rather than being encumbered with dead
9 timber in there. It's unsightly. It's -- when you go
10 into Karta Bay and you see this, you can't believe what
11 you see, because it was a beautiful river. The blow down
12 has really made it look like a disaster area.
13 Nationwide the federal government comes in to a
14 disaster and cleans it up -- helps people clean it up.
15 And this I think should be done.

16 Also I'm concerned about small businesses,
17 people who are trying to have private industries with the
18 long-term timber sale to the pulp mill. This is almost
19 impossible for them to do. And I think there needs to be
20 a way working with the United States Forest Service and
21 with the government and with the State of Alaska in
22 conjunction to these people that are trying to build
23 something. They need help where we all need help. And I
24 think if this happened, we can have a better economic and
25 a sociable way of life.

1 Deficits right now are creating a lot of panic
2 in the -- nationwide, not just in little towns. We again
3 face the fact here of our BIA road being shut down
4 because of the federal funding. That has now been
5 cleared up with the Graham-Rudman bill amendment, so
6 hopefully that's taken care of.
7 There's many things that I think of.
8 Subsistence fishing. Subsistence in part by itself, I am
9 greatly concerned of that. I think the native population
10 has always been a true provider of subsistence. What I
11 mean by that is if we catch the fish, the fish is totally
12 used up. We don't waste any of it.
13 The -- again, your clam beds. We agreed to
14 work with the industry to make sure these are not wiped
15 out with pollution from mills, et cetera, et cetera.
16 Waste, solid waste now coming to the island may
17 help this, too. You find out, too, that certain things
18 are being tested in the state for magnesium and other
19 waste out of the air that are coming down to pollute your
20 streams. These things we need to work with. There's a
21 lot of things I think the United States Forest Service
22 needs to look into along with federal government programs
23 and state programs.
24 And if I missed anything -- I hope I haven't,
25 but it's --

1 KEN ROLLINS: I'll give you another opportunity
2 if you think of some.
3 ESTELLE THOMPSON: Okay. Thank you.

Rec'd

302151

United States Department of the Interior

TAKE PRIDE IN AMERICA

ER 90/629

OFFICE OF THE SECRETARY
Office of Environmental Affairs
1689 C Street, Room 119
Anchorage, Alaska 99501-5126

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DEC 12 1990
REGIONAL FORESTER
FOREST SERVICE
ALASKA

Mr. Michael A. Barton, Regional Forester
USDA Forest Service
Alaska Region
709 West 9th Avenue
Juneau, Alaska 99801

Dear Mr. Barton:

In response to your request dated June 25, 1990, we have reviewed the Tongass Land Management Plan Revision Draft Environmental Impact Statement (EIS). We offer the following comments for your consideration.

General Comments

A preferred alternative is not identified in the EIS. A composite preferred alternative derived from two modified alternatives, F1 and G1 in the EIS, was proposed by the Regional Forester in his June 25, 1990, transmittal letter. The EIS contains no maps or other visual depictions of Alternatives F1 and G1. Also, the level of impact analysis for Alternatives F1 and G1 is less specific than for the analysis of the other seven alternatives. This and the lack of necessary detail in the presentation of biological and resource information in the EIS makes it difficult to analyze the potential effects of the preferred alternative and compare its impacts to those of the other alternatives.

The use of a computerized geographic information system allowed for detailed presentation and analysis of more resource information than would have otherwise been possible. Despite this, site-specific resource reporting and impact analysis are lost in the EIS due to the method of averaging resource values over large, heterogeneous areas and combining resource categories. More specific biological information would be necessary for meaningful, quantifiable analysis. Examples are the use of geozones for areas of analysis, and the combining of old-growth types as productive old growth. The geozones more often conform to administrative boundaries than ecological characteristics; they are also much too large to allow for substantive ecological analysis. Likewise, old-growth types should be separated by productivity to allow for a useful examination of projected impacts on highly productive habitats. Using the term "productive" for all old-growth types blurs the relative habitat values associated with different areas and the potential for impacts on biological resources within those areas. We suggest that a separation of old-growth types and analysis of impacts by productivity class within smaller areas be provided for public review in the next document.

Specific Comments

Page 3-8, Biological Setting: This discussion should note the predominance of coastal lodgepole pine (Pinus contorta contorta) in certain forested wetlands, especially around muskeg fringes.

Page 3-71, Opportunities: We support the referenced 1988 National Marine Fisheries Service Alaska Regional Policy concerning buffers, and we recommend its application in the EIS.

Page 3-91, Fish Habitat: We suggest that the explanation of the restriction of mineral development to maintain or enhance fish habitat be expanded since Section 505 of the Alaska National Interest Lands Conservation Act does not specify that mining may be restricted to enhance fish habitat.

Page 3-92, Mitigation: Measures discussed are to "maintain or enhance fish habitats." Opportunities also exist to rehabilitate previously degraded riparian areas. For example, accelerated regeneration in cut-over riparian areas could include placing large organic debris in the affected streams to create fish habitat.

Page 3-93, Windfirmness: Although windfirm trees are selected for stream buffer boundaries, the selection process is far from adequate, as demonstrated by the frequent blowdown and "unraveling" of fish and wildlife habitat strips and subsequent "salvage" harvesting of the remaining standing trees. Much better knowledge is required before the boundary selection process can be considered adequate. We recommend as a priority research need the development of techniques for selecting windfirm boundaries in leave strips.

Page 3-315, Roadbuilding: In order to accurately assess cumulative impacts, the types, extent, and duration of individual impacts must be quantified. With respect to roadbuilding, the EIS states that 1,627 miles of road have been built primarily for timber harvest activities and, to a lesser degree, mineral and recreational activities. If the reader were given data which separate the types of roads and where they are being built, it would be easier to determine the extent and duration of impacts associated with the roads. Specific mitigation can then be attached to the impacts identified.

Page 3-318, Subsistence and Mining: The EIS states that residents of mining camps are "subsistence users." This is incorrect since the permits for these camps strictly forbid subsistence hunting and fishing by their workers. The EIS should be changed to exclude mining camp residents as subsistence users.

Page 3-324, Log Transfer Facilities: Although little quantitative information may be available concerning bark longevity in marine deposits at log transfer facilities, it has long been known that debris accumulation at such sites can and does persist relatively unchanged for decades.

Page 3-325, Log Transfer Facilities: Although only a small proportion of the total estuarine area in Southeast Alaska is thought to be affected by proposed log transfer facilities, it

should be noted that local impacts can be significant and long-lasting. In order to properly assess the local impacts of proposed log transfer facilities, information on specific geographic locations is needed. We suggest that the EIS includes anticipated locations of all log transfer facilities that may be required.

Page 3-335, Old Tailings Sites: The extent of the leaching of heavy metals associated with old tailings sites should be described and the sites' locations identified.

Page 3-346, Candidate Species: The statement in the first paragraph that only two marbled murrelet nests have been found in North America is contradicted in the fourth paragraph, where four nests in North America since 1974 are reported. The latter is correct.

Page 3-347, Candidate Species: Change the last two words in the first paragraph from "to feed" to "with food."

Page 3-351, Log Transfer Facilities and Mining Docks: It would be helpful to the reader if the amount of impact from log transfer facilities is separated from that which is expected from mining docks. Log transfer facilities are used quite often, while mining docks receive much less activity.

Page 3-428, Mitigation: This section should also cite the Best Management Practices referred to in the Clean Water Act, as amended, 33 USC 1344, Section 404(f)(1)(E) and specified in the US Army Corps of Engineers' (Corps) implementing regulations at 33 CFR 323.4(a)(6)(i-xv). Also, the EIS should provide for rehabilitation techniques to be applied to past or future degraded habitats.

Page 3-458, Wetlands: The discussion of wetlands protection fails to reference the Clean Water Act, as amended, or the Corps and Environmental Protection Agency regulatory programs that implement it.

Page 3-459, Wetlands: The referenced Corps Wetlands Delineation Manual (January 1987) has been replaced by the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (January 1989). The EIS should reflect this new guidance.

Page 3-460, Palustrine Wetlands, Muskeg and Forested Classes: The occurrence of coastal lodgepole pine should be added to these sections.

Page 3-460, Estuarine Systems: While it is true that the Forest Service is not chartered to manage ocean areas, certain Forest Service-sponsored developmental activities have significant local impacts to the marine environment. In an effort to identify and protect high value estuaries on the Tongass, staff from the Fish and Wildlife Service and the National Marine Fisheries Service, in response to a 1989 Forest Service request, expended considerable time and energy to update the 1970 Forest Plan estuary ratings. There is no reference to the ratings in the revised plan. We request that the Forest Service display the ratings and explain how they were used to locate proposed log transfer sites and other facilities so as to avoid or minimize impacts to marine resources.

Pages 3-463 and 464, Table 3-140, Riparian Habitats: This discussion needs to be clarified because it addresses all riparian old-growth habitats regardless of habitat value. The section should consider: (1) How much highly productive riparian old growth habitat is currently in the forest; (2) How much has been harvested or impacted by roads in the past; and (3) How much will be harvested or impacted by roads in the future.

Page 3-474, Wetlands: The document should state that activities in waters of the United States are regulated by the Clean Water Act, as amended, 33 USC 1251 et seq.. Some silvicultural activities are authorized in accordance with requirements of Section 404(f) of the Clean Water Act, as amended, and 33 CFR 323.4(a) of Corps regulations. The latter specifies Best Management Practices to avoid all further regulation. The EIS should identify the steps taken to ensure that all proposals conform with Best Management Practices. It is also noted that recent guidance for application of Section 404(f), as applied to agricultural practices (Corps SPN 90-4, May 11, 1990), specifically states that the exemption does not authorize the filling of wetlands for ancillary buildings without Section 404 regulation. The document should note if the Forest Service has applied for individual permits for camps, sort yards, and shop or other non-road facilities requiring fill of wetlands in the past and how many permit applications are anticipated over the life of the plan.

Our review of Appendix I revealed only one management practice (#12.5) tied directly to wetland management, and it was simply "to maintain wetland functions and to avoid adverse soil and water resource impacts associated with the destruction or modification of wetlands." The Corps' Best Management Practices provide, among other things, that construction and maintenance activities for forestry roads will avoid fills in wetlands which are fish-spawning or waterfowl-breeding and -nesting habitats. Since these practices must be applied to satisfy the provisions of the silvicultural exemption and avoid individual permit regulations, we suggest that Forest Service describe how these practices will be met.

Page 3-480, Wild and Scenic Rivers: Although not recommended for designation after the Forest Service wild and scenic river study, the Situk River was found eligible. Additional information should be added to inform the reader about the prior study, its results, and how the Situk River will or will not be affected by the Tongass Land Management Plan.

Page 3-383, Wild and Scenic Rivers: Identify the high priority mineralized areas in relation to the potentially eligible wild and scenic rivers.

Page 3-484, Wild and Scenic Rivers: The Alsek River has not been listed by the Forest Service as a potentially eligible wild and scenic river because it is located on lands primarily administered by the National Park Service (NPS) and Parks Canada. The inventory and evaluation of potentially eligible streams should not be limited to rivers which are primarily on Forest Service lands. The NPS has begun a process to identify potentially eligible wild and scenic rivers within National Parks in Alaska. A draft eligibility determination which includes the Alsek River as potentially eligible by the NPS will be completed by April 1991. We suggest that the Forest Service reassess its initial determination which found the Alsek River to be not eligible and seek a cooperative study with NPS for the U.S. portion of the river in the final EIS.

Parks Canada has also initiated a study to recognize the unique wilderness and recreational values of the Canadian portion of the Alsek River, possibly including the Tatshenshini River, its largest tributary. Both may be placed under some form of protected status. We suggest you contact Bob Lewis (Area Superintendent, Parks Canada, PO Box 5540, Whitehorse, Yukon Territory, Canada YOB 1L0, 403-688-2116) for more information.

Page 3-485, Table 3-146, Wild and Scenic Rivers: We recommend the following additional column headings to help readers understand why rivers are considered tentatively eligible: in existing wilderness, in long-term timber sale areas, floatable or boatable, containing potential and/or existing road corridors, and within existing and/or potential Research Natural Areas.

Page 3-515 through 535, Management Indicator Species: The description of each species states that the species is "perceived to be affected by forest management activities" (emphasis added). Since the EIS notes that Management Indicator Species are species "whose population changes are used to indicate the effects of land management activities" (page 3-515), the use of the word "perceived" in this section seems unnecessary.

Page 3-536, Vancouver Canada Goose, Vegetation: Forested wetlands should be added to the list of vegetative types used by this species.

Pages 3-554 through 610, Tables 3-170 through 193, Environment and Effects: Although the initial wildlife habitat models were developed through interagency cooperation, the models referenced in this section were unilaterally modified by the EIS interdisciplinary team for FORPLAN computer analysis. This should be stated in the EIS and citations of original authors should be so noted for all modified models. Furthermore, the interagency wildlife habitat models were considered to be only the first of a three step process, and as such were still in draft form. Subsequent steps prior to model completion were: (1) peer review by experts other than the authors; and, (2) interagency verification of outputs through comparisons with known quantities. It was recognized that these steps would require additional studies for some species. Also, habitat maps derived from the models were to be developed for interagency review. Apparently, no outside peer review occurred. Verification was extremely limited in both area and scope. Wildlife habitat maps of a few species for only a minute fraction of the forest were made available for interagency review. Thus, the EIS should specifically note that the models were never finalized and verified through an interagency process and the outputs should be considered preliminary.

Also, since the effects analyses were done over such large areas, any major but localized impact would be masked by averaging over the entirety. Such analysis is unsuitable to reveal the effects of the proposed activities. Impacts should be analyzed on a site-specific basis.

Page 3-619, Mitigation, Waterfowl Habitats: This section should state that wetlands which are waterfowl-breeding and nesting habitat will be avoided as required by the Corps' Best Management Practices for the silvicultural exemption.

Page 3-628, Present Net Value of Mineral Deposits: The statements "[T]here are 13 identified mineral deposits on the Tongass National Forest that appear economically viable

for development under today's market conditions. The present net value of these 13 deposits is estimated at 25.6 billion dollars," should be clarified since only seven deposits appear to be economically viable for development under today's market conditions. The other six deposits may have some economic potential in the future, but it is unlikely that this potential will be realized within the next ten years.

Page 3-634, Mining Employment: Total mining employment is listed as 1,100 in the 1990s. It should be indicated that this figure may vary due to an increase in mineral exploration activities.

Pages B-23 through 30, Volume I, Appendix B, Model Outputs: It appears that the habitat suitability indices and the FORPLAN model outputs for the mountain goat, Vancouver Canada goose, and gray wolf were not included in the EIS. These species are among those agreed on as Management Indicator Species by the three Tongass National Forest supervisors. Without the indices and the results, the "manageable set of species," which is supposed to "collectively represent the complex habitats species and concerns," is incomplete. The analysis is inadequate without the full spectrum of species required to represent the total number of species on the Tongass.

Page B-13, Volume I, Appendix B, Table B-3: Red-breasted sapsucker is not listed in the table, although text concerning this species appears on page B-26. This species should be shown in the table.

Volume II, Appendix E, Wild and Scenic Rivers: The maps and some of the descriptive information for each river found to be eligible are extremely helpful. However, additional explanation or descriptive material is needed concerning the outstandingly remarkable resources. This will help the reader to better understand the values of each stream corridor and the rationale for the eligibility recommendations.

The river inventory and eligibility process should cover all streams and lakes on Forest Service lands regardless of how long the streams are, how large the lakes are, or who manages the majority of the lands adjacent to the waterbodies.

Page E-4, Volume II, Appendix E, Wild and Scenic Rivers: It would be helpful to further explain what makes a specific resource value outstandingly remarkable instead of reference the Departments of Agriculture and the Interior Wild and Scenic River Guidelines.

Page E-383, Volume II, Appendix E, Wild and Scenic Rivers: There are numerous instances where outstandingly remarkable values are mentioned in generic terms (e.g., recreation, scenery, history, wildlife) but are not described or explained. One example is Shakes Slough. The plant species are noted as uncommon to Southeast Alaska. Clarification is needed to determine whether vegetation is an outstandingly remarkable value since this resource was used to classify (incorrectly) the river. Classification is based on existing conditions not resource significance. That is, the basis of classification is the degree of naturalness.

Map Packets: The maps for Alternatives B, C, D, F, and G presently indicate a timber harvest within Glacier Bay National Preserve. These maps should be revised accordingly to exclude Glacier Bay National Preserve from timber harvest.

With the exception of the Pacific Ocean and a small portion of Canada, the Tongass National Forest surrounds Glacier Bay National Park and Preserve. The multiple-use mission of the Forest Service on the Tongass allows for a much broader range of land uses than those allowed by the National Park Service within Glacier Bay National Park and Preserve. We view the common boundaries as areas of opportunity for the Forest Service and the National Park Service to work cooperatively. We encourage you to continue to work with all Department of the Interior bureaus throughout your planning process.

We appreciate the opportunity to review the draft document.

Sincerely,

Paul D. Gates
Regional Environmental Officer
Alaska

CITY OF TENAKEE SPRINGS

SHEILA J. ZAGARS
MAYOR

ADMINISTRATION
(907) 736-2221

J02214

December 12, 1990

Steven A. Brink, Team Leader
Forest Plan Revision Team
Tongass National Forest
8465 Old Dairy Road
Juneau, Alaska 99801

Dear Mr. Brink:

The Tenakee Springs City Council at their November 29, 1990 Meeting approved the following pages of comments as the city's response to the Draft Revision to the Tongass Land Management Plan.

We appreciated having the opportunity to review the document and the invitation to submit our comments. Also the extension of the comment period to January 1991 assisted our ability to respond; thank you for that accommodation.

Sincerely,
CITY OF TENAKEE SPRINGS

Sheila J. Zagars

Sheila J. Zagars
Mayor

attachment

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POST OFFICE BOX 52

TENAKEE SPRINGS, ALASKA 99841

L-305

City of Tenakee Springs
Comments on Draft Revision to the Tongass Land Management Plan
December 12, 1990

These comments will not respond to the Draft page by page, although it is difficult to pass up statements like this one form Appendix C, "Trap Bay", page C-114: "Tenakee Springs and Corner Bay logging camp are nearby logging communities." (Tenakee Springs can hardly be characterized as a "logging community". Our economy is much more closely tied to commercial fishing, tourism, and subsistence.) While the document abounds with inaccuracies, it is more important to focus on the disparities between what was promised and what was produced, and on the startling inadequacy of a document that cost taxpayers over five million dollars.

In 1987, Forest Service planners came to Tenakee Springs to discuss the upcoming TLMP revision and the bright promise it held for community involvement and balanced, objective forest management. The team leader at that time responded to repeated voiced skepticism with assurance that "things are going to be different now".

According to the TLMP Revision Work Plan, the brochures sent to individuals, and the planning team that came to Tenakee Springs in 1987, public participation would be at the core of the TLMP revision effort. Instead, there has been absolutely no opportunity for public involvement since the initial meeting and "scoping" questionnaire. The glossy publication "Understanding the Past...Designing the Future" was distributed without any opportunity for formal comment on the outrageously inaccurate and misleading statements it contained.

We were astounded to find that the Draft Revision is actually less specific than the first TLMP! The Value Comparison Unit (VCU) division of the Tongass into individual watersheds was at least a logical place to start, and we were able to tell what was planned for each unit and react accordingly. Now the VCU has disappeared and we are supposed to make comparisons based on "geozones" and administrative areas. These areas are huge - the average size of the 51 geozones is 370,000 acres - and make it impossible for the public to discern what is planned for specific areas of concern.

The TLMP Revision was supposed to "address subsistence on a community-by-community basis in compliance with Title VIII of ANILCA". Very little of the information gathered in the multi-million dollar Tongass Resource Use Co-operative Study (TRUCS) appears in the TLMP Revision. About all that the Draft has to say is "under all alternatives there is the potential for a significant restriction on subsistence opportunities in the Chatham Administrative Area of the Forest, where abundance and distribution of brown bear, deer and marten could fall short of the expected demand even with no further resource development." This is small comfort to people who already know that their way of life is threatened.

The Draft acknowledges that subsistence use of resources in the "geozones" surrounding Tenakee Springs has already been affected by road construction and "reduction of habitat in some areas of use" (page 3-297), but fails to acknowledge that subsistence use has the priority established by ANILCA.

At the first and only TLMP meeting in Tenakee Springs there was a great deal of discussion of the new, incredibly expensive computer system that was supposed to resolve all the contentious issues in the Tongass. We were told that with the Geographic Information System (GIS) Forest Service planners would have at their fingertips information of incredible accuracy and usefulness, and that the TLMP revision would contain detailed analysis of the existing timber types and location, the cumulative effects of proposed timber operations, detailed descriptions including locations of roads and log transfer facilities, and site-specific analysis on the impacts of clearcutting and other actions on fish and wildlife habitat.

We have learned - not from the Forest Service but from copies of testimony from Congressional hearings - about the serious deficiencies in the data supplied to the GIS system. A Forest Service expert, biometrician J.E. Bricknell, was brought in to make recommendations after a comparison of actual on-the-ground data did not match what the timber-type maps produced by the computer predicted. He concluded that the data was inadequate for National Forest Planning, saying in a Forest Service report that: "Particularly lacking is the means of relating timber estimates to specific smaller areas of land with any reasonable precision".

Site specific evaluation, analysis, and planning are impossible without an accurate database. Unfortunately the most important information is the most inaccurate. The most valuable stands, both for timber and for Sitka black-tailed deer winter habitat, are those with more than 50 thousand board feet per acre. These stands are classified as Volume Class 7. When the Forest Service compared their GIS timber maps of volume class 7 stands to their on-the-ground, measured inventory on 516 plots, they found that only 15% of the areas mapped as volume class 7 were measured as volume class 7 in the field.

The Forest Service has acknowledged that it has no systematic means of locating or monitoring high-volume old growth on the ground. Evidently determination of what actually exists will still not occur until cutting units are laid out. This utterly discredits Forest Service wildlife habitat models and retention strategies.

Beyond the inaccuracy of the timber volume information, it is clear that much of the information presented in the Draft is based on assumptions that have little or no connection with reality. A good example is the assertion (page 3-87, table 3-27) that no matter how much clearcutting occurs, Tongass salmon production will increase. This projection astounded us until we learned that it is based on two assumptions: first, that there would be unlimited funds available for enhancement and mitigation projects, and second, that all those projects would work. As we all know, "it ain't necessarily so". Such blatant attempts to deceive the public and the Congress only serve to undermine what little credibility the Forest Service retains.

It is obvious that the TLMP draft was rushed to the printers. The notion that its hugh bulk would be impressive enough to derail Tongass reform has been proven false. Now it is time for the Forest Service to back up and do the job right.

The TLMP Draft needs to be completely overhauled. The erroneous timber base data and other flaws in the GIS system must be corrected. Impacts of management decisions must be analyzed in much greater detail, at the watershed level rather than hugh "administrative areas" or "geozones". Impacts on communities must be addressed. The long term, cumulative effects of clearcutting on other resource values should be carefully examined in TLMP.

The Forest Service is under fire nation wide for giving logging priority over all other forest values. Here in Southeast Alaska, the USFS has a choice between continuing with the single minded emphasis on timber production that has caused so much dissent, or starting over with a genuinely impartial analysis of options for Tongass management.

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JUNEAU, ALASKA

December 12, 1990

U.S. Department of Agriculture
Forest Service
Michael A. Barton, Regional Forester
P.O. Box 21628
Juneau, Alaska 99802-1628

RE: 1920 - Tongass Land Management Plan Revision
Draft Environmental Impact Statement

Dear Mr. Barton:

At the request of the Ketchikan Gateway Borough Assembly, I am forwarding this letter in response to the Forest Service request for comments and recommendations on the Tongass Land Management Plan Revision. The Borough Assembly finds that the Preferred Alternative, as presented by the Regional Forester, to be adequate and supportable by the Ketchikan Gateway Borough as we attempt to develop our land holdings and natural resources.

Of primary concern to the Borough within the Preferred Alternative, as with all the presented alternatives, is that the economic base provided by the timber industry, to the community, remain intact. The timber industry continues to be a major source of employment within the Borough, employing roughly twenty percent (20%) of the total labor force with both direct and indirect employment. Any major shift towards less employment within this industrial category will have profound and devastating affects upon the local economy. The Borough Assembly continues to support the timber industry as a major source of community employment.

The Ketchikan Gateway Borough is located in the extreme southeast portion of the state, and maintains land holdings on three major islands. The Borough does not have a direct linkage to a roaded system for access off these islands. Instead, the only direct linkages off the islands remain wholly with the air transport industry and the Alaska Marine Highway system. The Ketchikan Gateway Borough is specifically interested in the development of an inter-island and intra-island road system. The development of this type of a road system will require that a portion of this system be built upon Forest Service lands. As the roaded system is developed

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by the Forest Service for the extraction of timber, it is requested, for whatever alternative is developed, that the Forest Service involve both the Alaska Department of Transportation and Public Facilities and the local units of government to identify the transportation corridors that will best suit the needs of the local communities. In addition to being included in the planning process for the development of roads, the Borough requests that all logging roads be developed in such a fashion that will allow these roads to be utilized as part of the overall transportation system. The construction of these roads should be done with the intent that the roads could be tied to the existing roaded network. Also, it is requested that these roads have a design speed of 45-55 miles per hour to accommodate highway speeds, as a portion of these roads will be utilized for the inter-island and intra-island transportation network.

One additional comment I would have after reviewing the operation possibilities of the Seley Construction Co. chip barge and hopper truck. There apparently now exists the technology to leave a relatively clean clear-cut area following a logging operation. Mr. Seley states that they can produce chips from most of the larger leavings and a forest floor covering mulch from much of the other, including stumps with dirt on the roots.

In recent testimony on a proposal to exchange land within our Borough, we found that most of those who testified objected to the impassable clear-cut areas. I would appreciate it if you would begin thinking that maybe we can make our logging projects more usable, and less of an eyesore, by economically salvaging the heretofore leavings. I would at least like to see this considered on any project within our Borough.

The Ketchikan Gateway Borough Assembly, and I, would like to thank you for this opportunity to comment on the Tongass Land Management Plan Revision. We will follow the progress of this plan, and in particular our requested revisions, with great interest. If we can provide any further comment, or clarify our present comments, please feel free to contact me at the above address.

Sincerely,

Ralph Bartholomew, Mayor
Ketchikan Gateway Borough

RB/bjs

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

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December 19, 1990

Michael A. Barton, Regional Forester
USDA Forest Service, Region 10
P.O. Box 21628
Juneau, Alaska 99802

Dear Mr. Barton:

The National Marine Fisheries Service (NMFS) Alaska Region and Alaska Fisheries Science Center have reviewed the USDA Forest Service (FS) Tongass Land Management Plan Revision Draft Environmental Impact Statement (DEIS). The DEIS provides a tremendous amount of information valuable in defining the range of alternatives for management. Unfortunately the preferred alternative is presented as a composite of several alternatives rather than being defined separately. Issues and consequences associated with the preferred alternative cannot be followed, apparently because portions of several alternatives were pieced together after the document was completed.

The DEIS contains a bewildering amount of biological, economic, and socioeconomic information. Unfortunately, much of it has not been appropriately employed in the ultimate FORPLAN modeling effort. In fact, assumptions made in, and conclusions drawn from, the FORPLAN runs appear to be repeatedly refuted or contradicted by data contained within the supporting materials. This suggests that the vast quantities of information available simply overwhelmed the modeling process, leading to inadvertent inconsistencies in the assumptions and attributes. In any case, the assessment of the economic implications of the several alternatives should be reexamined utilizing all of the best available information on competing use values.

Our detailed comments are enclosed, loosely organized by issue. As you know the document requires major modifications to meet requirements enacted by the Tongass Timber Reform Act (H.R. 987). We hope these comments will be useful as you begin the process of supplementing the Draft EIS. If working groups are formed to address deficiencies in the fisheries or economic models, our staff would be pleased to participate.

Sincerely,

Steven Pennoyer
Director, Alaska Region

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I. Comments on Economic Analysis

We have serious concerns regarding the application of economic valuation methodologies and procedures within the document. These range from fundamental theoretical issues, to specific empirical considerations. In each case, procedural inconsistencies in the TLMP economic assessment place the analysis and resulting conclusions about relative economic and socioeconomic costs and benefits of the proposed alternatives in doubt. It should be noted that our summary is not exhaustive, but simply highlights many of the most severe problems with the DEIS and supporting documents. The TLMP DEIS contains so many apparent theoretical and empirical errors, factual misstatements or critical omissions, and logical contradictions, that making a detailed, point-by-point critique is impractical. The following summarizes the most serious problems perceived with the economic assessment.

The DEIS appropriately proposes to use the discounted present value of the (net) benefit stream as a means of comparing values which accrue to society at different points in time. It refers to this measure as Present Net Value (PNV). In order to derive this estimate of economic welfare, it is suggested that, "The dollar values for outputs used to calculate PNV (will be) the prices consumers would be willing to pay for Forest outputs...", over and above that which they actually pay for the good or service, (p. B-35). The DEIS goes on to suggest that willingness-to-pay is to be empirically measured as a "surplus", either consumer or producer (p. B-35).

The concept of "willingness-to-pay" is widely accepted in welfare economic theory. The use of "consumer and/or producer surplus" as an exact measure of change in social welfare is, however, theoretically defensible only under very specific and limited conditions (see Willig, 1976, and/or Just, Hueth, and Schmitz, 1985). In the absence of meeting each of these requirements, surplus measures, such as those purportedly used, are not unique and, therefore, do not correctly measure attributable welfare changes. As Mitchell and Carson (1989) note, "... consumer surplus has been shown to have a number of problems as a measure of the benefits resulting from price or quantity changes (Samuelson, 1947; Silberberg, 1978). These problems are largely a result of the fact that the ordinary (Marshallian) demand curve does not hold the level of utility or satisfaction constant..." (p. 23). The Marshallian consumer surplus, as reportedly estimated, suffers from the "fatal flaw" of not being a true measure of an individual's welfare change, therefore, all conclusions drawn from this erroneous measurement fail to provide insight into the true "willingness-to-pay" of consumers for the goods and services derived from the Tongass.

The use of ordinary, rather than compensated (Hicksian), demand as a basis for measuring welfare change can be undertaken. Several methodological approaches were developed in the period between 1981 and 1985 (see Hausman, 1981; Vartia, 1983; Langkford, 1983; Bergland, 1985). Each, however, has the very strong disadvantage, being derived as they are from duality theory employing Roy's identity, that the researcher must know the mathematical form of the underlying utility function from which the compensated demand is derived (see Deaton and Muellbauer, 1980; Varian, 1984). This is a requirement not readily met in most empirical applications and unlikely to pertain in the TLMP analysis. Therefore, the implicit conclusion that ordinary surplus measures capture the welfare effects of the proposed alternative management changes is inappropriate and inconsistent with accepted economic theory.

Furthermore, measurement of aggregate willingness-to-pay within an economic sector (which is implicitly assumed to have been done), is even more demanding, particularly when actions taken in one sector influence supply and demand in other sectors, as is the case in the DEIS analysis. In this situation, measurement of aggregate willingness-to-pay requires either, 1) careful measurement of welfare changes at each level in the effected markets, employing compensated demand and supply relationships, and summation of the appropriate net welfare effects to derive aggregate welfare changes, or 2) utilization of "general equilibrium" demand and supply functions, under assumptions of well defined market linkages between sectors, and an essentially competitive market structure, i.e., many buyers and sellers acting independently.

Within the current context, one cannot conclude these necessary and sufficient estimation conditions have been met. Therefore, the analytical results which purport to measure "Net Willingness To Pay", by evaluating Marshallian consumer and producer surpluses, and are themselves used to derive PNV, are not unambiguously consistent with basic requirements of economic theory.

Because, as the DEIS repeatedly declares, "willingness-to-pay" measures, as derived through use of consumer and/or producer surpluses, underlay all of the economic present value conclusions drawn in the FORPLAN model, the "Present Net Value" findings are not based on accepted economic theory, and are, therefore, necessarily called into question.

An equally troubling theoretical issue surrounds the treatment of <u>demand</u> and <u>supply</u> estimation. Economic theory defines "demand" and "supply" in a very precise way, and attaches to these definitions specific requirements and expectations regarding behavior of consumers and producers. To the extent that social welfare implications are to be input from changes in consumer

and/or producer surpluses (as proposed in the DEIS), care must be taken to adhere to theoretically consistent demand and supply relationships.

This is important to the present review in two ways:

First, the modeling exercise utilizes an explicit assumption that the "demand" for timber from the Tongass is perfectly price elastic and, effectively, infinite (e.g. p. 3-654). That is, as stated in the supporting documentation, it is assumed virtually any amount of timber can be produced in a given time period and sold, i.e., "consumed", without price effect.

This assumption is not reasonable, either empirically or theoretically, (nor is it consistent with subsequent treatment of timber demand). The results of such an assumption on the assessment are, 1) logical inconsistencies in the economic modeling of alternatives, and 2) a bias in the analysis which incorrectly favors timber production at the expense of non-timber uses.

Empirically, there are numerous references within the supporting documentation which refute the conclusion that timber demand is infinitely elastic. Prices and quantities demanded for Tongass timber have been highly variable over time. It was just this demand volatility which, according to the DEIS, necessitated the controversial "long-term supply contracts" with Alaska Pulp Corp. and Ketchikan Pulp Co. (e.g. pp. B-37, 3-374, and 3-624). Theoretically, assuming an infinitely elastic demand curve for timber implies there is no "consumer surplus" associated with harvests from the Tongass.

Likewise, if one (correctly) views timber production from the public's perspective as "supplier", given the Tongass is a publicly owned resource, then the extent to which significant portions of Tongass timber sales are conducted at "below-cost" and/or heavily subsidized through, for example, "in-kind" payments for timber, suggests there may be, in fact, no "producer surpluses". (See the extensive discussion of "below-cost" sales and "in-kind" timber payments). Until a recent change in the Tongass accounting procedures, timber production from the forest was consistently reported to be accruing a net economic loss for the U.S. Treasury, and thus the nation.

Notwithstanding the technical criticism above regarding the misuse of "Marshallian surpluses" as exact willingness-to-pay measures, this calls into serious question the subsequent derivation of PNV. This is so, precisely because, by the above assumption regarding demand, and

evidence in the DEIS concerning supply, Tongass timber apparently has neither an attributable consumer surplus nor producer surplus; yet it is these two "surpluses" which purportedly yield the (positive) timber PNV estimates in the model. This is not logical.

Second, economic demand and supply relationships, by definition, incorporate price and quantity expectations. The DEIS, however, unjustifiably adopts a method of assessing "demand" for non-timber goods and services which effectively contradicts this basic economic paradigm. Specifically, the analysis truncates, or "cuts-off", the demand function for non-timber outputs at levels which are "perceived" to adequately represent expectations of non-timber use.

The decision to arbitrarily cut-off demand for numerous non-timber goods and services effectively begs the economic question of concern. That is, "what are the relative economic values to the nation of these competing uses of the Tongass?" This is troubling in two ways. First, if "willingness-to-pay" measures are, indeed, the basis for PNV comparisons, truncating the demand (and presumably supply) curves for these outputs necessarily constrains their respective "surplus" measures, thus effectively understating their true worth to society. Second, by arbitrarily "cutting-off" demand, implicit market failure is introduced and potential "consumers" of both timber and non-timber commodities are, in effect, precluded from indicating their true preferences through the normal "market" process.

Cutting-off demand virtually assures the value of non-timber goods and services will not be optimized in the assessment. This is particularly so because the DEIS presents substantial evidence to suggest the arbitrary "cut-offs" used in the model are not even approximately appropriate estimates of the true underlying demand for non-timber goods and services (e.g. 3-158 & 159, 3-162-166).

"Demand Cut-offs" were predicated upon local resident population growth rates (e.g. 3-658 & 3-661). Growth rates for non-timber uses, however, are reportedly much greater, in virtually every category, than is local resident population growth. More importantly, for many of the most highly valued uses, local residents are a minor component of the true potential user population upon which demand estimates would be correctly based. These inconsistencies must be resolved if an adequate economic impact assessment of "non-timber" uses is to be presented. Substantial evidence exists to suggest unique, pristine, isolated natural environments, such as those represented by much of the current Tongass forest, have very high values to

"consumers" around the world. Significant "potential demand" for the attributes of the Tongass exist well beyond the local or even regional, i.e., Pacific Northwest, populations. The Tongass is a "national resource" with both use and non-use, e.g., "existence/option", values for people throughout the U.S., and extending to many internationally. These national and international "demand values" for non-timber goods and services will undoubtedly increase over time as the total worldwide "equivalent" resource base declines and populations increase. Particularly in light of the long planning horizons employed (i.e., 150+ years), non-timber demand for goods and services must be realistically characterized, reflecting an accelerating rate of growth over time.

A corollary valuation concern centers on the treatment of demand for "non-priced" commodities. As the name implies, these are goods and services which are not typically traded in a market setting. They, nonetheless, have substantial economic value which must be fully assessed if any reliable "Net Economic Valuation" is to be obtained.

The DEIS acknowledges the value of "non-price" outputs, explicitly citing amenity values and quality of life considerations which influence both resident and nonresident users of the Tongass. The document reports, for example, "non-consumptive use of wildlife appears to be increasingly important to the lifestyle and the economy of Southeast Alaska..."; noting, "In 1989 businesses (catering to recreationists in these use categories in SE Alaska) served approximately 146,000 clients who spent over $43 million" (p. 3-166). Furthermore, "...the principal concerns within this relatively new industry (supporting non-consumptive use activities) are that the current quality (of the Tongass natural environment) may be adversely affected by logging...", among other uses.

This clearly suggests these "non-priced" goods and services are, 1) very highly valued, with a significant growth potential, 2) potentially at risk from other uses of the forest base, and 3) management alternatives under consideration will necessarily "trade-off" the value of these "non-priced" goods and services against all other uses of the Tongass. By definition, however, in order to assess these trade-offs, one is required to undertake a full and accurate accounting of the existing (and more importantly potential future) value of these "non-price" commodities. The procedure used to deal with non-priced forest outputs, namely assigning some arbitrary, minimum threshold level of supply as a constraint in the LP, is woefully inadequate to this task.

The suggestion made, that the LP constraint procedure somehow places an "infinite" value on the units specified in the FORPLAN

model ignores the fact that the quantity specified has no relationship to actual or future demand for that good or service. Therefore, the aggregate social value of these "commodities" is not appropriately accounted for in the comparative economic assessment presented. This means any conclusion about the relative cost or benefit of one or another of the proposed alternatives is, on its face, incorrect.

Use of LP constraints to approximate "non-priced" demand cannot be justified, either on the basis of empirical evidence or economic theory. This approach does not provide insight into willingness-to-pay measures for these use categories. Having concluded this, it is inappropriate to argue the PNV estimates drawn from the LP model have any connection to the actual welfare change society would experience when trading-off these non-priced goods and services for alternative (competing) uses of the Tongass.

"Non-priced" demand and supply must be treated in a theoretically (and logically) equivalent manner to those of "market" goods and services, if any conclusions about net social welfare impacts are to be made. This was not done, leading to the conclusion that the TLMP DEIS fails to fully and accurately assess the economic and social costs attributable to the several proposed alternative management regimes.

From a strict accounting stance, since the Tongass is a nationally-owned resource, it would seem the appropriate level at which to calculate net benefits would be at the national level. Given most of the commercial products from this forest (timber, fish, etc.) are exported, currently primarily to the Asian market, it would not be too difficult to expand the analysis to, at least, the national level. Some additional "consumer benefits" would be correctly incorporated into the analysis, and in addition, trade-offs between alternatives that generate "local" benefits (such as increased jobs) and those that impose "out-of-state" costs on non-local "owners" would be highlighted.

Once the analysis is refocused to the appropriate accounting stance, not only does the calculation of the stream of benefits change for consumptive use of this resource base, but it again becomes apparent that non-consumptive use, option, and existence values for the appropriate population (e.g., the nation) must be estimated. Without doing so, the analysis ignores a major component of the economic value of this forest to its owners.

At the Nov. 27, 1990, Forest Service TLMP workshop, held in Juneau, an objective of supporting existing capacity of mills could be inferred, as the presentation cited anticipated declines in state and native harvest, with a result of "increased burden" on the forest for timber supply from the 1980s onward. It should be noted that an increased national and regional population base,

continuing development and congestion in the lower 48 states, and an increased awareness about preservation/conservation (the greening movement, etc.) will place a substantially greater burden on all national forests to provide outdoor recreational experiences (in all manner of forms), as well as serve as a preservation base. These competing demands may be obscured or overlooked completely if the DEIS fails to adopt the more appropriate analytical frame and continues to focus on provincial interests.

These general concerns about the economic assessment might be summarized in the following way. To provide insight into the economic tradeoffs between competing uses of the Tongass resource base, then 1) more reasonable and defensible assumptions about both timber and non-timber demand and supply must be developed, 2) a more balanced "national accounting stance" should be adopted, and 3) measures of net welfare change must be made consistent with economic theory and empirical evidence.

There are numerous specific points in the DEIS which require reconsideration and/or substantial revision. Some of these include:

* Having emphasized concerns about the theoretically correct measurement of willingness-to-pay, it is not clear the DEIS employed the consumer and producer surplus measures it claims. Instead, it depends upon the FORPLAN linear programming model, which imputes linear relationships in a maximization algorithm. Whether "compensating and equivalent" variation measures can be obtained from constrained linear maximization is questionable. If not, net social welfare conclusions predicated on precise "willingness-to-pay" measures have not been estimated.

* "No real price or cost trends for any resource were used in the FORPLAN runs." (B-34). These are not desirable assumptions, particularly given the duration over which the analysis is to be conducted (150 to 160 years). Some effort should be made to use existing models to project these economic trends, at least a reasonable distance into the future.

* "To reduce complexity, the various types of induced wildlife and fish user days...were modeled and valued as a composite rather than tracked individually in the analysis." (B-36). If willingness-to-pay measures are to be made of the social valuation placed on a use, as proposed, then "composite" commodities, combining several distinct and dissimilar uses, are inappropriate. Composites will tend to obscure and underestimate the value of individual uses within specific trade-off settings.

* "Building roads" has been treated as an activity separate and distinct from timber production. Although this might follow fiscal accounting procedures of the Forest Service, analysis of

the economic costs and benefits of competing uses of the Tongass dictate that road-building, in and of itself, is not a primary product of the forest, and the cost of this activity should be included in the cost calculation for the activities the roads support. In addition, actual costs of building roads should be estimated, given spatial link-ups and differences in terrain, rather than using average costs per mile of road. Failure to do so biases the results by understating the cost of timber production, i.e., exaggerating its net value, in comparison with alternative non-timber goods and services.

* The implication of using cubic, as opposed to board, feet, when evaluating the non-declining yield constraint allows, 1) for utilization of a shorter minimum rotation time, 2) for the quality/diameter of the regeneration stands to be less than existing stands (with implications for the value of the final market product produced from these trees), and 3) for sales, which are made in board feet, to actually decline unless production is increased. This change from board feet to cubic feet for the analysis seems little more than an arbitrary mechanism for overstating the sustainable yield potential of the commercial forest. This, in turn, tends to bias the analysis by exaggerating the future value of regenerated timber. Furthermore, this change in unit measure suggests that, over time, logging of the Tongass will yield timber, which is increasingly suited only for pulp, with an accompanying reduction in dimensional lumber production. What employment implications for the domestic mills will this have? These should be explicitly addressed.

* "Net willingness to pay, for all recreation activities, was combined to produce an average value for a composite activity." (B-36). This is inappropriate, for the same reasons cited above. Especially in the case of recreation, which within the Tongass includes diverse and highly valued activities, use of a composite activity unit of measure and/or value will fail to fully account for the net social welfare changes attributable to any given trade-off decision. Clearly, the value of a "unit" of, say, hiking/biking activity is different from the value of a "unit" of goat hunting. What is more, a particular management decision regarding the supply of timber and non-timber outputs in a given area will impact these uses very differently. Because recreation use in the Tongass is so highly valued and so varied in form, utilization of any composite or aggregation which reduces precision and detail is not appropriate in modeling economic trade-offs among competing alternatives.

* Constraints imposed on the model purport to assure "minimum viable populations" of several species of importance, both to consumptive and non-consumptive users, alike. The expected declines in total numbers of animals for these species are dramatic (see the discussion in the DEIS). Simultaneously,

recreational use values associated with these animals are assumed fixed within the model. Again, this is empirically and theoretically incorrect. Both consumptive and non-consumptive use values for activities dependent upon these animals are inversely proportional to the probability of sightings. Therefore, as populations decline (particularly as dramatically as projected in the document), frequency of sightings will decline. It follows that, on average, value to the user will fall as well. The model fails to account for this interaction. Because the dramatic declines are attributed specifically to timber management practices, the loss in value to consumptive and non-consumptive users is a direct and real cost of logging. Failure to account for these impact costs in the model will overstate the net benefit to society of the timber harvest.

* Conclusions about employment "benefits" from various industry sectors (pp. 3-630-637) are highly suspect. Timber employment was projected by applying an employment multiplier to the "predetermined", and largely arbitrary, specified cut (more precisely the allowable cut and utility volume), by alternative. Because these timber output levels are themselves of dubious usefulness, assuming as they do unrealistic timber demand and price relationships over the duration of the analysis, and ignoring empirical evidence that the "allowable cut" on the Tongass far outstrips the actual cut, attributable timber related employment is most probably overstated. Simultaneously, non-timber employment benefits are most probably understated, because use value and demand for these outputs are arbitrarily (and, as cited above, incorrectly) cut-off, i.e., constrained to levels below their true social value. The entire issue of attributable employment benefits, by sector, must be reexamined, once timber and non-timber demand are appropriately treated.

* "An average over the last five years (for commercial fishing) was used to develop the values for planning purposes." (B-36). "A ten year period is used in determining...(timber values)." (B-37). There is no apparent justification for using different length historical horizons for fish and timber values. Had commercial fisheries values been assessed over a ten year period, instead of the last five, weighted average salmon values would have been higher. Had timber values been assessed only over the last five years would they have been lower? This inconsistency must be corrected, particularly if, as suggested earlier, the impact of timber management on fisheries is correctly re-specified in the revised draft.

* The DEIS fails to recognize, much less account for, society's intrinsic valuation of the Tongass resource base, i.e., existence, bequest, and option values. While not easily measured, these economic values have been demonstrated to exist, and their inclusion in EIS assessments upheld in Federal Court (e.g. CERCLA and Clean Water Act). At a minimum, acknowledgement

that PNV estimates in the model are incomplete and understate the non-timber values to society, is appropriate. There is considerable evidence (e.g. ANILCA, ANWR, etc.) to suggest the nation as a whole places very high value on retention of wild, scenic, and undeveloped resources in Alaska.

* Under 'Demand Cutoffs' (B-39), "Demand (for non-timber uses) was considered to be a function of population in the market area..." For most of the analysis, "local" or Alaska-resident population growth was used for this important benchmark. This is inappropriate, however, because as the DEIS points out (p. 3-158), non-resident use has been increasing at many times the rate of local or Alaska population growth. Subsequently, it was suggested that Alaska, Washington, and Oregon populations were used as the "market area". This is still incorrect. Demand cutoffs are inappropriate on their face (see comments above); however, if they have any relevance or justification, they must at least utilize the "correct" population base from which to derive their bounds. The Tongass is a national resource base, with significant potential for international "consumers", particularly in terms of non-use value (see comments above). The demand for non-timber (including non-use) goods and services must reflect the correct current and long-term "consuming" population. This has not been done and, as a result, the DEIS undervalues users' willingness-to-pay for these non-timber outputs of the Tongass (to the extent WTP measures have actually been made).

* Quite apart from the erroneous demand cut-offs, cited above, the entire issue of recreation/tourism demand and supply, and thus their attributable economic value to SE Alaska, is improperly treated. Declarations concerning adequacy, or more often "surplus", of supply of recreational attributes are incorrect, given the treatment of their respective underlying resource bases. For just one of many examples (pp. 3-658-660), "Every alternative produces significantly more sport fishing capacity than anticipated demand in all periods." However, the model which produces these conclusions is arbitrarily (and quite erroneously) based upon the assumption that timber harvesting does not impact fish production. This is not consistent with prevailing research or empirical experience. If the fundamental relationship between timber harvesting and fisheries production, assumed in the model, is flawed, any conclusion about "adequacy of supply" for recreational fishing (or commercial fishing, for that matter) must be questioned. Similar doubt must be expressed about assumed "supplies" of wildlife for both consumptive and non-consumptive uses (see projections of percent declines in indicator species populations), or scenic visual amenities (cited as primary to both resident and non-resident recreation satisfaction, both use categories which are increasing at an extremely high rate), among others. Therefore, all conclusions about "adequacy" or "surplus" of supply of recreational opportunities, based upon the current LP model, must be

reevaluated on the basis of defensible resource relationships and appropriate demand trends.

* In the 'Technological Constraints' section (B-39), the plan articulates the arbitrary decision to cutoff demand for all but timber uses to "... stop the model from valuing RVD's and Hunter Days over the projected demand." If the model were capable of evaluating demand and supply in a theoretically consistent way, this artificial truncation would be unnecessary. Given the FORPLAN model is not capable of such measures, it calls into question the veracity of all of the model's economic output. In effect, FORPLAN does not reflect an economic analysis predicated on accepted theory, but instead mechanically grinds through a linear accounting algorithm to produce an outcome that was, in large part, predetermined when the model's assumed parameters were specified.

* Under 'Management Requirements' (B-39), item 3 pertains to "irreversible damage to soils, productivity, or watershed condition." Irreversibility is as much an economic as technological question and should be evaluated as such. If the cost of physically reversing logging damage exceeds the PNV of the timber extracted, when other foregone use and non-use values are considered, then the action may be regarded as economically irreversible. This is the appropriate context within which to assess "irreversibility".

* On the issue of 'Diversity' (B-43), "..., no type conversion was allowed in any alternative." Is this reasonable? Does this suggest, for example, that hemlock/spruce old-growth forest habitat is, effectively, retainable even after a clearcut? Does this ignore plant succession, i.e., do not clear-cuts often revert to red alder after cutting, presumably with a very different wildlife diversity and carrying capacity? Is this assumption correct in all proposed management schemes under assessment? Have the costs of assuring adherence to this assumption, forest wide, been explicitly accounted for?

* The discussion on p. B-44 contains what appears to be inconsistencies, first internally and subsequently with reported outputs from the model. Specifically, the following statements seem to be incompatible. First, the DEIS states, "No practice or prescription will be applied to (riparian zones) that cause detrimental changes to water quality, aquatic flora and fauna, and/or hydrophytic vegetation within the area." Immediately thereafter, the text states, "Suitable timber land within the riparian strip were limited to selective harvest. This means that a range of intensities of vegetation management will be allowed and that a scheduled yield is expected from these areas." Substantial scientific evidence exists, however, which demonstrates alteration of the vegetation, in any way, within the riparian zone has a direct and detrimental effect on stream

habitat. Therefore, the first sentence above is contradicted by the second. Even more confusing are the repeated statements in the modeling section which indicate no alteration of the riparian zone is undertaken in any of the alternatives to the benchmark case. Can these apparent inconsistencies be rectified?

* On p. B-46, under 'Harvest Flow Requirements', there is an assumption made which arbitrarily constrains variation in the flow of timber from period to period. If the model is intended to objectively evaluate alternative (competing) uses of the Tongass resource base, why impose a solution which does not coincide with market signals? This will tend to inappropriately bias the analytical results in favor of timber, at the cost of non-timber outputs. Historically, timber demand has been highly variable, in response to national and international economic conditions (see p. 3-624, among others). Since no similar assumption has been made in the model to "assure stability" in any of the other economic sectors dependent on the Tongass resource base, this assumption respecting timber supply should be excluded.

* Timber harvest composition and grade will vary significantly over the duration of this Tongass Land Management Plan, affecting marketability and price, particularly in a changing world market, e.g., entry of the USSR into western wood fiber markets. Despite this, timber demand and price have been assumed "fixed" over the more than 150 year planning horizon. This is highly suspect and introduces an economic bias, exaggerating the value of timber production, which must be addressed.

* By assuming that timber demand is infinite and perfectly price elastic, and by ignoring the fact that harvest composition will change, along with harvest and transportation costs, timber values are overstated. This suggests that attempting to "maximize net benefits" through trading off alternative goods and services is a meaningless exercise. None of the conclusions regarding relative benefits and costs can be relied upon to be even crude approximations of the true social welfare condition.

* Unless timber is to be treated as a 'constraint' in the LP model, rather than an element of the objective function, predetermining cut levels, and mandating the designated cut be achieved in the model run, will systematically bias the resulting output composition of the LP solution.

* Value of recreational fishing was calculated separately, yet it was also incorporated into the composite recreational demand.

* Constraints on wildlife carrying capacity were only imposed in the end periods due to limitations of FORPLAN. This approach allowed some populations to dip below the minimum level in some years. The implications of this limitation were not addressed.

* Many linkages among activities were assumed away based on outside research and/or the "experienced judgment of the modelers". For example, given the existing buffers, no interaction between timber harvesting and fish production was assumed to occur. This is a highly controversial and disputed assumption and should be clearly stated, along with accompanying rationale.

* Demand was estimated for homogenous recreational sites, rather than actual activities, and therefore it is hard to predict whether the plan will adequately produce sufficient quantities of hiking, hunting, wildlife viewing opportunities, etc. In addition, the text is often careless in distinguishing between "demand" and "quantity demanded".

* There are no apparent linkages between the increased number of jobs projected under some of the alternatives and how those additional residents might change the estimates of demand for recreational goods. This failure calls into question conclusions about the relative economic contribution of each competing use.

* If the analysis continues to assume a perfectly elastic demand for timber from the Tongass forest, then market price should be depicted as a function of exchange rates in the model and allowed to fluctuate. Microeconomic theory requires that the marginal cost of producing an output, in this case timber, should be compared to market price in each time period, since if the marginal cost is higher, none of the timber would be harvested. This requires that all subsidies which are currently provided to artificially induce excess timber production from the forest be explicitly identified and accounted as costs of timber production, thus eliminating this significant market distortion.

* During the course of the analysis, the productivity of existing stand structure was estimated using two different procedures, resulting in average volume per acre estimates calculated both by administrative zone and by timber type. There appear to be substantial differences in the estimate depending on which approach is used. The actual approach used needs to be identified and justified. In addition, the current sites are aggregated too broadly across timber species, terrain, etc., to make estimates of the costs and revenues of actually harvesting these sites. This prevents an adequate and objective assessment of the costs and benefits of the alternatives under review.

* The assumption of a composite RVD (or any composite use) with a fixed value is untenable for several reasons. In addition to those cited above, recreation values are predicated on a number of activity specific attributes or characteristics. As these attributes change, perhaps in response to competing Tongass land use activities such as, for example logging, the value to the

recreationist changes. To assume otherwise contradicts both empirical evidence and basic economic theory.

* The implicit assumption, which apparently has been made in the DEIS, that recreation sites within the Tongass are effectively homogeneous, and therefore perfect substitutes for one another, is not supported empirically. It is, unfortunately, consistent with the approach adopted to treat "recreation use" in the aggregate as a "composite" commodity. In combination with the composite recreational unit, failure to differentiate recreational sites based on use attributes, precludes any effective judgement about the economic trade-offs associated with alternative land management decisions, when recreation is one potential competing use.

* The several comparative model runs which purport to provide a basis for assessing the costs and benefits of trading off one use for another do not achieve this objective. The reasons are: (1) Fundamental parameters employed in the "Benchmark" alternative do not appear to be the same as those employed in the subsequent alternative runs, making marginal economic comparisons impossible. (2) Estimates of welfare changes attributable to alternative management actions are incorrectly made for several non-timber uses (cutting off demand). (3) Demand analysis (economic valuation) was not undertaken at all for many other use and non-use categories (intrinsic values, non-consumptive or aesthetic uses, etc.) despite repeated references of their economic and social importance.

II. Concerns with the Economic Modelling Process:

Given that a model is necessarily an abstract idealization of the problem one is attempting to solve, care must be taken to ensure that the model remains a valid representation of the problem. One criterion for judging the validity of the model is whether or not the model predicts the relative effects of the alternative courses of action with sufficient accuracy to permit a sound decision. A presentation that verifies and validates the model is, therefore, necessary for those outside of the actual planners to buy into the credibility of this exercise. As this plan fails to identify actual sites for timber harvest, or for recreation, or an actual timber sale plan, it is not of much use for either prediction or simulation and thus cannot be considered a valid modelling exercise.

In addition, the FORPLAN portion of this analysis is a linear programming technique. A fundamental assumption of this type of technique is the certainty assumption that all parameters of the model are known constants. Usually, there is some degree of uncertainty about some or all of the parameters used (this is certainly the case in this model), therefore, "it is usually important to conduct a thorough sensitivity analysis after

finding a solution that is optimal under the assumed parameter values. The general purpose is to identify the relatively sensitive parameters (i.e., those that cannot be changed much without changing the optimal solution)..." (p 40 "Introduction to Linear Programming", Introduction to Operations Research, Hillier and Lieberman, 1986).

The range that will preserve the optimal solution under each alternative should be presented for key parameters, so that reviewers can determine for themselves the likelihood that errors in estimating certain parameters will prevent attainment of the "optimal" solution.

In addition, the FORPLAN model appears to have so many assumptions built into the constraints of the model that the true objective of this exercise appears to be to schedule timber harvest, rather than to attempt to objectively optimize values from among competing uses of the forest base. A clearer discussion of "what actually was modeled and why", should be presented in the DEIS and supporting documents.

On this point, there appear to be numerous misleading statements between the text and the appendices, and significant confusion about what was modeled and how the analyses were done. In addition, documents presented at the November 27th workshop did not always agree with the information presented in the DEIS. With fundamental concerns such as those delineated above, the supplement to the DEIS should stress unambiguously what was actually estimated and how the estimation was performed.

In addition, changes to the model to incorporate the provisions of the Tongass Timber Reform Act, and the ongoing changes indicated at the Nov. 27, 1990, economic assumptions workshop (e.g. expanded number of management areas to 141, a separate FORPLAN model for each administrative area, etc.), should be presented in the supplement to the DEIS now underway.

It is not clear that reliance upon a linear program, such as FORPLAN, allows one to obtain theoretically consistent estimates of net social welfare change, based upon "willingness-to-pay" measures. Consideration of alternatives to the FORPLAN LP model may be appropriate for the economic assessment portion.

III. Comments on Fisheries Habitat Protection and Models

Fisheries models used to project populations of Management Indicator Species (MIS) are inadequate because stream habitat of spawning limited species is not represented. These models were erroneously used to conclude timber harvest would have no effect on pink salmon because the modeling showed no effect to pink salmon habitat. That conclusion was extended to chum and sockeye

salmon, and finally the commercial fishing sector of the economy which is driven primarily by these species. The absence of a valid effects model for a spawning limited species results in Benchmark and Alternatives which are inadequate from fisheries habitat or fisheries economics perspectives. Economic projections, such as jobs and income by resource sector, are also premised on the assumption that pink, sockeye, and chum abundance are not affected by timber harvest. In this regard, not only has the process fallen short of it's goal, the application of that modeling data goes far beyond the intent. These comments are expanded below.

Deficiency of the pink salmon model - The rational behind the use of MIS was that each species selected would represent a particular type of habitat which may be limiting and also may be affected by timber harvest. Fish MIS were narrowed to three species with pink salmon being the indicator species for spawning limited species. Following this logic, habitat variables which could be quantified and monitored and have been shown to relate to fish abundance, would be incorporated into models which would predict numbers of smolts, and effects of timber harvest upon smolt output. No effects, however, were modeled for pink salmon, the most abundant fish of commercial value and MIS for spawning limited salmonids.

The Summary states (p. 20) "Following a thorough analysis in the DEIS, no measurable effects on fisheries were identified as a result of implementing any of the alternatives". This conclusion, however, is contradicted by the Analysis of the Management Situation (Tongass National Forest IDT, January 1990) which states (p. 3-103) that a model relating watershed disturbance to pink salmon commercial harvests "indicated some changes in cumulative disturbance which may result in net decreases to the habitat capability for pink salmon". Records of IDT meetings show the IDT had planned to model effects on pink salmon: "Since the effects on pink salmon are subject to a number of conditions that all are related to watershed condition, it was determined that a 'watershed disturbance factor' should be used to model changes in pink salmon habitat capability" (Meeting Record: Interagency Meeting on Fish Habitat Capability Modeling for the Tongass Revision, February 9, 1988); however, no disturbance factor was used in the model.

The pink salmon model is of no use in evaluating alternatives. Pink salmon habitat is treated as a constant; there are no linkages between land management and pink salmon habitat. For example, there are no relationships for how egg survival depends on gravel composition or how gravel composition changes with sediment inputs from roads. The pink salmon model, therefore, cannot assess potential impacts, even qualitatively. The fact that "no quantitative reductions in pink salmon habitat capability were predicted due to management activities" (p. 3-77)

resulted, not from lack of impacts determined after analysis, but because the model is inadequate. To compare alternatives, the reader must decipher large tables (3-22 and 3-23), which show the area of land management disturbance differs more than three-fold between the least disturbance (Alternative A) and most disturbance (Alternative D). The percentage of riparian acres that could have harvest activities ranges from 22 percent (Alternative A) to 81 percent (Alternative C). These differences and their potential impacts on pink salmon should be evaluated.

NMFS disagrees with the assertion that there is insufficient information to model effects to a spawning limited species. Adverse effects have been convincingly documented in British Columbia and the Pacific Northwest. Holtby and Scrivener (1989), for example, report that logging increased fine sediment in spawning gravel of Carnation Creek, B.C. and reduced equilibrium abundance of chum salmon by 50 percent. According to records (Interagency Meeting on Fish Habitat Capability Modeling for the Tongass Revision, February 9, 1988), the IDT recognized these potential impacts when they "agreed that there must be an effect on spawning success, hence pink salmon production, in Southeast Alaska, as found in studies elsewhere." If studies done outside Alaska are believed to be inadequate, then the FS should conduct studies in Alaska to document the effects.

Limitations of the coho model - Coho salmon and Dolly Varden char were chosen to represent anadromous and resident MIS species limited by rearing habitat. The tables and effects graphs are a reasonable projection of what will happen by channel type to rearing habitat based on current understanding of the importance of large woody debris (LWD). LWD, however, is only one of many critical habitat components which determine abundance. Additional habitat variables such as water temperature and sediment need to be factored into the model to make conclusions about production.

Effects of timber harvest prior to 1988 are underestimated - Riparian areas were generally clearcut to the streambank prior to 1988. Trees were often felled and yarded into and across stream channels resulting in channel destabilization and huge influxes of fine organic debris; sometimes all the large woody debris was removed from the channel during clean-up (Murphy et al. 1986). Because the coho model assumes LWD was left undisturbed, the model overestimates habitat capability in harvested areas. In addition, stream productivity in these areas likely will decline because of shading by second-growth trees (Sedell and Swanson 1984), further reducing coho habitat capability. The likely consequences of logging without buffers or yarding breaks at streams probably are, therefore, much greater than the estimates. Declines in coho in geozone K08 (on Prince of Wales Island), for example, could be much higher than the 14.8 percent reduction predicted.

Model lacks testing - The coho and Dolly Varden char models need verification to develop confidence that predictive evaluations drawn from them are acceptable and applicable. As with any prototype model, the fish models are analytic systems for qualitative impact assessments only (Garrett et al. 1990). Testing and modification are required to assure they are appropriate for quantitative assessments.

The DEIS misrepresents the untested condition of the capability models. "Review of the models by an interagency group of biologists indicated that the coho salmon model accurately estimated coho numbers, based on smolt migration studies." (p. 3-54). This statement implies that the coho model has been tested when in fact, the only review was a general comparison of predicted total coho habitat capability of the entire Tongass with annual commercial coho harvest (Meeting Record: Interagency Meeting on Fish Habitat Capability Modeling for the Tongass Revision, February 9, 1988). No model simulation was done to compare model outputs with actual smolt production for specific watersheds. The IDT agreed that predicted Tongass-wide coho habitat capability was "in the ballpark," but this broad comparison does not constitute review of the coho model.

Many equations in the coho and Dolly Varden models are based on a number of important assumptions, including: pools and large woody debris are the principal factors determining habitat capability for coho; stream channels are not disturbed during logging; large woody debris input is a random process unchanged by logging (a constant proportion of each tree size class is input in old-growth, second-growth, and buffers); probability of blowdown is not increased in buffers; old-growth streams are in equilibrium so that large woody debris quantity, input, and output are constant; logs >24 inches in diameter constitute key pieces controlling channel stability; and winter mortality of coho parr is 50 percent in all channel types. These assumptions need to be tested because they could greatly affect model outputs.

Although NMFS agrees large woody debris and pools are usually the most important habitat features for rearing salmon, other factors can outweigh it. For example, canopy can be so dense in second-growth forest that low light limits stream productivity below that in old-growth (Sedell and Swanson 1984). The reduction in stream productivity in second growth is unknown but potentially could limit coho production to a greater extent than depletion of large woody debris.

Evaluation of Road Construction - Failure to account for potential effects of roads on fish habitat is a major shortcoming. As stated (p. 3-82), "Road construction and use are often the greatest potential sediment source of all land

disturbing activities, over both the short term and the long term." Although effects of roads were not evaluated, the DEIS discounts potential problems from roads (p. 3-82): "no Forest-wide effects on fish habitat are anticipated due to the construction and use of roads", while acknowledging that risks of "unplanned" impacts, such as road failures, use of inadequate construction materials, washout of culverts and bridges, and failure of culverts and bridges to pass fish, will increase as the miles of roads increase.

Road construction on the Tongass may have adverse impacts on salmon. Road construction and use are known to greatly accelerate sediment delivery to streams. Annual sediment delivery to streams from forest roads in two Chichagof Island watersheds is about 165 m^3 per mile during and immediately after construction, representing an increase over natural levels of over 100,000% (Paustian et al. 1987; Swanston et al. 1990). Regular road use causes chronic sediment inputs nearly as bad as road construction itself. Normal log hauling annually delivers about 83 m^3 of road sediment per mile of road, an increase over natural levels of 55,000% (Swanston et al. 1990).

Acute and chronic sedimentation from construction and use of roads likely will have adverse effects on salmon. While the DEIS states (p. 3-454) that sediment is minimized because all roads are constructed on blasted quarry rock, the quality of this material varies. Powell (1989) writes: "In many areas of Southeast Alaska, the rock borrow material is too weak to provide a stable road surface to support truck haul. The road surface tends to rut, and the rock continually breaks down with heavy repeated wheel loads combined with wet conditions. This process breaks the gravel down to fine silt and clay size particles which are bladed into the ditch and are continual source of material contributing to stream sediment....There are many miles of existing roads where surface breakdown is continually occurring and generating fine particles which can result in an increase in stream turbidity."

Adverse effects of sediment on salmon can be estimated. Interagency participants developing the Southeast Alaska Multiresource Model (SAMM) were able to simulate effects of road construction and use on salmon production. SAMM was based primarily on research done in Alaska, but it did not exclude data from British Columbia and the Pacific Northwest. Garrett et al. (1990) show results from a SAMM simulation of effects of typical road construction and use in a watershed of several thousand acres with 25% of the area harvested by clearcutting: fine sediment in spawning gravel increased 160%; pink and coho salmon declined 36% and 41%, respectively, and did not recover for 12 years.

The DEIS reports (Table 3-25) that in the next 50 years roads on the Tongass, now totalling about 3,000 miles, will more than triple under Alternatives B, C, E, F, and G to between 9,000 and 10,000 miles; Alternative D will quadruple the roads to over 12,000 miles; Alternative A will increase roads only half as much, to about 5,000 miles. NMFS believes that a thorough evaluation of effects of roads on salmon habitat is needed for an adequate review of alternatives.

Monitoring plans are inadequate - Water Quality Protection measures are inadequate and effectiveness of best management practices are poorly evaluated. Rather than demonstrating the "success of best management practices in keeping sediment from logging and road construction to levels within the range of natural sedimentation yields" as asserted, the examples used (p. 3-456) point out the paucity of sediment monitoring on the Tongass related to roading and the need to evaluate best management practices.

The TLMP analysis assumes prescriptions are fully implemented. As stated (p. 3-77), however, "Failure to implement all aspects of Forest Plan direction which maintain fish habitat contributes to the risk from timber harvest." The Forest Service has insufficient trained personnel to carry out the intensive, site-specific planning and monitoring necessary to ensure full implementation. The Monitoring Plan (Appendix H) proposes to examine only 5% of the projects that involve riparian areas to determine if standards and guidelines were implemented. Allocating $9,000. for implementation monitoring is not enough to even make a cursory check on whether a buffer prescribed for a given unit was left. Additional dollars are required. At a minimum, we recommend implementation monitoring of all cutting units which contain streams.

Each cutting unit is part of a watershed. Impacts from each cutting unit are cumulative both in terms of time (successional impacts) and space (downstream). Monitoring studies need to be sophisticated enough to take the cumulative forces into account and draw conclusions on a watershed scale.

Paustian's (1987) finding that application of best management practices in harvesting and roading of the Indian River watershed resulted in no sediment yield increases that were significant is limited in that only 8 percent of the study watershed was affected by harvest units. Since similar information on the percent of each watershed harvested under each alternative is not provided, it is difficult to relate Paustian's findings to the DEIS. In many cases up to 25 percent of the watershed is considered for harvest (McCorison et. al. 1989). Further, the increases in estimated sediment yield of 20-66 percent in three Kadashan study streams related to road building alone (without road use by heavy trucks) underscore the potential of roads and

road crossings to increase sediment. The issues of sediment generated by road use and the evaluation of management practices in areas prone to mass wasting or other difficult site conditions remain to be addressed on the Tongass.

The Stream and Lake Protection prescription does not adequately protect salmon streams from impacts of logging in their headwaters. It provides only 25-ft buffers, some of which may be selectively logged, on many Class-II and Class-III streams. NMFS believes such narrow buffers are insufficient to prevent adverse effects on channel stability, sediment routing, and stream temperature, which would have cumulative impacts on salmon habitat (Class I) downstream. Narrow buffers may be more susceptible to windthrow, which could increase bank erosion and cause sedimentation downstream. Furthermore, channel stability and sediment storage in headwater channels will decline over time as key LWD decays, resulting in faster delivery of sediment to downstream reaches. Narrow buffers will increase solar radiation and temperature in small streams, and because such increases in temperature of tributaries are additive (Beschta et al. 1987), cumulative effects on downstream reaches could be severe. In addition to the above biological considerations, we believe a minimum buffer width is possible to administer and monitor over the vast areas of the Tongass and throughout frequent and numerous personnel changes. For these reasons, NMFS recommends 100 foot minimum buffer zones be left on all anadromous streams and important tributaries. We look forward to your modifying the Stream and Lake Protection prescription to incorporate buffer zone provisions of the Tongass Timber Reform Act.

Literature Cited

Bergland, O. 1985. "Exact Welfare Analysis with Rationing", presented at the winter meeting of the Econometric Society, New York.

Beschta, R. L., R. E. Bilby, G. W. Brown, L. B. Holtby, and T. D. Hofstra. 1987. Stream temperature and aquatic habitat: Fisheries and Forestry Interactions. pp. 191-232 In Salo, E. O., and T. W. Cundy (ED). 1987. Streamside management: Forestry and fishery interactions. Contribution No. 57, College of Forest Resources, Univ. of Washington, Seattle. 471 p.

Deaton, A. and J. Muellbauer. 1980. Economics and Consumer Behavior. New York, Cambridge University Press.

Garrett, L. D., R. D. Fight, D. L. Weyermann, and J. R.Mehrkens. 1990. Using the model SAMM: Implications for management. pp. 79-89 In R. D. Fight, L. D. Garrett, and D. L. Weyermann (editors) SAMM: a prototype Southeast Alaska Multiresource Model. U.S. Department of Agriculture General Technical Report PNW-GTR-255.

Hausman, J. A. 1981. "Exact Consumer Surplus and Dead Weight Loss," American Economics Review, vol. 71, pp. 662-676.

Hillier, F. S., G. J. Lieberman. 1986. Introduction to Operations Research. McGraw-Hill Publishing Co.

Holtby, L. B., and J. C. Scrivener. 1989. pp. 62-81 In Levings, C. D., L. B. Holtby, and M. A. Henderson (ED). 1989. Proceedings of the National Workshop on effects of habitat alteration on salmonid stocks. Can. Spec. Publ. Fish. Aquat. Sci. 105: 199 p.

Just, R. E., D. L. Hueth, and A. Schmitz. 1982. Applied Welfare Economics and Public Policy. Englewood Cliffs, N. J.: Prentice-Hall, Inc.

Langkford, R. H. 1983. "Exact Consumer's Surplus for Changes in Imposed Quantities," Department of Economics, State University of New York, Albany.

McCorison, M. G. Johnejack, and E. Kissinger. 1989. A method to analyze watershed sensitivity. pp. 157-164 In E. B. Alexander (editor) Proceedings of Watershed '89, A conference on the stewardship of soil, air, and water resources. March 21-23, 1989, Juneau, AK.

Mitchell, R. C., and R. T. Carson. 1989. Using Surveys to Value Public Goods: The Contingent Valuation Method. Resources for the Future, Johns Hopkins Univ. Press.

Murphy, M. L., J. Heifetz, S. W. Johnson, K V. Koski, and J. F. Thedinga. 1986. Effects of clear-cut logging with and without buffer strips on juvenile salmonids in Alaskan streams. Canadian Journal of Fisheries and Aquatic Sciences 43:1521-1533.

Paustian, S. J., D. Marion, S. Maki, and D. Kelliher. 1987. Kadashan sediment monitoring study. Juneau, AK: U.S. Department of Agriculture, Forest Service, Tongass National Forest. Interim report on file with Tongass National Forest Chatham Area Fisheries, Wildlife, and Watershed Staff Office, Sitka, AK 99835. 29 p.

Powell, W. O. 1989. Low tire inflation pressure -- a solution to breakdown of road surface rock. pp. 121-123 In E. B. Alexander (editor) Proceedings of Watershed '89, A conference on the stewardship of soil, air, and water resources. March 21-23, 1989, Juneau, AK.

Sedell, J. R., and F. J. Swanson. 1984. Ecological characteristics of streams in old-growth forests of the Pacific Northwest. pp. 9-16 In Meehan, W. R., T. R. Merrell, Jr., and T. A. Hanley (ED). 1984. Fish and wildlife relationships in old-growth forests. American Institute of Fisheries Research Biologists.

Samuelson, P. Foundations of Economic Analysis. Cambridge Mass, Harvard Univ. Press. 1947.

Silberberg, E. 1978. The Structure of Economics: A Mathematical Analysis (New York, McGraw-Hill).

Swanston, D. N., T. M. Webb, L. Bartos, W. R. Meehan, T. Sheehy, and A. Puffer. 1990. The hydrology and soils submodel. pp. 28-45 In R. D. Fight, L. D. Garrett, and D. L. Weyermann (editors) SAMM: a prototype Southeast Alaska Multiresource Model. U.S. Department of Agriculture General Technical Report PNW-GTR-255.

Varian, H. R. 1984. Microeconomic Analysis (2nd ed., N.Y., Norton).

Vartia, Y. 1983. "Efficient Methods of Measuring Welfare Change and Compensated Income in Terms of Ordinary Demand Functions," Econometrica, vol. 51, pp. 79-98.

Willig, R.D., "Consumer's Surplus Without Apology," American Economic Review, vol. 66, no. 4, September 1976, pp. 589-97.

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JUNEAU, ALASKA

December 19, 1990

Michael A. Barton
Regional Forester
P.O. Box 21628
Juneau, Alaska 99802-1628

Dear Mr. Barton:

Re: Tongas Land Management Plan

The residents of Kake are very concerned about the "No Look" at Security Bay, and adjacent areas that the Forest Service didn't comment upon.

The Security Bay area is the most important Subsistence area left to the Village of Kake.

The Forest Service seems determined to wipe out the entire Security Bay drainage area by continued logging around the slopes as example this past fall sediment has already begun to infiltrate into the streams.

Everyone realizes that Salmon Eggs cannot survive in such an environment.

Suggested solution would be to establish a wilderness area. HELP us to continue the Subsistence in Kake.

Sincerely,

Lonnie Anderson, Mayor

CC: Senator Ted Stevens
Senator Frank Murkowski
Representative Don Young

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United States Department of the Interior

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January 2, 1991

Steve Brink, Leader
USDA Forest Service
Tongass National Forest
Forest Plan Interdisciplinary Team
8465 Old Dairy Road
Juneau, Alaska 99801

Dear Mr. Brink:

This letter transmits to your team the formal U.S. Geological Survey-Geologic Division comments on the Tongass National Forest Draft Environmental Impact Statement for Land Management Plan Revision. The comments are in two parts: the first is the enclosed report titled "Undiscovered mineral resources of the Tongass National Forest and adjacent lands, southeastern Alaska" by Brew, Drew, Schmidt, Root, and Huber; the second part consists of the specific comments on the draft EIS that make up most of the remainder of this letter.

The enclosed report on undiscovered mineral resources is designed to fill the gap in your analysis that is clearly noted on page 3-120 of the Minerals subsection of the Environment and Effects section of the Draft EIS. Regarding the report: (1) We can make additional copies available as you request. Call me at the above number or Dr. David A. Brew at (415) 329-5726 and inform us how many you need. (2) If you wish, we can arrange a briefing in either Juneau or Anchorage on the report. The best times for us would be either the week of January 21 or February 18, but we could perhaps make other arrangements if necessary. Please inform us if you wish a briefing.

The following specific comments are keyed to page numbers and paragraphs in the Minerals subsection of the Environment and Effects section of the Draft EIS, or to the recently produced map titled "Preferred Alternative" dated July 25, 1990. The comments are of two types: one type alerts you to the fact that the enclosed report provides some specific information that you may wish to incorporate; the second type consists of general revision suggestions that we provide from our perspective as an information-oriented, non-advocacy, non-land-managing sister Federal Bureau. Regarding both types of comments: we would be pleased to discuss them in person with you or with your staff. Please contact us as noted above.

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P. 3-106 - Re locatable, leasable, and salable mineral resources: our report is concerned almost entirely with locatable resources. It does inventory the known occurrences of the leasable resources geothermal energy, coal, oil, and gas. It does not quantify any of those resources, however. The report does not discuss salable resources at all.

P. 3-108 - Because we cannot see the mineral deposits that are hidden beneath the earth's surface, we must rely on highly skilled professionals to make the judgements necessary to accurately assess mineral potential. Judgements are subject to legitimate differences of opinion. Under these circumstances it is imperative that (1) either the methods for arriving at the resource estimates be outlined carefully in the Land Management Plan, or (2), the methods be stated in references that are readily available to the public. Neither appears to be the case with respect to the "Coldwell, 1989" report, which makes it difficult for us or any other interested party to comment on the accuracy of the "total gross in-place metal value of identified mineral resources".

P. 3-108, paragraph 1 - The "mineral activity tract" concept presupposes that short-term exploration and development are a measure of long-term activity. Our evidence, which is not included in the enclosed report, is that the minimum time from discovery of an eventually productive deposit to actual production may be as long as 20 years. To this must be added the time needed for the exploration that led to the discovery. In our opinion, land classification actions based in part on the short-term "mineral activity tract" concept could interfere with appropriate long-term mineral-resource exploration in the Tongass National Forest. As evidence of this, we compared the 13 rank 1 "mineral activity tracts" shown on the "Preferred Alternative" map with figure 11 of the enclosed report, which depicts, on a gross-in-place value (GIPV) per square kilometer basis, our evaluation of where the highest undiscovered mineral-resource values are located. Of the 34 mineral-resource assessment tracts wholly or partially in the Tongass that are in our class 1 and class 2 categories, only 6 are included in the 13 "mineral activity tracts".

When we compare the 52 "High development potential mineral activity tracts" (Fig. 3-18 and Table 3-32) with the same figure 11 from the enclosed report we find that only 13 of the 52 correspond to any of our 34 class 1 and 2 categories and that only four of the 52 correspond to any of our 8 class 1 category tracts.

The point being made here is not the "High development potential mineral activity tracts" are necessarily inappropriate for some purposes; instead the point is that, in our judgment, they are not indicative of the long-term mineral-resource exploration and development activities in the Forest.

P. 3-109, paragraph 3 and table 3-30 - Re money spent on mineral-resource exploration activities in southeastern Alaska: The enclosed report (table 14) gives an analysis for the years 1900-1989. This includes the shorter period 1981-1988 reported in table 3-30. You may wish to update this part in the final version of the EIS.

P. 3-110, paragraph 2 *et seq.* - Re "mineral activity tracts": See above comment. Also, note that one of these "tracts" (Chilkat Peninsula: number 1 in table 3-32) is almost entirely on State of Alaska land.

P. 3-116, paragraph 6 - Re "Salable supply": This paragraph is misleading because it appears to describe only rock sources for road-building purposes and does not concern other salable materials.

P. 3-118, paragraph 4 - Re treatment of "Recommended Wilderness": Please note that in contrast to your analysis, ours does not include the various recommended Wilderness Areas as withdrawn from mineral entry.

P. 3-122 *et seq.* (tables 3-19 and 3-20): These two tables graphically depict the effect of different alternative mineral withdrawals on the whole Forest and on the 52 "mineral activity tracts". The analysis is straightforward and helpful in understanding the availability of the resources said to be those tracts under different "Mineral Access Group" (p. 3-119, table 3-35) conditions. We suggest that you treat the undiscovered mineral resources that are the subject of the enclosed report the same way in the revision of the EIS.

Thank you for the opportunity to comment on the Draft EIS and the belated opportunity to provide you with information on the undiscovered mineral resource endowment of the Tongass National Forest. We hope that both our comments and the information will be helpful and will be fully used in the revision of the EIS. Please contact us as appropriate during the revision process.

Sincerely,

Willis H. White

Willis H. White
Chief, Branch of Alaskan Geology

003113 PPB

CITY OF KUPREANOF ALASKA

Post Office Box 50
Petersburg, Alaska 99833

RECEIVED
JAN 02 1980
REGIONAL FORESTER
FOREST SERVICE
JUNEAU, ALASKA

Michael Barton, Reg. Forester
U S Forest Service, Reg 10
P O Box 21628
Juneau, Ak. 99802

Dear Mr. Barton;

We would like to make a few points of interest known with the hope that it will aid the Forest Service in their new course of planning for the Tongass Land Management Plan Revision.

First, we urge you to withdraw the minerals prescription from the plan. We feel it is an unnecessary and unfair giveaway to the minerals industry, which already has access to all of these protected areas. (13 proposed)

Secondly we ask that you give primitive recreation or old growth designations to the following areas;

1. all areas included in HR 987 but left out of the final compromise bill.
2. key tributaries draining into Salmon Bay Lake on Prince of Whales Island.
3. Honker Divide and adjacent lands.
4. Mansfield Peninsula on Admiralty Island.
5. Mt. Edgecumbe.
6. River corridors with special values, i.e. Scienic, high fisheries production, unique ecological characteristics and all research natural areas.
7. Indian Creek Watershed near Hollis.

Third, we ask you to defer timber harvest on Cleveland Peninsula for the 10-15 year life of the new Tongass Plan.

Fourth, we feel you should be open with the public and disclose your 10 year logging and road building schedule.

Fifth, we request that all comments including this letter and all TLMP Revision hearing comments be included in the public record and printed in the final plan.

Last but of most importance we urge you to implement the full intent of the Tongass Timber Reform Act. We urge you to prepare a new preferred alternative for the Tongass that truly embraces the newly passed Reform Act. We urge you to act immediatly to correct the inaccurate timber data base that undermines the validity of the entire plan.

Thank you for the opportunity to have an input into this tremendous task that lies ahead.

Sincerely,

Sharon B Sprague

Sharon B Sprague, Administrator

L-339

003216

NM

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

January 3, 1990

File No.: 13300

Steve Brink
Forest Plan Revision Team
8465 Old Dairy Road
Juneau, Alaska 99801

SUBJECT: TLMP DEIS

Dear Mr. Brink:

The Department of Community Development, City and Borough of Juneau, has reviewed the Draft Environmental Impact Statement (DEIS) for the Tongass Land Management Plan (TLMP) revision. In view of the fact that the recent Tongass Timber Reform Act makes numerous changes in the DEIS necessary, we are glad that the Forest Service has decided to prepare a Supplement to the DEIS. We will take advantage of your offer to provide comments at this time which may be used in the preparation of the Supplement. The City and Borough of Juneau (CBJ) may wish to provide comments on the Supplement as well.

The CBJ Planning Commission discussed the DEIS earlier, and decided that it would be helpful to compare the management direction of the TLMP revision to that of the CBJ Comprehensive Plan and other pertinent documents. This letter makes these comparisons. Our focus is on that portion of the Tongass which falls within CBJ boundaries.

The Comprehensive Plan is a long range blueprint intended to guide growth and development of the community. It forms the basis for land use regulations and future policy decisions.

Comprehensive Plan land use maps display the proposed land uses for the CBJ through the year 1997. These maps cover the area from Echo Cove to Thane and Douglas Island. The land uses shown are expressed in a range of development intensities from, for example, "open space" to "industrial."

Almost all of the area shown on these maps which are in the Tongass are classified as "recreation resource." This land use category is defined as land primarily under federal or state management for a range of resources, such as timber and minerals, and wildlife and recreation uses, including recreation cabins. Uses may include

155 South Seward Street, Juneau, Alaska 99801

small scale, visitor-oriented, summer only recreation facilities. This category is generally compatible with the TLMP prescriptions of semi-primitive recreation, roaded natural/rural recreation, and scenic viewshed which are applied to this same area in the preferred alternative.

Several areas are shown with incompatible land use guidelines. The CBJ maps show Benjamin Island as "open space," or land to be retained as open space and managed for recreational and scenic values, including parks and public cemeteries. The TLMP maps show Benjamin Island in a moderate development prescription (RN/RR) which allows timber harvesting while giving priority to maintaining existing recreation sites and protecting proposed sites.

Stream corridor management is another area of potential incompatibility between the CBJ Comprehensive Plan and the DEIS, although this has apparently been resolved through the Tongass Timber Reform Act. It is the policy of the CBJ to protect stream corridors and lake shorelines from adverse effects of development. The stream corridors are recognized in the Comprehensive Plan for both habitat and recreational values. Therefore, the CBJ land use maps shown a 200′ stream corridor designated as open space along anadromous fish streams in the CBJ. We assume that these designated streams are largely identical to the Class I and Class II streams of the Act and will be shown on the next set of TLMP maps with a 100′ buffer zone on each stream side.

Another document which is important to the TLMP revision process is the Juneau Area Recreation Plan (1982). This plan presents the conclusions of a multi-agency recreation planning effort, which included the Forest Service, the CBJ and other four state or federal resource agencies. It was intended to provide guidance for recreational land allocations and site and facility developments in the Juneau area for ten years or until 1992.

This recreation plan contains some observations and recommendations which are pertinent to the current TLMP revision process. Stressing that close proximity to undisturbed recreational settings is one of Juneau's greatest assets, the plan recommends (p.57), "the process of updating the Tongass Land Management Plan (TLMP) should reflect the importance of specific recreation activities and sites within VCU's. Significant recreation areas and areas that are likely to be important in the future should be identified and appropriate proscriptions applied to regulate uses other than recreation."

The DEIS states that there are 56 "recreation places" or 205,000 recreation acres within a 20 to 30 mile radius of Juneau. The DEIS shows that if the preferred alternative is implemented, 31,000

acres or 15% of these recreation places will be subject to change to a more modified setting.

This recreation analysis in the DEIS does not take into consideration the potential effects of the minerals management prescription. We believe that some discussion of impact of the minerals prescription on Juneau recreation places should be included in the Supplement. Further, we suggest that the Supplement address how the minerals management prescription would be implemented with respect to the Juneau Area Recreation Plan.

In conclusion, we would like to note that this office has received several calls about the TLMP revision. The minerals management prescription prompted two individuals to call us to register their opposition to the concept of the prescription. A third individual called to make sure that the TLMP prescriptions will not preclude future construction of a highway along the Taku River which would connect Juneau with the Canadian road system.

We appreciate the flexibility the Forest Service has shown in accepting comments now on this DEIS, or after the Supplement is issued, or at both times. We look forward to the receipt of the Supplement and the new maps.

Sincerely,

Murray Walsh, Director
Community Development
(907) 586-5235

000038

Alaska State Legislature

Official Business

P.O. Box V
State Capitol
Juneau, Alaska 99811

September 16, 1991

Steven A. Brink
Forest Plan Revision Team
8465 Old Dairy Road
Juneau, AK. 99801

Dear Mr. Brink:

We, the undersigned members of the District 1 Legislative Delegation, submit this letter as our official comment on the Supplement to the DEIS for the Tongass Land Management Plan Revision.

We consider it essential that no matter which alternative is finally adopted, the T-LMP must include acknowledgement of the vital transportation and power transmission corridors proposed for this area. Furthermore, the land use designations adopted should not inhibit future transportation and power transmission access.

We request the designation of the corridors required for the Bradfield Canal Resource Road project with connecting roads to Ketchikan and Wrangell, the Tyee Lake/Swan Lake Power Intertie and Transportation project and designation of the site at Thomas Bay of a future hydroelectric facility.

Sincerely,

Senator Lloyd Jones Rep. Robin L. Taylor Rep. Cheri Davis

JOE AMBROSE: My name is Joe Ambrose, A-M-B-R-O-S-E. I live at 636 Deermount Street, Ketchikan. I work as administrative assistant to State Representative Robin Taylor, and I'm here representing Representative Taylor tonight.

I'd like to read into the record a letter Representative Taylor has written on the TLMP Revision. First of all, he apologizes for not being available this evening.

The letter states, and I quote:

Thank you for this opportunity to express my views on the supplement to the DEIS on the Tongass Land Management Plan Revision. I am deeply concerned about the impact of the TLMP Revision on the overall economy and future development of Southeast Alaska. My concerns go beyond the impact this plan revision will have on the timber industry to its impacts on the development of a regional transportation and power transmission system as well.

Regarding the timber industry, I submit that neither the preferred alternative nor Alternative D meet the mandate Congress sent down with the passage of the Tongass Timber Reform Act. Alternative P, the preferred alternative according to the plan, would maintain the industry. Alternative D, in my view, falls short of its stated goal of market demand and mill capacity. It's my understanding that your projections are based on historical demand while those statistics make interesting reading and a change in market conditions in the industry itself.

Congress did away with the Tongass supply fund and mandated management to meet demands of the market place. I feel a more realistic estimate of the demand would require the capabilities of providing 550 million board feet per year. The Forest Service needs to consider the impact of the decline in production from private lands management, decisions being made in Canada and the western United States, as well as fluctuations in the world market.

I support Alternative D with modifications to increase the timber harvest capability and to meet the Congressinal mandate to supply the demands of a changing market. The timber industry in Southeast Alaska represents by the most conservative estimate 30 percent of the basic private economy of the region. I believe that figure is actually in excess of 40 percent when

22 other factors are included. The land use management
23 decision made by the Forest Service today will directly
24 effect the economic well being for all for years to come.
25 Congress has limited the scope of your management
1 decisions.
2 I urge you to be as flexible as possible
3 within the confines of the new law managing the forest
4 for true multiple use.
5 I also feel strongly that land use
6 designations reflected in the alternatives presented in
7 the revised DEIS fail to acknowledge the planned
8 development of a transportation and power transmission
9 system in this region. Several projects already on the
10 drawing board now will be hampered by designations
11 indicated in the supplement. I am concerned about the
12 primitive recreation lands north of Revilla Island and to
13 the south and northeast of Bradfield Canal. The needs of
14 the region would be better served if these areas are
15 classified as scenic view shed or at least semi-primitive
16 recreation.
17 While provisions have been made to allow
18 access corridors through primitive recreation areas, such
19 designations would only serve to complicate the project.
20 It would be more reasonable to acknowledge plans for both
21 transportation and power access and to use designations
22 that reflected the intended use. The U.S. Forest Service
23 is more than aware of the desire of the people of
24 southern Southeast for more roaded recreation and
25 transportation access and the need to transmit power from
1 the hydro facility at Tyee Lake to Swan Lake. The State
2 of Alaska and the people of this area need more than
3 lines on an overlay map. They need lands use designation
4 compatible with the development plans of the entire
5 region.
6 I ask that the U.S. Forest Service work
7 closely with the State Department of Transportation and
8 Public Facilities and the Alaska Energy Authority in
9 identifying these project areas and then classify these
10 areas in ways which will avoid restrictions that ignore
11 reality.
12 To summarize, I support a modified version
13 of Alternative D that provides for a strong commitment to
14 meet timber market demand. Regardless of the alternative
15 selected, land use designations should reflect more than
16 just an overlay view of planned transportation and power
17 transmission facilities.
18 Sincerely, Robin L. Taylor, State
19 Representative, District One.

TESTIMONY OF EDWARD RILATOS

For the record, my name's Edward Rilatos. I'm presently the mayor of the City of Wrangell. I've been employed in the timber industry in Wrangell for the last twenty-three years.

What I have, just for the record, and it was a quick run down on what could possibly happen with the lack of timber to supply the mill in Wrangell.

On estimated on a income of $3,000 a month times a hundred and eighty employees, that's $540,000 per month that the City of Wrangell could possibly loose if the mill was down. Take this over a twelve month period, you're talking $6,480,000 per year loss of direct wage. Normally, there's a factor in this that involves businesses by using a multiplier for money turns over. We were pretty lenient, we only used it by two and three. A lot of places use it by six and seven. At the $6.4 million by two is $12,000,000 per year for the community of Wrangell, by three its $19.4 million. The community of Wrangell without timber industry as we are could not survive. It would be a drastic impact not only economically but socially on the City of Wrangell. Talking to the Chief of Police every time the mill goes down for any length of length of period, be it for a shut down, maintenance shut down or whatever, domestic violence increases, alcoholism increases, arrests due to alcoholism increases. And as Roy was saying, the main ingredient out of your plans was the human factor. And communities that's been in saw mill industries as Wrangell still running for the last thirty-five years is basically a saw mill industry town. Ketchikan, Sitka with their pulp mills and their saw mills are basically depending on the Tongass National Forest. Unfortunately, right now in the Tongass National Forest we have two mills shut down in Haines and Klawok, which is very unfortunate for whatever reason that they're down.

Alternate D is not the best, but its the best of what you have. We support it. We'd like to see it raised a little bit to be able to, the, the industry demand that we can do. With looking at what was put out by the Alaska Forest Association, and you can correct me if I'm wrong, old growth, there are 5.1 million acres of productive old growth on the Tongass National Forest. Less than one-third of these acres are now designated for timber harvest. Under the current plan of harvesting after fifty years, there would be 4.1 million acres of productive old growth left, productive old growth, left, after fifty years.

I do believe that the Forest Service is doing a good job on managing the Tongass.

Recreational, a lot of this recreational area no body will see, or very little people will see. We might be tying up some of this area for a very, very small percent of the population where we could have towns pretty virtually come to a halt if timber is not made available. Some of the people I see in this room, they've been longshoremen, saw mill workers, most, if not most, all their lives, their working age. What happens to that part of the human factor. I think I read in the Ketchikan paper where it said the, Ketchikan or Juneau paper, where one fellow said the smart ones will find another job, and I guess those dumb ones are gonna go on welfare. So one way or the other the state's gonna pay. If its not productive, its gonna be unproductive people, and that's not what we're looking for. We're looking for prodictive people and to make our community and all other communities in Southeast Alaska the best that they can be.

So, I would like to commend you on, as Roy showed the books of what you've done to try to make it an equal plan that can help support, not only the timber industry, but the people that choose to be, I hate to use environmentalist, or preservationists, and I think there's room for everybody, but everybody has to bend to make it work. Thank you.

12 PUBLIC TESTIMONY OF MR. WALT WILCOX

13 Good evening. My name is Walter J. Wilcox. I work
14 for the City of Haines as the City Administrator. Tonight I'm
15 representing the views of Mayor Frank L. Wallace as he's unable
16 to attend.

17 We would like to note that we did not receive the
18 Tongass Land Management Plan revision due to an inadvertent
19 mailing error, so he has not had time to go through the
20 multi-thousand page document. We'd like to reserve the right
21 to submit written comments through December 6th, I believe, is
22 the correct -- is the date.

23 The City is in favor of environmentally sound
24 economic development. We are environmentalists; we are
25 conservations. We are not preservationists. Mayor Wallace
1 is -- would like me to support Alternative D, during the first
2 decade average having an annual allowable sale of 472 million
3 board feet, and the first decade average of an annual rate of
4 timber harvest for the acreage of 18,800 acres. If I said
5 square feet, I meant million board feet.

6 We would like you to know that the forest products
7 industry comprises 43 percent of the employment and income in
8 the Haines area, as substantiated in the recent McDowell Report
9 prepared for the Getty's (ph) Mine impact on Haines. We are in
10 favor of jobs; we're not in favor of jobs at the expense of the
11 environment. We believe that they can operate in harmony under
12 Alternative D.

13 We appreciate your time for your comments (sic). We
14 will be following them up.

15 HEARING OFFICER SHERROD: Appreciate your testimony,
16 Walt.

17 MR. WILCOX: Thank you.

20 PAT ROWLAND: I would. As the mayor of
21 Coffman Cove, I thank you for coming to Coffman Cove to
22 hold this hearing. My name is Pat Rowland,
23 R-O-W-L-A-N-D. My family has lived and worked in Alaska
24 since 1964.
25 Coffman Cove became a second class city
1 and I became it's mayor in 1989. If you look up the word
2 "subsistence" in the dictionary, a few meanings are
3 given. Following the meaning you're directed to the
4 synonyms at livelihood. Turning to that page, you see
5 synonyms livelihood, living, subsistence, maintenance
6 support, keep. These nouns refer to that which provides
7 the necessities of life. Livelihood and living are
8 usually specific to occupation, work or other means by
9 which one earns his income.
10 Subsistence refers to that which barely
11 supports life and sustenance to the means by which one
12 exists on any economic level. Maintenance support and
13 keep are usually recognized as equivalent in money of
14 what is needed to provide necessities such as food
15 lodging and clothing.
16 My neighbors and I do not want to merely
17 exist. We want our livelihood. We want an income. We
18 want our children and our descendants to have the
19 necessities of life. It is time to stop setting aside
20 the resources and utilize them. I have spent the last
21 decade of my life representing my neighbors trying to
22 make that point.
23 It is strange that multiple use is being
24 changed to no use. On our national lands we have forests
25 not to be logged, ranges not to be grazed, minerals not

1 to be extracted. Work is now a four letter word. Is
2 this work ethic to be put out of existance?
3 When all that is put aside is saved, who
4 will pay taxes? How will services be provided? As a
5 community, we are concerned. As a nation, we are
6 concerned. Our concerns should be addressed.
7 Sound environmental practices should be
8 encouraged. We all agree to that. We want clean air and
9 water. We want animals to thrive. We need places set
10 aside not to be disturbed. Laws have been enacted to
11 provide all these things. The record salmon catch and
12 the record number of tourists to our area show that
13 resources are sustained. Now is the time to consider the
14 people that also inhabit our planet.
15 Take away the embarassment of trying to
16 work to make a living. Why is the human race considered
17 a special interest group? Why do we have to justify
18 sheltering, feeding and clothing our families? Industry
19 is not our opponent. We are here to support the timber
20 industry. It is the main enterprise in our area. From
21 it flows jobs, and from jobs stream benefits. The
22 benefits pass through our communities and into the nation
23 and into the world.
24 We ask for Alternative D. We need the
25 timber supply that will meet the market demand. We would
1 prefer the allowable sale quantity to be more than 500
2 million board feet per year. The ASQ is the lifeblood of
3 the timber industry. This alternative will insure our
4 livelihood. Our residents will be able to be employed.
5 We ask you for more than subsistence. We are appealing
6 for our livlihoods.
7 KEN ROLLINS: Thank you, Pat.

000506 PPB

OFFICIAL RESPONSE to the Tongass Land Management Plan

Mike Barton, Regional Forester
U.S. Forest Service
P. O. Box 21628
Juneau, Alaska 99802-1628

Dear Mr. Barton:

Please note my position on the Supplement to the Tongass Land Management Plan and then forward my testimony to the Tongass Planning Team by the **December 6, 1991 deadline.**

The Tongass National Forest and its natural resources are extremely important to all of us. I am concerned that decisions made on the Tongass may damage the economy of Southeast Alaska and also will set future public policy on all National Forests. Reasonable resource development of timber and minerals can co-exist with commercial fishing, tourism and recreation interests. I ask that you prepare a final alternative that will meet market demand for timber supply while allowing for multiple-use of the Tongass.

Public Response (please check one box for each question):

1. The Tongass is currently capable of producing one billion board feet (1000 MMBF) of timber on a long-term sustained-yield basis. Alternative A would only provide 298 million board feet per year while market demand is expected to reach 565 million board feet per year. The Tongass Plan's preferred alternative, as selected by the Forest Service, allows for a harvest of 418 million board feet per year. Southeast Alaskan mills must rely on the Tongass National Forest for their raw material supply. I would like to see a timber supply for the timber industry to meet market demand.

Agree X Disagree_____

2. Only 10% of the Tongass is scheduled for timber harvest. 40% is now Congressionally mandated into Wilderness or roadless designations. Another 50% is restricted from harvest to provide for the protection of fisheries, wildlife and old-growth forests. I therefore support an alternative that emphasizes development and management of the remaining resources to maintain the lifestyles and economy of Southeast Alaska.

Agree X Disagree_____

3. Alternative A would reduce timber-related employment by 1,850 jobs in comparison with Alternative D. I favor an alternative that would maximize resource-related jobs through economic development for tourism, fishing, timber and mining.

Agree X Disagree_____

4. Alternative A contains no specific land use designation for mineral development. I favor mining, mineral development, and the minerals land use designation, and support an alternative that maximizes access and opportunity for mineral discovery, exploration and development.

Agree X Disagree_____

5. Some land use designations displayed would inhibit the development of utility interties and transportation routes. I favor an alternative that emphasizes development of utility and transportation corridors both within and out of the National Forest.

Agree X Disagree_____

6. In Alternative D, 76% of the old-growth habitat will still remain after 50 years. I believe this will be more than adequate to maintain fisheries, wildlife habitat, and old-growth areas while allowing for reasonable development. I favor an alternative that will supply the allowable sale quantity necessary to meet the market demand of the established forest industry.

Agree X Disagree_____

7. I oppose recommendations to Congress for the designation of Wild, Scenic and Recreation Rivers except for rivers already contained in designated Wilderness and which are not state-owned navigable waterways.

Agree X Disagree_____

8. I support an alternative that maximizes developed recreation potential on the Tongass. I believe this can best be accomplished in association with timber harvest to provide access.

Agree X Disagree_____

FILL IN BELOW TO VALIDATE YOUR RESPONSE:

DATE 10/16/91

PRINT NAME REP. JERRY MACKIE

SIGNATURE Jerry Mackie

ADDRESS PO BOX 73 CRAIG AK 99921

Place additional comments below:

Fold into thirds, tape seam and mail.

Name: Mackie
Address: Box 73
Craig, AK 99921

20 USA

TO: Mike Barton, Regional Forester
U. S. Forest Service
P. O. Box 21628
Juneau, AK 99802-1628

L-352

006381

Stikine Area
cc: EAM
RCWR

CITY OF PETERSBURG

P.O. BOX 329 • PETERSBURG, ALASKA 99833
TELEPHONE (907) 772-4511
TELECOPIER (907) 772-3759

November 22, 1991

Mike Barton, Regional Forester
USDA Forest Service
Alaska Region, Region 10, Regional Office
PO Box 21628
Juneau, Alaska 99802-1628

Dear Mr. Barton:

Enclosed please find a copy of Resolution No. 1270-R, passed and approved by the City Council of the City of Petersburg at their regular meeting of November 18, 1991.

The resolution resolves:

1. That the City of Petersburg supports the continued federal power site designations at Cascade Creek and Scenery Creek in Thomas Bay and urges the Forest Service to maintain these designations.

2. That the City of Petersburg supports the utility corridors which the State of Alaska and related federal agencies have identified for southeast Alaska.

3. That the City of Petersburg strongly recommend that the Forest Service should not designate the Eagle River on the Cleveland Peninsula as a Wild & Scenic River in the Tongass Land Management Plan revision.

Sincerely,

Patricia Curtiss
City Clerk

RECEIVED
NOV 25 1991
REGIONAL FORESTER
FOREST SERVICE
JUNEAU, ALASKA

Stikine
DEC05
PIO
AO
Eng Staff
F&WL Staff
Planning Staff
RL Staff
Supervisor
Tongass Staff
Fishery Dist
Wildl. Dist

L-35

Resolution No. 1270-R

A RESOLUTION RELATING TO FEDERAL LANDS AND ENERGY REQUIREMENTS OF PETERSBURG AND SOUTHEAST ALASKA.

Whereas, the community of Petersburg will need long term and reliable sources of energy for the future; and

Whereas, the communities of Petersburg and Wrangell have a proven commitment to developing long term energy production by the formation of the Thomas Bay Power Authority, a jointly operated electric utility which operates the State of Alaska Tyee Lake Hydroelectric facility; and

Whereas, the communities of Petersburg and Wrangell had originally planned to build a power project at Thomas Bay but were advised by state and federal energy regulatory agencies that Tyee Lake would better suit the energy requirements for that time period; and

Whereas, the interconnection of Tyee and the Ketchikan power facilities seems likely to become a reality soon and with the connection to Juneau's Snettisham power facility appearing more plausible day by day, making the utilization of the Thomas Bay power sites more probable with the result being more reliable power for Petersburg and southeast Alaska; and

Whereas, contrary to the statements made in the Tongass Land Management Plan revision, the worth of the power site withdrawals at Thomas Bay is undiminished to Petersburg, Wrangell and now the balance of southeast Alaska; and

Whereas, an electrical intertie from the Swan Lake Hydroelectric facility near Ketchikan to the Tyee Hydroelectric facility is currently in the preliminary design process; and

Whereas, the Eagle River Valley on the Cleveland Peninsula has been identified as the most desired route; and

Whereas, the U.S. Forest Service may recommend to include the Eagle River in the National Wild and Scenic River System as a Scenic River; and

Whereas, historically there is a well founded concern that such a designation, if applied, would be too restrictive and would heighten the impression that the area is more valuable in its present state, adding mitigating factors which translate into increased costs for the overall transmission line between the

Tyee Hydroelectric Facility and Ketchikan by that potentially threatening the economic viability of the proposed electrical intertie.

Therefore, Be It Resolved by the City Council of the City of Petersburg, Alaska:

1. That the City of Petersburg supports the continued federal power site designations at Cascade Creek and Scenery Creek in Thomas Bay and urges the Forest Service to maintain these designations.

2. That the City of Petersburg supports the utility corridors which the State of Alaska and related federal agencies have identified for southeast Alaska.

3. That the City of Petersburg strongly recommend that the Forest Service should not designate the Eagle River on the Cleveland Peninsula as a Wild & Scenic River in the Tongass Land Management Plan revision.

4. That copies of this resolution be sent to the Honorable Dale Robertson, U.S. Dept. of Agriculture; Mike Barton, U.S. Forest Service, Tongass National Forest; Ted Stevens, U.S. Senate, Frank Murkowski, U.S. Senate; Don Young, U.S. Representative; Lloyd Jones, Alaska State Senate, Robin Taylor, Alaska House of Representatives; Cheri Davis, Alaska House of Representatives; and the communities of Wrangell, Ketchikan, Kake, Sitka and Juneau.

Passed and Approved by the City Council of the City of Petersburg, Alaska this 18 day of November 1991.

Mayor

ATTEST:

City Clerk

006347 PHP

ALASKA STATE LEGISLATURE

Representative Gail Phillips

November 25, 1991

Mr. Mike Barton, Regional Forester
U.S. Forest Service
P.O. Box 21628
Juneau, AK 99802-1628

Dear Mr. Barton:

This letter is to convey my strong support for the Alaska Forest Association's position on the Tongass National Forest. I believe that the best and most prudent management is that which is based upon sustained yield multiple use principles. Alaska is touted as a resource-rich state, but if those resources cannot be harvested, extracted, or utilitized by our people, then in fact, we are not resource-rich, but instead resource-poor.

This is of significant concern when one considers that the Federal government owns or controls over sixty percent (60%) of land in Alaska. If economic development of our resources is prohibited, Alaska could be faced with economic devastation once Prudhoe Bay is depleted. Forty percent (40%) of the Tongass has already been set aside as Wilderness, off-limits to development. With this much of the forest already designated to be maintained in pristine unusable status, the remaining areas should be classified to allow timber harvest and multi-disciplined recreation activities. This will not only promote a healthy forest but a healthy community as well. One must remember that the timber industry is the mainstay of southeast Alaska. If that industry is strangled to extinction, not only the residents of southeast Alaska who rely on these resources surely be the losers, but also all the residents of Alaska.

Thank you for the opportunity to be heard.

Sincerely,

Gail Phillips

GAIL PHILLIPS
Representative

L-356

GP/mk

006345 PPB

OFFICE OF THE MAYOR
KETCHIKAN GATEWAY BOROUGH

344 FRONT STREET
KETCHIKAN, ALASKA 99901
(907) 228-6605

November 25, 1991

Michael A. Barton, Regional Forester
Forest Service
U.S. Department of Agriculture
P.O. Box 21628
Juneau, Alaska 99802-1628

RECEIVED
NOV 26 1991

RE: Tongass Land Management Plan Revision

Dear Mr. Barton:

At the request of the Ketchikan Gateway Borough Assembly, I am forwarding this letter in response to the U.S. Forest Service request for comments on the supplement to the DEIS on the Tongass Land Management Plan Revision. The Borough Assembly, representing the Ketchikan Gateway Borough, prefers an alternative that would support the following concerns:

Of primary concern to the Borough is that the mandate set forth by Congress with the passage of the Tongass Timber Reform Act, to manage the forest to meet the demands of the market place, be upheld. Of concern to the Borough is that the economic base supplied by the timber industry not be eroded to the point of being a detriment to the community. The timber industry continues to be a major source of employment within the Borough. This industrial classification employs roughly twenty percent (20%) of the total labor force within the Borough, with both direct and indirect employment. Any major shift towards less employment within this industrial category will have profound and devastating effects upon the local economy. The Borough Assembly, and the community as a whole, continues to support the timber industry as a major source of community employment. For these reasons the Borough Assembly supports an alternative that will provide an allowable sale guarantee that will sustain the existing forest industry with no loss of jobs.

An additional concern of the Borough is its specific interest in the development of an inter-island and intra-island road system. The development of this type of a road system will require that a portion of this system be built upon U.S. Forest Service lands. The development of this type of a road system, as well as a utility corridor for the linkage of the Swan Lake to Tyee Lake hydro

electric facilities, is presently on the drawing boards. The land use designations within the Tongass Land Management Plan (TLMP) should be revised to reflect appropriate land uses for the development of these corridors, and the TLMP maps should also reflect the existence of these corridors. At the present time the proposed corridors are designated as Primitive Recreation within the preferred alternative land use section. It is requested that these land use designations, within and adjoining these corridors, be reclassified as Scenic Viewshed, or at least Semiprimitive Recreation. The reclassification of the land use designations within these corridors will allow for a compatible land use that will expedite the development plans for the entire region.

The U.S. Forest Service has been made aware of the desires of the people of Ketchikan to acquire more roaded recreation and transportation access to other areas of Revillagigedo Island, and the need for the connection of the hydro electric facilities of Swan Lake and Tyee Lake. It is requested that the U.S. Forest Service work closely with the State Department of Transportation and Public Facilities, the Alaska Energy Authority, and the local communities to identify these project areas and then classify these areas in ways which will avoid unnecessary restrictions to their potential development.

The Ketchikan Gateway Borough Assembly, and I, would like to thank you for this opportunity to comment on the Tongass Land Management Plan Revision. We will follow the progress of this plan, and in particular our requested revisions, with great interest. If we can provide any further comment, or clarify our present comments, please feel free to contact me at the above address.

Sincerely,

Ralph Bartholomew, Mayor

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

006362

November 27, 1991

Steven Brink, Forest Plan Team Leader
USDA Forest Service
Tongass National Forest
8465 Old Dairy Road
Juneau, Alaska 99801

Re: Revised Tongass Land Management Plan

Dear Mr. Brink:

The National Marine Fisheries Service (NMFS) Alaska Region has reviewed the USDA Forest Service Tongass Land Management Plan Revision Supplement to the Draft Environmental Impact Statement (DEIS). We focused our current review efforts on the Forest-wide Standards and Guidelines, and the Monitoring and Evaluation section. These comments should be appended to our comments of December 19, 1990, (copy enclosed) and considered together prior to preparation of the Final Forest Plan and FEIS.

We think presenting the Forest Plan separate from the DEIS is a positive move. Given the weight of the environmental document, it is convenient to have the forest management plan separated from the rest of the material. The two-step planning process (Chapter 5 of the Forest Plan) appears reasonable from an implementation standpoint. It is not clear, however, how cumulative environmental impacts will ever be assessed. The Forest Plan contains only a conceptual summary of environmental impacts and site-specific plans occur at another time on a lower level in the environmental analysis hierarchy; hence actual cumulative impacts are not likely to be aggregated.

The concept of designating 'experimental forests' to conduct manipulative research remains valid. In particular, there remain many unknowns about outer boundaries of buffer zone location, windthrow, and the impacts of windthrow on riparian habitat (See April 1991 letter from Alaska Cooperative Working Group on Forestry/Fisheries). The current management scenario contains two experimental forests -- Maybeso Creek on Prince of Wales Island and Young Bay on Admiralty Island. Neither contain vegetative characteristics that lend themselves to experimental

timber harvest or vegetative treatments, therefore, are not useful to buffer zone research. We think the Forest Service should pursue designation of additional watersheds within the Tongass that could be used for buffer zone research.

The fish habitat improvement projects listed in the Proposed Forest Plan (pages 2-19 through 2-28) reflect divergent views. We looked particularly at projects that might restore riparian habitat impacted by timber harvest. The types of projects and acres involved vary between administrative areas and are different from Summary Table 3-35 on page 3-104 of the Supplemental DEIS. For example, Chatham Area lists the items: large woody debris (LWD) habitat development, watershed improvement, and brush habitat development (50 acres). Stikine Area used the terms: LWD habitat development, riparian vegetation management, LWD rehabilitation, and king salmon habitat rehabilitation (76 acres). Ketchikan Area used the terms: LWD rehabilitation, LWD/gabian placement (and replacement), LWD placement, LWD enhancement, rearing habitat, stream rehabilitation, and instream rehabilitation/gabian placement (566 acres). Such different terms and areas affected conveys a lack of standardization from the start. We recommend future fisheries/watershed meetings discuss this with the objective of reducing guesswork in these lists.

We recommend another thrust be added to the Fish Habitat Inventory (FISH111 Page 4-20 on the Proposed Revised Forest Plan). As impacts on riparian habitat during timber harvest are being minimized, stream restoration and second-growth management are becoming larger issues. Addressing those issues requires comprehensive data on the locations of past timber harvests in watersheds with Class I, II, and III streams. Therefore, harvest data by geographic location need to be systematically surveyed, compared to existing geographic information system (GIS) harvest data, and where new information is found the GIS should be corrected. Because depletion of LWD is a key issue, these data should contain sufficient resolution to distinguish whether: (1) trees were harvested to the streambank, or (2) the stream was buffered, and if so, the minimum width of the buffer. We think these data should be obtained from aerial photos and ground surveys.

We noted differences between Stream Process Groups listed on Page 4-20 (FISH112 of the Proposed Revised Forest Plan) and Table D-1 in the Appendix. There is no equivalent summary in the Alaska Region's Aquatic Habitat Management Handbook (June 1986). We also understand the code system for channel types is being changed. Is the Handbook going to be amended or do the changes that appear in the Forest Plan supersede the Handbook? This process is confusing. We recommend the Forest Service publish techniques for stream survey and channel classification systems in the public domain and reference them in planning documents.

We disagree with stating an objective to improve water temperature at a level to optimize salmonid populations (Page 4-20 of the Proposed Revised Forest Plan). Maintaining water temperatures at levels determined by climate and the natural watershed characteristics is enough for an objective. Although the canopy over a stream can be manipulated through harvest to result in higher water temperatures in the summer, there are associated colder water temperatures in the winter that have negative impacts on rearing fish populations. The removal of canopy trees also reduces recruitment of LWD that further reduces available habitat.

The Forest-wide standards & guidelines for Steller sea lion habitats (page 4-68 of the Proposed Revised Forest Plan) provide for the protection and maintenance of Steller sea lion habitats. Item number 2. in the guidelines (distances for maintaining habitats and reducing human disturbance) says "facilities, camps, LTF's, campgrounds and other developments should be located 1 mile from known haul outs, and farther if the development is large." We recommend the guidelines also prohibit location of timber harvest units within one mile of sea lion haulouts. Our rationale is that the process of timber harvesting (falling, bucking, yarding, hauling) and secondary management activities associated with monitoring and managing second growth, are potentially disruptive to sea lion use of a haulout, therefore maximum minimization of impact would be to avoid the harvest initially.

The GIS information on Steller sea lion haulouts the TLMP team collected has not been included in this document. A list of Steller sea lion rookeries and haulouts within southeast Alaska is enclosed. We suggest incorporation of these data into the Forest Service WILD-HAB GIS layer.

Page 4-68 of the Proposed Revised Forest Plan contains guidance for activities around whales. Subsequent to the TLMP Revision meetings, national regulations for approaching marine mammals have been drafted by the NMFS. The Forest Service guidelines are both more conservative and different from the NMFS national regulations which may complicate public information and enforcement activities. Although our proposed regulations have not yet been published, you may wish to consider incorporating them rather than establish different guidelines. The proposed Rule is in final draft stage, scheduled for publication in the Federal Register in February or March 1992. We will forward a copy as soon as it is available.

On page 6-31 of the Proposed Revised Forest Plan the monitoring question, "Are fish & riparian guidelines being implemented as described in the Forest Plan?" is presented and discussed. We disagree with the rating of "low" for the likelihood of error.

We agree the standards and guidelines for activities that could most directly affect fish production in riparian areas are clearly defined, however, words can only go so far. Application leaves room for subjectivity that results in waves and pockets of inconsistency.

To achieve and maintain uniform application of standards and guidelines requires: (1) extensive field experience throughout the varying riparian habitats in the Tongass and (2) thorough eyeball calibration sessions between biologists charged with implementation. In other words, a large element of skill is associated with recognition, appreciation, and description of fish habitat; explicit written definitions and guidelines will not yield consistency without a common foundation of understanding. Specialists implementing the standards and guidelines are unequally experienced and interpret words and terms differently. During our field trips with the Forest Service we have been quite impressed with the frequency and magnitude of inconsistent application of what appears, on paper, to be quite clearly defined. We have observed interesting pockets of inconsistent guideline application that can be traced to individual interpretation.

Because of the inherent subjectivity of the standards and guidelines, we think the likelihood of error should be rated high and the associated risk index rated high. We see this as more than a paper exercise. Our reasoning is that by labeling risk as high, there will be a continuation of management leveling processes (specifically: management reviews on riparian topics and workshops where biologists get opportunities to interact with each other). The value of these sessions is the learning that occurs as specialists explore differences and develop common understandings of terms. We also think the high risk designation will be associated with increased priority to fund management reviews, training sessions, temporary duty assignments, and other skill building opportunities.

The estimated annual cost of obtaining the monitoring data seriously underestimates the actual cost. If 20 percent of the units cut[1] were sampled, it will take more than six GS-9s 15 days to collect the information. Further, we doubt a sample size of 20 percent is adequate to evaluate the hypothesis that fish & riparian standards and guidelines are being implemented. There is considerable variation within and between units. For valid results, these variances need to be determined and factored into the equation to determine an adequate sample size.

---

[1] Assume an average of 100 cutting units per year per area for a total of 300 cutting units. Twenty percent of 300 is 60.

We do not think it is valid to analyze implementation of standards and guidelines for road crossing and habitat enhancement projects in the same study as timber harvest units. These projects are quite different in scope and effect. Lumping them into the same study is comparable to pressing apples, oranges, and bananas, and then drawing conclusions about juice content. We think projects should be categorized according to whether they are for purposes of timber harvest, habitat restoration, or stream crossing, then analyzed for compliance with standards and guidelines.

Appendix B of the Proposed Revised Forest Plan contains a section on information needs for fish. We agree it is necessary to maintain channel type and stream class inventories. Conceptual information may be adequate for broad planning purposes, however actual site-specific information is essential to refine planning further and implement projects. We are aware that as projects are implemented and information is obtained from field work, a great number of discrepancies between planning level and site-specific information are found. It is important to develop a system to update the appropriate layers in the Forest Service GIS with the more accurate information.

In conclusion, we think the Supplement to the Draft Environmental Impact Statement for the Tongass Land Management Plan Revision adequately incorporates the fish habitat protective conditions of the Tongass Timber Reform Act. We remain available to attend planning sessions, participate in management reviews, and otherwise assist in implementation of the Plan. If you have any questions about these comments please contact Tamra Faris at (907) 586-7235.

Sincerely,

Steven Pennoyer

Steven Pennoyer
Director, Alaska Region

006362

National Marine Fisheries Service
November 1991

Southeast Alaska Steller Sea Lion Haulout Locations

Site	Latitude	Longitude			
Benjamin Island	58°33'5"N	134°54'5"W			
Biali Rock	56°43'0"N	135°20'5"W			
Biorka Island	56°51'0"N	135°32'0"W			
Cape Addington	55°26'5"N	133°48'5"W			
Cape Bingham	58°05'5"N	136°32'0"W			
Cape Cross	57°55'5"N	136°33'0"W			
Cape Ommaney	56°09'5"N	134°39'5"W			
Coronation Island	55°49'5"N	134°16'5"W			
Forrester	54°51'0"N	133°32'0"W	to	54°52'5"N	133°35'5"W
Graves Rock	57°14'5"N	136°45'5"W			
Grindle Island	55°26'5"N	132°07'5"W			
Hazy	55°52'0"N	134°34'0"W	to	55°51'5"N	134°35'0"W
Inian Island	58°15'0"N	136°20'0"W			
Jacob Rock	56°43'5"N	135°23'5"W			
Lull Point	57°18'0"N	135°48'5"W			
Met Pt. (Lynn Canal)	58°20'0"N	134°54'0"W			
Pinta Rocks	57°05'0"N	134°00'0"W			
Round Rock	57°16'5"N	133°52'5"W			
Sea Lion Island	57°17'0"N	135°52'5"W			
St. Lazaria Island	56°59'5"N	135°43'0"W			
Stephens Passage	58°08'0"N	134°10'0"W			
Sunset Island	57°30'5"N	133°35'0"W			
Tenakee Cannery Pt.	57°46'4"N	135°04'0"W			
The Brothers	57°17'5"N	133°50'0"W			
The Sisters	58°10'3"N	135°15'5"W			
Timbered Island	55°42'0"N	133°48'0"W			
Turnabout Island	57°08'0"N	133°59'0"W			
White Sisters	57°38'0"N	136°15'5"W			
Wolf Rock	55°01'2"N	133°29'2"W			
Yasha Island	56°58'0"N	134°33'5"W			

City of Tenakee Springs

006339

RESOLUTION 92-12

In the Council
November 30, 1991

Introduced by the
Council President

A RESOLUTION FOR THE CITY OF TENAKEE SPRINGS, ALASKA
ADOPTING COMMENTS ON THE TONGASS LAND MANAGEMENT PLAN REVISION
SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

WHEREAS, the USDA Forest Service has solicited public comment regarding the proposed Tongass Land Management Plan Revision Supplement to the Draft Environmental Impact Statement; and

WHEREAS, the city and residents of Tenakee Springs, Alaska are directly affected by the management decisions of the USDA Forest Service; and

WHEREAS, it is the right and responsibility of the city and residents of Tenakee Springs, Alaska to participate in USDA Forest Service planning and management decisions pertaining to the Tongass National Forest;

THEREFORE BE IT RESOLVED that the Common Council of the City of Tenakee Springs, Alaska hereby adopts the attached statement of comments as the city's response to the Tongass Land Management Plan Revision Supplement to the Draft Environmental Impact Statement

ADOPTED 6 YES, 1 ABSENT THIS 30TH DAY OF NOVEMBER 1991

Edna Paddock
Edna Paddock
City Council President
ex officio MAYOR

ATTEST:
Janice J. Eagle
Janice J. Eagle
City Clerk

CITY OF TENAKEE SPRINGS

EDNA PADDOCK
MAYOR

ADMINISTRATION
(907) 736-2221

006339

The Tongass Land Management Plan Revision Supplement to the Draft Environmental Impact Statement is a massive document, with four volumes each the size of a Seattle phone book, and a sheaf of enormous complicated maps. The planning decisions the Forest Service will make following the comment period will shape the future of the Tongass National Forest and directly affect residents of Tenakee Springs.

The TLMP Revision Supplement Draft EIS was released at the end of August 1991. The sole opportunity for public oral comment in Tenakee was scheduled for September 23. A professional working full time could hardly be expected to review this huge document and produce comments in three weeks. Local people with their own lives to attend to cannot drop everything to decipher thousands of pages of Forest Service jargon, particularly since this document was released at the busiest time of the year for subsistence and commercial fishing activities. Could anyone live in Southeast Alaska and not be aware of the schedule for halibut openings, and the intense time pressure on the fishing fleet during the first two weeks of September this year? It is hard to believe that the Forest Service did not deliberately schedule the abbreviated comment opportunity in order to diminish participation by individuals with concerns that conflict with continued emphasis on large scale clearcutting and road construction.

To make matters worse, neither the City of Tenakee, the City library, the local Fish and Game Advisory Board, or individual Tenakee residents even recieved the document until mid-September. The City of Tenakee Springs did not recieve a copy until September 21, two days before the hearing.

TENAKEE INLET

People with strong ties to a specific area approach a regional document by first examining the implications for the places they know and depend on. What will happen to Tenakee Inlet under the Forest Service Preferred Alternative?

Except the two VCU's where Congress forced the Forest Service to preclude clearcutting, every square inch of Tongass land in Tenakee Inlet is dedicated to timber harvest. The map colors of green, yellow and brown all permit clearcutting. Yellow and brown provide for a beach fringe to protect esthetic values, which is little consolation to the fish and wildlife whose habitat is behind the screen. Green is no-holds-barred clearcutting.

Congress gave the Forest Service a clear order to establish genuine multiple use in the Tongass. It appears that message has been ignored.

L-366

POST OFFICE BOX 52

TENAKEE SPRINGS, ALASKA 99841

The watersheds that drain into Tenakee Inlet comprise a very large area. Two areas, Trap Bay and Kadashan, are protected from clearcutting by the Tongass Timber Reform Act. The Forest Service has evidently decided that any area not protected by legislation can be handed over to the pulp industry. Nothing could be farther from the true intent of the Tongass Timber Reform Act. The Forest Service was given specific directions to re-examine its approach to Tongass management, and to comply with a philosophy of genuine multiple use in keeping with the National Forest Management Act.

Representative George Miller, now chairman of the House Interior Committee, made the intent of the Tongass Timber Reform Act clear in this statement in the Congressional Record: "the Forest Service is directed to seek to meet market demand for timber to the extent consistent with providing for multiple use and sustained yield of all renewable forest resources. Included within the scope of "renewable forest resources" is fish and wildlife habitat. This language requires the Forest Service to meet the needs of resource based industries other than timber - including commercial fishing, sport hunting, sport fishing, and tourism - and provide for non-commodity uses of forest resources for subsistence and recreation." Representative Miller also stated: "The net effect of section 705(a) as amended, is to assure Tongass planning and management does not give timber harvest priority over other uses of the national forest. Given the overwhelming sense of Congress that the Forest Service has mismanaged the Tongass, the burden is now on the agency to prove that it can be responsive to the changing public views of how - and for what purposes - this forest should be managed. The era of preferential treatment for a single commodity, timber, is over."

Throughout the Tongass Timber Reform Act debate the City of Tenakee Springs was consistent supporting bills that recommended the areas known as Seal Bay, Long Bay and Goose Flats (as well as Kadashan and Trap Bay) be given permanent protection. (See City of Tenakee Springs Resolutions #'s 90-08, 89-11, 88-20, and 88-13, attached). Legislation protecting those areas passed the U.S. House Of Representatives by an overwhelming majority - TWICE! The fact that were not included in the final conference committee bill in no way diminishes their value, or the responsibility of the Forest Service to address concerns beyond the immediate, short term gain of APC.

The City of Tenakee Springs recommends that at least VCU's 225 (Seal Bay), 226 (Long Bay), and 228-229 (Goose Flats) be assigned the strongest protective designations in the TLMP revision. Singling out these areas is not meant to imply that other areas are without worth, but in light of the legislative history it is inconcievable that the Forest Service can ignore

their exceptional value to fish, wildlife, subsistence, and recreation.

Taxpayers throughout the U.S. are rebelling against subsidizing the timber industry with below-cost sales. Despite claims that the Tongass is now making money, analysis by Randall O'Toole of the Cascade Holistic Economic Consultants has revealed that Forest Service accounting practices are extremely misleading. For example, the cost of building roads is borne by taxpayers. We pay in the form of purchaser credits against the already low price of Tongass timber. When the Forest Service calculates whether the Tongass is making a profit, the cost of construction is counted as a profit while the purchaser credits are not counted as expense. Also, the FORPLAN computer model assumes that in the next twenty years Tongass timber will sell for an average of $190 per thousand board feet, or more than four times the average price of $44 per thousand paid 1988-1990. TLMP uses a price of $90 per thousand. This sort of creative accounting may serve to temporarily baffle the public, but we're not dumb enough to let it go on indefinitely.

The TLMP Revision claims that the preferred alternative's timber program will earn a net profit of $3 million per year. According to Mr. O'Toole, when timber price projections are set at a realistic level and road-building expenses are counted, the program will actually lose more than $27 million per year. Every alternative considered in the EIS will lose at least $21 million per year. This is borne out by the fact that appropriations for timber related Tongass costs in 1990 were over $32 million. The knowledge that federal dollars are being poured into the wasteful misuse of national resources is very annoying to taxpayers no matter where they live.

We can think of many better ways to spend $30 million dollars a year, ways that would provide employment without damaging fish and wildlife habitat. Loggers could be put to work thinning old clearcuts, or building recreation trails and cabins to enhance Southeast's growing tourist industry. Incentives and grants could encourage development of value-added products, and industries that utilize Tongass resources at a sustainable rate and with genuine profits. It is demeaning to imply that loggers are incapable of doing anything but working in the current industry.

Tenakee is not opposed to all logging, rather to the scale and speed of what is occurring and what is proposed. Our goal is a sustainable, diverse economy with emphasis on subsistence and local enterprise. Tenakee's way of life and economy are tied to the forest ecosystem in many ways. Residents of Tenakee (and the many non-residents who come here to vacation, hunt and fish) will not accept the premise that their future is subordinate to the short term profits of the pulp industry.

The next section of these comments will address specific issues of concern to Tenakee, which are particularily relevant to the need to provide protection for all rich estuarine areas such as Seal Bay, Long Bay, and Goose Flats.

DEER

There is no longer any question about the critical relationship between deer populations and high volume old growth winter habitat. Study after study has shown that deer must have the protected forage only available in high volume old growth to survive deep snow winters. Other studies have shown that the nutritional quality of deer forage plants in old growth is higher than the same species grown in clearcuts. Captive deer will select vegetation from old growth over the same types collected in clearcuts.

The ADF&G Division of Wildlife Conservation recently published a "Strategic Plan for Management of Deer in Southeast Alaska". The Tenakee Inlet watershed is described in two components: NE Chichagof Island (with WAA 3526 the north shore of the Inlet) and the south shore.

Deer futures look grim on Northeast Chichagof. Page 4-27 states under Habitat Characteristics: "Original habitat quality was excellent. However, extensive logging has occurred and substantial amounts of habitat have been lost. A large portion of WAA 3524, and areas in WAA's 3523 and 3526 are private or municipal lands. It is expected that all habitat on private lands will eventually be eliminated. In early 1991, only two stream drainages in the planning area remained mostly unlogged."

Since 1988 non-subsistence hunters have been subject to a reduced bag limit in this entire area. Analysis of Hunter access shows that: "Since 1987 this area has had the third highest annual total of hunters of all areas in southeast Alaska. Prior to 1986, hunter numbers here were high but not exceptionally so. Increased use coincides with the expanding of the road system as a result of extensive logging in the area."

Analysis of projected demand shows that "Demand exceeds or equals long-term habitat capability in all WAA's in the area. Mild winters have enabled deer populations to increase to levels well above apparent habitat capability throughout the 1980's allowing harvest to approach demand. As more-severe winters reduce deer populations to levels near long-term habitat capability, the ability of this area to provide for hunters' demands will

decrease. Bag limits and/or seasons may have to be reduced. Nonsubsistence hunters may continue to lose hunting opportunity."

Finally the ADF&G Population Objectives indicate that "Population objectives reflect the high demand for deer in all WAA's and the need to retain remaining habitat to provide deer for that demand in this popular area."

Analysis of the South Shore of Tenakee Inlet shows that more original winter habitat is still intact. Quality and condition are described as follows: "Habitat quality is generally low in the northern part of the area. The Kadashan drainage (WAA 3628) and part of Trap Bay (WAA 3627) have better habitat and were designated permanent LUD II areas by Congress. Elsewhere, logging is likely to occur in most stream valleys and shores of the inlet and its bays. Because these areas also have the best deer habitat, especially in the northern part of the planning area, long-term deer populations could decline significantly. Little logging has occurred in the area as yet except in Corner Bay (WAA 3627)."

Analysis of hunter use: "This area is hunted regularly by hunters from Juneau, Haines, and Tenakee Springs. Twenty percent of Haines hunting effort is in this area. Eight percent of Juneau hunters and over 30% of Tenakee Springs hunters hunt the south shore of Tenakee Inlet."

Even the current level of use is not sustainable as demonstrated by ADF&G demand analysis "Hunter demand already exceeds habitat capability in WAA 3629. Recent mild winters have allowed populations to exceed long-term capability and allowed harvest to approach demand. As deer populations decline to long-term levels hunters will have to shift their efforts to other areas. There is potential for Kadashan and Trap Bay to absorb more hunter effort and harvest, but if large habitat losses occur elsewhere in the area, hunters' options may be restricted in the future."

WAA 3629 includes Crab Bay, Saltery Bay, Seal Bay and Long Bay. WAA 3630 takes in Goose Flats and the remainder of the south shore.

Finally, ADF&G's population objectives reflect the reality that demand for hunting opportunities is going to increase. "Population objectives reflect the popularity of this area to a core of hunters from northern Southeast and the need to restrict habitat losses so that demand for deer can be met. In WAA 3627, the objective is to maintain the population at a minimum of 75% of pristine habitat capability to maintain options for both hunting and nonhunting users. The objective for the protected Kadashan drainage (WAA 3628) has been set equal to habitat capability. Because hunter demand exceeds habitat capability om

Equally important but often ignored is the vital topic of rearing habitat. Only pink and chum salmon go directly to sea after emerging from spawning gravel. Other species spend years in fresh water, with exacting requirements for survival and growth. Juvenile coho salmon rear in slow moving or still water, tiny tributaries, sloughs, beaver ponds and other areas sometimes a considerable distance from the main stream. The reasearch on juvenile coho at Kadashan clearly illustrates this principle, with extremely productive areas found in the beaver ponds at least 1/4 mile from the stream. The fact that research has not yet been undertaken in the riparian habitat of other bays does not mean that the same conditions do not exist! Disruption of these critical rearing areas spells doom for salmon stocks.

Other concerns about large scale clearcutting in watersheds affecting salmon streams include changes in sediment production and distribution, bed-load shifting, scouring, massive soil failures (landslides) and concern about the large scale hydrological changes that occur following extensive clearcutting. There is evidence that runoff may increase by as much as 40% after logging, or even more in combination with circumstances such as rain-on-snow. Increased flooding can have a dramatic negative affect on juvenile salmon.

There is also cause for concern about hydrologic changes in the other direction as clearcuts age. A 1981 study in Porcupine Creek on Etolin Island in Southeast Alaska concluded that once the clearcut watershed turned into rapidly growing second growth stand (more than 20 year old) stream flow may be less. In the long term, increased evapo-transpiration has the potential to reduce the minimum summer streamflow and exacerbate salmon kills, especially in times of summer drought.

It does not make sense to indulge the yen for short term profit of the pulp company at the expense of Southeast's (and Tenakee's) sustainable, locally based fishing industry and the rapidly growing tourism-sport fishing sector.

Seal Bay, Long Bay, and the rivers flowing into Goose Flat all support substantial runs of pink and chum and unmeasured quantities of coho, steelhead, and other species.

POT FISHERIES

In recent years there has been a resurgence of locally based fishing for shrimp and Dungeness crab in Tenakee Inlet. Most participants have been local people with a long term commitment to our community. These individuals are rightly concerned about the effects of log transfer facilities - with associated bark debris, fuel spills and other pollution - on the health of delicate estuarine ecosystems. Even more directly, there is an obvious conflict between shrimp and crab pot floats and log

barges. One local fisherman states that he lost a large quantity of expensive gear last winter, when weather caused a passing tugboat to pull into the Inlet and circle with its rafts of logs.

TOURISM

Tenakee is very popular as a vacation destination both with Alaskans and people from all over the world. An increasing percentage of the local economy is based on tourism in several forms. Last summer a young man who was born and raised in Tenakee had a very successful season as a professional guide, escorting sightseers with an emphasis on wildlife viewing.

In past years a Juneau outfitter ran very popular kayak trips from Hoonah to Tenakee, and contributed to the economy of both towns. Extensive clearcutting in Port Frederick reduced the desirability of that tour to the extent that it is no longer offered.

In the TLMP Revision, Recreation Visitor Days are judged to be equal whether the visitor is in a pristine remote location surrounded by wildlife, or camped in a clearcut on Prince of Wales road system. Local experience with tourists confirms that people come to Alaska to see the wildlife and wild country, not to admire large scale industrial sites.

The Forest Service should direct more of its budget to construction of recreation trails and cabins, thus providing employment and enhancing tourism.

VALUE-ADDED FOREST PRODUCTS

There is some truly extraordinary wood in the old growth of the Tongass. The Forest Service needs to acknowledge that those big old trees are not a renewable resource under any current management strategy and manage accordingly.

All trees are not created equal. Old growth lumber is generally tighter grained than second growth, indicating wood that is harder, stronger, less porous and more rot resistant. Rapidly growing second growth has wide growth rings and is much less valuable. Also, usable amounts of clear lumber can only be obtained from large diameter trees, usually no less than 30". According to USDA Technical Bulletin #412, Tongass second growth in the best growing sites may average about 18 inches in diameter after 100 years. Average growing conditions produce 100 year old trees averaging 13 inches in diameter.

The continued emphasis on rapidly converting any area not under lock and key to an even-age tree farm means that within a few decades there will not be any high quality Tongass timber available - unless we can buy some back from Japan.

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This situation is particularly painful in Tenakee where there is a need for local employment, a demand for value-added forest products that could be produced here, and a pool of talented individuals eager to build a small-scale sustainable economy. There are already individuals in Tenakee manufacturing musical instrument parts, musical instruments, small boats, and a variety of carving and other craft products. These efforts should be encouraged, and the forest managed in a manner that will allow future generations the same opportunity.

Small scale utilization of old growth timber needs to be tightly **defined. We want future cutting discussed in terms of** individual trees, not entire watersheds.

TRANSPORTION CORRIDOR MAP

The transportation corridors map is very puzzling, appearing as it does without a word of explanation. Disconcerting to Tenakee are the appearance of "corridors" connecting Tenakee and Hoonah and through the Kadashan watershed. Both of these highly controversial areas were addressed in the Tongass Timber Reform Act, and it is very hard to understand the purpose of this map. A road by any other name is still a road.

KADASHAN STUDY

It appears that the Forest Service hopes to substitute sections of TLMP for the Kadashan study required by Congress before considering about further road construction. This simply will not do! Examination of the Tongass Timber Reform Act makes the intent of Congress clear. Section 203. Kadashan Study states: "The Secretary shall complete, as part of the Tongass Land Management Plan revision process, in consultation with the State of Alaska Department of Fish and Game, the City of Tenakee Springs, and the public, a comprehensive study of the Kadashan LUD II Management Area as described in Sec. 201(4). The Secretary shall submit a **separate** report of such study to the Committee on Energy and Natural Resources in the Senate and the Committee on Interior and Insular Affairs in the House of Representatives, which shall include, but not be limited to: (a) an assessment of the natural, cultural, environmental, fish and wildlife (including habitat) resources and values of such area; and (b) an assessment of the need for, potential uses, alternatives to and environmental impacts of providing a transportation corridor route through the Kadashan River Valley."

Tenakee is still waiting for notification that this cooperative study effort has begun. For the TLMP record, however, Tenakee maintains its long-term position that construction of any road

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through the Kadashan watershed is utterly unnecessary and would cause irreparable harm to wildlife populations there.

WILD AND SCENIC RIVERS DESIGNATIONS

The City of Tenakee Springs recommends Wild River designations for the Kadashan River and the unnamed rivers flowing into Seal Bay, Long Bay and Goose Flats.

ROADLESS AREAS

The 217 pages of TLMP narrative titled "Roadless Areas" constitute another puzzle for the reviewer. The introduction states that Appendix C presents a description of areas that are "in an unroaded and essentially undeveloped condition" and comes up with a very large total number of unroaded acres.

Closer examination of the narrative, however, casts some doubt on the Forest Service definition of roadless. For example, people who know the area called "Pavlof-East Point" are well aware of the extensive cutting and road construction that has taken place there. The Forest Service's own narrative is contradictory, as illustrated by this quote from page C-122 "The natural integrity of the area has not been modified heavily by human activities. This area as a whole does not offer a high opportunity for solitude due to the Forest Service work center, road systems and logging camp, the population at Tenakee Springs, and the air and boat traffic."

Perhaps the acreage figures were derived by considering any ground not actually converted to a road bed as "roadless".

It is also impossible to resist pointing out that the description of Trap Bay on page C-114 still characterizes Tenakee Springs and Corner Bay as "nearby logging communities". The economy of Tenakee Springs is much more closely tied to fishing, tourism, and subsistence.

AIR AND WATER QUALITY

The sections on Air (page 3-7) and Water (3-429) strangely fail to mention any of the highly visible and well documented air and pollution problems at the Sitka pulp mill, which is certainly connected to the Forest Serivce preferred vision of the future of the Tongass.

SUMMARY

These comments do not attempt to address all the flaws and inadequacies of the TLMP Revision Draft Supplement EIS. However, the basic direction reccommended by Tenakee Springs is relatively

simple. All Tongass lands should be managed according to principles of genuine multiple use, with deference given to sustainable uses of resources. In particular, the areas known as Seal Bay, Long Bay, and Goose Flats should be assigned the category that provides the most protection for fish and wildlife habitat ("old growth" or "primitive recreation"). The Kadashan River and rivers flowing out of Seal Bay, Long Bay, and Goose Flats should be designated Wild and Scenic.

CITY OF KUPREANOF ALASKA

Post Office Box 50
Petersburg, Alaska 99833

December 1, 1991

Forest Plan Revision Team
8465 Old Dairy Road
Juneau, Ak 99801

Re: Comments on TLMP

To whom it may concern;

Thank you for the opportunity to make comments on the TLMP draft. This is a very critical document as it will affect our local environments for the next 10 - 15 years. This is a large part of the rest of our lives and those of our children.

We are opposed to road and powerline construction in the Kadashan area. This construction would directly harm the ititial intent that Congress tried to protect by designating Kadashan as a LUD II area under the Tongass Land Management Plan.

We strongly recommend that all mineral designations be removed from the plan. Mining companies already have access to free minerals under the 1872 mining law. Relaxed environmental standards should not be permitted to any group under any circumstances.

For the Baranof Warm Springs we recommend a primitive recreation statis. This pristine area will be lost forever if allowed further developement.

We are adamantly opposed to a road link from Petersburg to Kake through the Bohemia Mountain area. The communities of Kake and Kupreanof will be impacted to too great a degree. The native heritage and life style in Kake will be over-ridden by the road traffic from Petersburg. Hospital usage in Petersburg by Kake natives will be impossible by road. The distance and road conditions in summer and winter would prevent this. Air transportation in emergencies as it is now is far more feasible. The City of Kupreanof is a roadless community by ordinance. Terminating the link North of Kupreanof and ferrying to Petersburg from Fredrick Sound would not be feasible, therefore, bringing undue pressure on the City of Kupreanof residents lifestyles. An electrical intertie using the Bohemia Route has already been ruled out.

We recommend the Portage area be developed for footpath recreation only. It is close to the Petersburg area and would help to defray the heavy recreational use of Petersburg Creek.

Therefore, a primitive recreational use designation would be appropriate for this area.

The Duncan Salt Chuck area should be protected as stated in the Wild and Scenic Rivers Act of 1968.

We recommend that the Forest Service work with and abide by the local communities recommendations for identified susistence uses and areas.

We recommend that more trails be built for recreational uses rather than roads. Wheelchair accesible trails to accomodate the handicapped in a pristine setting is without question lacking.

Above all, full implementation of the Tongass Timber Reform Act must be maintained. The 100' minimum buffers along all salmon streams and resident fish streams must be maintained without exceptiion.

We feel that long-term timber contract reforms must balance the timber production with a real multiple use stewardship. We feel that timber harvests should no longer dominate or override the integrity of other resources and uses such as subsistence, wildlife, recreation and tourism.

Thank you again for working with the public to maintain our forests as the people want to see them maintained for todays use as well as tomorrows use.

Sincerely,

CITY OF KUPREANOF

Sharon B Sprague

Sharon B Sprague, Mayor

ALASKA STATE LEGISLATURE

006346

ELECTIVE DISTRICT 1
HYDER
KETCHIKAN
KUPREANOF
MEYERS CHUCK
PETERSBURG
SAXMAN
WRANGELL

HOME
P.O. BOX 5723
KETCHIKAN, AK 99901
PHONE 225-6304

DURING SESSION
P.O. BOX V
STATE CAPITOL BUILDING
JUNEAU, AK 99811
PHONE 465-3424

Representative Cheri L. Davis

December 4, 1991

Mr. Mike Barton
Regional Forester,
U.S. Department of Agriculture
P.O. Box 21628
Juneau, AK 99802

RECEIVED
DEC 06 1991
REGIONAL FORESTER
FOREST SERVICE
JUNEAU, ALASKA

Sent Via Fax To #586-7840

Dear Mike:

Thank you for giving me the chance to give you my view on the proposed revision to the Tongass Land Management Plan.

Two years ago I stood on the stage at the Ketchikan High School Auditorium, as I had stood years before that, and talked about the economic importance of the timber industry to our region. Today, not much has changed.

Last year, Congress passed the Tongass Timber Reform Act (TTRA) which stated in Section 705; "seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle." Neither the Preferred Alternative, or Alternative D meet this requirement. As I understand it, "historical usage" is used to calculate the estimates in these proposals. However, I do urge you to carefully evaluate the MMBF from private lands that you have assigned in this calculation, as well as the declining timber available in Canada, Washington and Oregon.

As evidenced by the Frosty Bay timber sale, areas that will be opening up for logging will be the targets of lawsuits by environmental groups. That lawsuit, when settled, resulted in a loss of 5 MMBF. I would imagine that as new areas are opened up for logging, these lawsuits will follow, possibly resulting in a reduction of available timber. Have you allowed for any contingencies for these possible reductions? Based upon the information I have received, a more realistic estimate for harvesting should be set at a minimum of 555 MMBF.

As the need for timber increases world-wide Alaska, with proper and fair land management, will continue to meet the market demand.

Sincerely,

Cheri

Cheri L. Davis
Alaska House of Representatives

L-378

006379

JUNEAU
ALASKA'S CAPITAL CITY

OFFICE OF THE MAYOR
CITY AND BOROUGH OF JUNEAU

December 5, 1991

Forest Service Revision Team
United States Forest Service
8465 Old Dairy Road
Juneau, AK 99801

SUBJECT: Tongass Land Use Management Plan (Revision)

Attention: Forest Plan Revision Team
Mr. Steve Brink

This letter serves as a reminder that the City and Borough of Juneau is on record, through Resolution No. 1368am adopted March 6, 1989 regarding management of the Tongass National Forest. A copy is attached for your reference. The resolution was the Assembly's attempt to express its views on a number of very important points and issues. The intent included our adamant opposition to permit moderate to intensive logging on the Mansfield Peninsula on Admiralty Island since local residents use this area for hunting and fishing while others have cabin use permits and legal mining claims.

Thank you for your consideration.

Sincerely,

Jamie Parsons
Mayor

JUNEAU
RANGER DISTRICT

DEC 16 '91

cc: Mike Barton
CBJ Assemblymembers

Attachments

JMP:dh

DISTRICT RANGER _____
DEPUTY RANGER _____
TLM _____
REC _____
F & W _____
BM _____
VIS _____

155 So. Seward St., Juneau, AK 99801 (907) 586-5257

Presented by: Assemblymember Campbell
Introduced: 03/06/89
Drafted by: M.G.C.

RESOLUTION OF THE CITY AND BOROUGH OF JUNEAU, ALASKA

Serial No. 1368am

A RESOLUTION ENDORSING, WITH CERTAIN AMENDMENTS, THE SOUTHEAST CONFERENCE POLICY POSITION ON MANAGEMENT OF THE TONGASS NATIONAL FOREST.

WHEREAS, the City and Borough of Juneau is located within the Tongass National Forest, and

WHEREAS, we, the residents of Juneau, like other people who live within the Tongass, depend on the resources of the forest for jobs in the timber, fishing, mining, tourism, and other industries, and

WHEREAS, we depend on the Tongass for recreation and for obtaining food through hunting and fishing, and

WHEREAS, proper management of the Tongass is essential to protect and enhance the use of our forest, and

WHEREAS, Congress is currently considering changes to the laws governing management of the Tongass National Forest, and

WHEREAS, the Tongass Committee of the Southeast Conference has developed a policy position representing neither the interests of the timber industry nor conservation advocacy groups, but instead the interests of Southeastern Alaska communities and the people who live and work within the Tongass, and

WHEREAS, the Assembly has reviewed and endorses the policy position with certain amendments set forth in this resolution;

NOW, THEREFORE, BE IT RESOLVED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU, ALASKA:

1. That the Assembly endorses the Southeast Conference's policy position on the Tongass National Forest dated February 21, 1989, with the amendments set forth in this resolution. A copy of the policy position is attached to this resolution and summarized in the following five points:

(a) Clarification of the mission of the National Forest in the Tongass to include an allowable harvest of up to 4.5 billion board feet per decade depending on market conditions and subject to multiple use values of the Tongass National Forest. (Maintain existing jobs in the forest while protecting fish and wildlife and their habitat.)

(b) Establishment of a specific intensive management fund to ensure that the U.S. Forest Service is able to make marginal timber stands viable sales for the industry and sustain other values.

(c) Setting aside 12 areas for protection due to the high values of fish and wildlife production in those areas.

(d) Providing for land trades, exchanges, or purchases of nonwilderness lands to increase the timber base for allowable harvest level (to include potential use of harvested land).

(e) Establishment of an economic diversification fund of grants and loans to provide opportunities to strengthen the Southeastern Alaska economy.

2. The Assembly adds the Mansfield Peninsula portion of Admiralty Island to the list of public lands within the Tongass National Forest that are designated as protected noncommercial timber areas, and urges the Southeast Conference to amend the policy position at page 9 to add the Mansfield Peninsula to Section 709(a)(1) of the Alaska National Interest Lands Conservation Act (ANILCA).

3. The Assembly amends the final sentence in Section 705(b)(2)(A) of ANILCA, at page 8 of the policy position, to read: "The report shall be prepared in consultation with the communities of Southeast Alaska." The Assembly urges the Southeast Conference to so amend the policy position.

4. The Assembly amends the final sentence in Section 709(a)(2) of ANILCA, at page 9 of the policy position, to read: "The report shall be prepared in consultation with the communities of Southeast Alaska." The Assembly urges the Southeast Conference to so amend the policy position.

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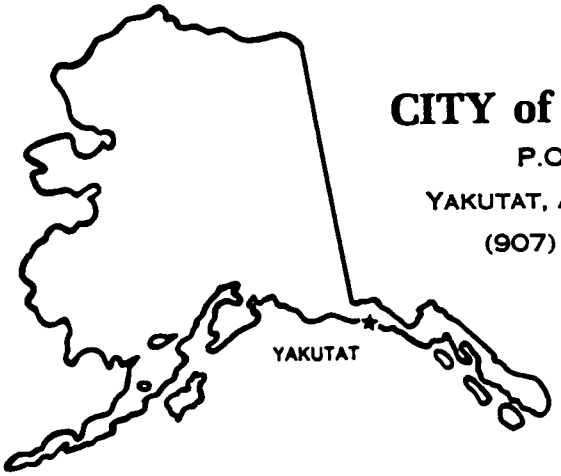

CITY of YAKUTAT

P.O. Box 6

YAKUTAT, ALASKA 99689

(907) 784-3323

December 5, 1991

Steven A. Brink
Forest Plan Team Leader
Forest Plan Revision Team
8465 Old Dairy Road
Juneau, Alaska 99801

Dear Mr. Brink:

The City of Yakutat has reviewed the latest revision of the Tongass Land Management Plan. The City has been involved in the TLMP planning process for some time. Numerous meetings have been held, involving much of the community. Therefore, the following comments and recommendations represent the consensus of the area residents for the management of the north Tongass Forest near Yakutat.

In March of 1988 the City of Yakutat developed a policy statement for the Yakutat Tongass. In February of 1990 this policy statement was revised, and passed as a resolution by the Yakutat City Council. This resolution is attached.

None of the alternatives offered in the latest revision meet the management goals the community has for the north Tongass. It is the policy of the City of Yakutat that fisheries values and fish habitat protection are of paramount importance on the Forelands, and first priority is assigned to the conservation of fish populations and habitat. The Forelands should be managed for Fish and Wildlife, Subsistence, and Visual resources. Small scale and personal use timber harvest should be permitted. Alternative A most closely meets these goals, yet it still needs modification. Specifically, provisions should be made for very small scale and personal use timber harvest.

All of the other alternatives offered include timber development. We realize that no cuts are identified in the north Tongass for this planning period. However, plans are known to change, and given a timber classification, development could be possible here. Our community has seen enough large scale timber harvest. The visitor industry is seriously compromised by clear cuts easily viewed from the road, reaching from town to the Situk and Dangerous Rivers. It will take fifty or more years to visually recover from ten years of harvesting. We have had enough, and want all large scale timber harvesting to end.

Tourism is recognized as an industry with important potential for growth which is compatible with the primary resource values and traditional use of the Forelands. In an effort to met this goal the City has been looking into having the Yakutat and Southern Railway designated as some type of historical monument. The Y&S Railway was a standard gauge railroad which ran between the cannery site on Monti Bay and the mouth of the Situk River, across municipal, state and federal lands. Some method of identifying the railroad right-of-way ought to be incorporated into TLMP and provisions made for its preservation.

We strongly believe that all rivers should be classified, and this classification process should take place separately from the TLMP process. Our community relies on the rivers of the region intensely as commercial fishing is the economic mainstay. The management of the rivers must be developed so as to met the needs of the people who rely on them for their livelihood. Therefore, the Wild, Scenic, or Recreation status should be withheld as a part of this planning process, until the community can be an intimate part of the planning for those rivers.

With the imminent closure of the Hubbard Glacier and overflow of Russell Lake, leading to the destruction of the Situk fishery, the Anklin River, Situk headwaters and spawning areas, must receive added protection and enhancement. The majority of Yakutat setnet permit holders (+/- 90%) fish the Situk at sometime during a fishing season. This translates into over 1.5 million dollars income average for the past four years. In 1988 over 2.2 million dollars was produced by the Situk alone.

The Anklin needs to be protected to off-set economic devastation resulting from the Situk overflow. Also, the spawning and rearing habitat of the lower Situk, from West Fork, will be lost. An extra effort needs to be made to maintain and enhance rearing and spawning habitat from the West Fork up to and including Situk Lake area.

In conclusion, none of the TLMP alternatives meets the goals that the community of Yakutat has developed for management of the North Tongass. This area cannot support any more large scale timber harvesting, and still maintain a viable commercial fishery and develop a strong visitor industry. These are incompatible activities. Alternative A most closely meets these goals, however, river classification must be a separate process from TLMP.

The City of Yakutat appreciates this opportunity to comment. We hope that you will take our recommendations into serious consideration.

Sincerely,

Larry Powell by BMC

Larry Powell, Mayor
City of Yakutat

attachment

CITY OF YAKUTAT, ALASKA 99689
RESOLUTION 90-8

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YAKUTAT MODIFYING THE CITY OF YAKUTAT'S POLICY STATEMENT FOR THE YAKUTAT FORELANDS.

WHEREAS; the Council has adopted basic policy recommendations for the Yakutat Forelands on March 8, 1988 and;

WHEREAS; the Yak-Tat Kwaan Corporation has adopted a resolution encompassing Forelands policy recommendations and;

WHEREAS; the two statements are essentially identical except for the question of road building and;

WHEREAS; it is in the community's best interest to have the City and the Yak-Tat Kwaan Inc. to be echoing a single position for pending Congressional action;

NOW THEREFORE BE IT RESOLVED; by the City Council for the City of Yakutat that the basic policy recommendations for the Forelands is modified to read as follows:

1. It is the policy of the City of Yakutat that fisheries values and fish habitat protection are of paramount importance on the Forelands, and first priority is assigned to the conservation of fish populations and habitat.

2. The Forelands should be managed for Fish and Wildlife, Subsistence, and Visual resources.

3. It is the policy of the City of Yakutat that commercial timber harvest and associated logging roads are prohibited east of the Dangerous River to the Alsek River.

4. Other roads will be allowed which are necessary to service established, as well as future, fishing, hunting, subsistence and tourism operations as they may develop.

5. It is the policy of the City of Yakutat that tourism is recognized as an industry with an important potential for growth which is compatible with the primary resource values and traditional use of the Forelands.

6. The management of the Situk River requires special attention and long term management planning agreed to earlier should be completed and implemented prior to the completion of the TLMP revision in 1989-90.

7. Although the community is specifically opposed to designation of additional "wilderness" on the Forelands, there is concern that the usual 10 year TLMP planning period is not sufficient protection for the items listed above. Therefore, it is recommended that the time frame for the land use designation ultimately given to those lands east of the Dangerous River transcend the usual TLMP planning period.

8. Officials from the City of Yakutat, Yak-Tat Kwaan Inc. and the Yakutat Fisheries organizations be instrumental in drawing boundary lines for any special management area designation on the Forelands.

PASSED AND APPROVED THIS DAY 20 OF February 1990.

Larry Powell
Mayor

ATTEST:

June Stockton
City Clerk

ALASKA STATE LEGISLATURE

006348

While in Ketchikan
352 Front Street
Ketchikan, AK 99901
907-225-9675

While in Juneau
P.O. Box V
Juneau, AK 99811
907-465-3743

Senator Lloyd Jones

December 6, 1991

Mike Barton
Regional Forester
U.S. Department of Agriculture
8465 Old Dairy Road
Juneau, Alaska 99801

Dear Mr. Barton:

I am entering this letter as further comment on the proposed revision to the Tongass Land Management Plan.

The timber industry in Southeast Alaska is as vital now to the overall economy of this region as it ever was. Representing 30-40% of the employment base in this region, the timber industry must remain not only viable, but healthy.

I know that projections used in developing the various alternatives in the recent proposed T-LMP revision utilized "historical usage" in arriving at harvest levels. Historical demand does not accurately reflect the changes that have taken effect in the market place, and therefore is not a good base on which to build your analysis. Declines in production from private lands as well as ongoing management decisions being made in Canada and the Western United States need to be taken into consideration. I believe a timber harvest level of 550 mmbf per year is the level we need to provide healthy economic opportunity.

In addition to the timber based economic considerations, I urge you to adequately address the transportation and utility corridor issues of this region. T-LMP must acknowledge these transportation and utility corridors and must not inhibit planning for future transportation and power transmission access. This consideration is as important as any other in developing an overall use plan for the Tongass. I refer you to the September 16 letter signed by myself and the two Representatives of District One regarding this issue.

In summary, I urge you to make adequate timber harvest levels attainable in the Tongass. This, along with the allowance for current and future transportation and utility corridor access will help insure a viable economy for Southeast Alaska into the next century.

Sincerely,

Lloyd Jones

Lloyd Jones
Alaska State Senate

L-388

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 3
To [redacted] | From [redacted]
Co. | Co.

WALTER J. HICKEL
GOVERNOR

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

006400

December 6, 1991

Mr. Michael A. Barton, Regional Forester
U.S.D.A. Forest Service, Alaska Region
709 West Ninth Street
Juneau, AK 99801

Dear Mr. Barton:

I must express my profound concern with the deficiencies in the SDEIS Tongass Management Plan Revision, as well as its underlying philosophy.

This work has been prepared without adequate regard for either the social or economic impacts of its provisions and conclusions on the people of Southeast Alaska. This is not acceptable. Therefore, I request a total restudy and rewrite of the SDEIS document because of its inadequate socio-economic assessment.

The Tongass National Forest and its resources of timber, fish and wildlife, mining, and tourism are the lifeblood of the economy of this region. Totalling 17 million acres, the Tongass covers 94 percent of the available land mass south of Glacier Bay National Park and Preserve. In contrast, only three to four percent of the area is made up of private land and ANCSA corporate lands.

Over the protests of Alaska's congressional delegation and a majority of the Alaskan people, the U.S. Congress has year after year placed more of the Tongass into restrictive land use designations. In fact, at this time, only ten percent of the Tongass, or 1.7 million acres, is available to support the operations of the forest products industry, the region's largest private employer.

And now, as written in the plan you are developing, the Forest Service proposes to further reduce this available timber base and put millions of acres into "Natural Setting" land use designations. These Natural Setting categories will also dramatically impede the growth of the emerging mining industry and threaten transportation and utility corridors, as well as roaded recreation opportunities. Because oil revenues will decline before the turn of the century, Alaska must diversify its economy, utilizing all the resources with which we have been blessed.

All we ask is the opportunity to harvest a sustainable resource in an environmentally sound manner. To this end, we request a supplement to the SDEIS that includes an alternative (D plus plus) that supports the current level of the timber industry. If this is not allowed, the responsibility for the loss of

hundreds, perhaps thousands of jobs in Southeast Alaska, the shutting down of saw mills, and perhaps one or more of the pulp mills will be on your hands. A large number of our smaller communities will become ghost towns, and the area will be reduced to subsistence fishing and seasonal tourism jobs.

One of the other great benefits to our people of the Tongass National Forest is the high mineralized nature of the geology of the area. It is inconceivable to those of us who live here that, through your planning process, only 185,500 acres are designated for mineral prescription out of the 17 million acre forest. Your preferred alternative would allow for exploration and possible development of only 13 of the 52 high potential mineral activity tracts as designated by the U.S. Bureau of Mines. In the areas not specifically prescribed for minerals, there should be a land designation which would not limit economic mineral exploration and development. The U.S.G.S. has determined that the mineral potential of the region's mineralized lands, if opened to mineral entry, has a value of $24.4 billion.

The re-emergence of mining as an economic force is critical as a source of new jobs in Southeast Alaska. Your study must include an analysis that shows the effects of high paying mining jobs which are averaging $44,600 in Southeast Alaska.

At Greens Creek on Admiralty Island, the U.S. Forest Service, working with the private sector, has proven the validity of environmentally sound mineral development in the Tongass National Forest. Such success should be rewarded with additional lands opened to mineral entry, not ignored and penalized as in your current draft.

We strongly support developing road access to Canada, roaded access within the region, and utility corridor opportunities. Under your preferred alternative, much of this access would be impossible, including the proposed Taku road connecting Juneau with Canada. Your preferred alternative also precludes from development the best site for new hydroelectric generation to support future needs of the region.

In the attached consolidated State position, you will find more detailed departmental comments on important Tongass planning issues. These were considered in the development of the State position. While we have concerns for the socio-economic consequences in Southeast Alaska, we must maintain a strong commitment to caring for the wildlife values, the beauty and the recreation opportunities enjoyed by our people and those who visit the region. Neither we nor the federal government can ignore effective multiple-use management of the Tongass National Forest which is crucial to the future of the

Southeast Alaska region and the very survival of the people and communities dependent upon the region's resources.

In conclusion, until the federal government rewrites this plan with consideration for the above-mentioned socio-economic realities, it is unacceptable. I offer you my assistance, and the assistance of the members of my cabinet and the talented professionals in our resource agencies, to work with you and your staff, not only in the necessary rewrite of your document, but in ongoing management and resolution of issues as they arise. We believe that this forest can be a pattern for the world in terms of resource development while also caring for its wide spectrum of values and multiple use.

The State of Alaska is prepared to exercise all of its legal prerogatives to protect its people and prevent the devastation of the communities of Southeast Alaska.

Sincerely,

Walter J. Hickel
Governor

c: Hon. Edward R. Madigan
Mr. Dale F. Robertson

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December 6, 1991

Mr. Michael A. Barton, Regional Forester
USDA, Forest Service
Alaska Region
709 W. 9th Street
Juneau, Alaska 99801

Dear Mr. Barton,

SUBJECT: State Position
Supplement to the Draft Environmental Impact Statement
Tongass Land Management Plan Revision
STATE I.D. NUMBER AK910906-01C

The State has reviewed the Supplement to the Draft Environmental Impact Statement (SDEIS) for the Tongass Land Management Plan (TLMP) revision. The State position was developed by the Division of Governmental Coordination with the Departments of Natural Resources (DNR), Fish and Game (DFG), Environmental Conservation (DEC), Commerce and Economic Development (DCED), Transportation and Public Facilities (DOTPF), and the Alaska Energy Authority (AEA). The State appreciates this opportunity to comment.

Our consolidated State position addresses the National Environmental Policy Act (NEPA) requirements and related issues and responsibilities pursuant to the Alaska National Interest Lands Conservation Act (ANILCA). This position includes a discussion of major forest plan issues including, timber supply, socio-economic consequences, fish and wildlife, and water quality. Also discussed are important issues of state concern including, jurisdictional concerns, land ownership, mining, State of Alaska Area Plans, transportation and utility corridors, state parks and community recreation areas, Wild and Scenic Rivers designation, and navigable waters. While the major issues and concerns are addressed in the State position, detailed page-

specific preliminary comments and recommendations have been appended in Enclosures 1-5. The enclosures contain page-specific comments, recommendations, and more detailed discussion of concerns on the TLMP summary volume, Forest Plan Revision volume, and the Supplemental Draft Environmental Impact Statement (SDEIS) volume. These materials, along with Enclosure 6, which contains original departmental comments, should not be viewed as part of the state position but were considered in formulating the State position on the SDEIS contained herein.

The State of Alaska looks forward to on-going participation with the Forest Service in the development of the Final EIS. To this end, we encourage opportunities for the cooperative interaction of the Forest Service with participating state agencies and their respective expertise in the optimization of competing resource uses on the Tongass. We recognize that the forest-wide TLMP is only part of the overall planning process on the Tongass and a cooperative approach must be fostered throughout all phases of planning and implementation. We further acknowledge that although the allowable sale quantity will be set by this plan, and land use prescriptions cannot be changed except by amendment to the final plan, the actual layout of harvest units within areas allocated to timber harvesting will be determined in subsequent project-level EA's and EIS's.

EXECUTIVE SUMMARY OF STATE POSITION

The State of Alaska strongly recommends that the Forest Service undertake a full restudy and rewrite of the SDEIS on the grounds of an inadequate socio-economic assessment. The economic impacts of the plan on all sectors of the southeast Alaska economy are understated and misrepresented. In the present form none of the alternatives is acceptable to the State. All of the alternatives displayed will result in negative impacts to the timber industry and communities throughout Southeast Alaska.

This document includes the official comments of the State. Major summary points and concerns are highlighted below;

* The State requests additional analysis which reclassifies tentatively suitable forest land in the Semi-Primitive and Primitive Land-Use Designations (LUDs) to the Moderate Development LUD.

* The State requests that the Forest Service undertake an additional alternative analysis (Alternative D++) and display the full effects of emphasizing an allowable sale quantity (ASQ) of 520 million board feet (mmbf) of net sawlog volume to support the current mill capacity on the Tongass National Forest.

current mill capacity on the Tongass National Forest.

3 * The SDEIS has not adequately analyzed and displayed the related economic impacts and effects of independent mill closures under each alternative.

4 * An accurate display of the ability or inability to meet current mill capacity, and the resulting socio-economic and resource effects is critical to this Tongass Plan revision.

5 * The State requests that the acreage allocated to the Minerals management prescription be increased to include all 52 identified Mineral Activity Tracts identified in the SDEIS.

6 * The Final EIS must place greater emphasis on the expansion of back country, roaded recreation, and facility oriented recreational opportunities on the Tongass to increase and diversify tourism in southeast Alaska.

7 * The SDEIS understates the adverse effects of all proposed alternatives on sport and subsistence hunters and anglers, commercial guides and outfitters, and commercial fishermen which are dependent on fish and wildlife resources.

8 * The State recommends the Forest Service undertake efforts to include in the FEIS, procedural standards and guidelines used for forest operations that occur within streamcourse buffers which ensure equivalent levels of protection as that required under the Alaska Forest Resources and Practices Act.

9 * The State recommends an additional alternative analysis be undertaken which seeks a balance between the diversity of communities and businesses dependent upon fish, wildlife, timber and minerals. This alternative analysis should display the full effects of protecting important fish and wildlife resources while ensuring sustained yield opportunities for the timber and mineral industries.

10 * In development of the final ASQ the Forest Service should evaluate and reconcile any differences to ensure that the forestwide Standards and Guidelines can be fully implemented and enforced while meeting the timber harvest objectives.

11 * The FEIS should fully disclose an explanation of the Forest Service interpretation and proposed TLMP implementation of the proportionality provision, Section 301 (c) (2) of the Tongass Timber Reform Act.

12 * The State maintains that in order to minimize adverse water quality impacts from future timber harvest activities as a result

of this plan, the Tongass Plan must ensure that water quality Best Management Practices (BMPs) are fully implemented and monitored for effectiveness.

* The SDEIS overstates the available ASQ for all alternatives due to the inclusion of acres that are encumbered by the State of Alaska pursuant to Section 6(a), Alaska Statehood Act and native corporation lands pursuant to the Alaska Native Claims Settlement Act (ANCSA).

* The FEIS should reference the Alaska Department of Natural Resources (DNR) Area Plans. These plans make site-specific decisions for managing State tide and submerged lands adjacent to national forest system lands. Efforts should be undertaken to ensure to the maximum extent practicable, that site-specific decisions on adjacent national forest system land will be consistent with state area plan designations.

* The Tongass Plan must recognize and preserve opportunities for regional transportation corridors, including developed road access to Canada, and the orderly, cost effective electrical generation and transmission for communities and load centers within the forest planning area.

* The SDEIS asserts the right to impose management restrictions in navigable rivers. The State maintains that navigable waters and their management are the responsibility of the State, not the Forest Service.

We believe that management of the tongass can be a pattern for the world in terms of resource development while also caring for its wide spectrum of values and multiple use. We offer the assistance of the state resource agencies and their talented professionals to work with you and your staff not only in the necessary rewrite of the SDEIS, but in ongoing management and resolution of issues as they arise.

INTRODUCTION

The influence of the Tongass National Forest on the Southeast Region and the State of Alaska is most simply and clearly illustrated by a description of its land and population base. The Tongass represents 17 million acres or 5 percent of the state. In terms of percentage of the land in southeast Alaska, south of Glacier Bay National Park and Preserve, the Tongass covers 94% of the available land mass. Private and ANCSA corporate lands comprise 3 percent of the remaining land. The principal non-government sector industries of Southeast Alaska are commercial fishing, forestry, tourism and mining. The forest

the 4,100 private sector jobs in the Southeast forest products industry were dependent on harvest in the Tongass. A significant portion of the 800 U.S. Forest Service jobs depend on the active management of the forest for commercial timber harvest.

In the region, there are two pulp mills, five sawmills, eighteen logging companies, about ten logging-related construction companies, and six towing companies, in addition to a variety of other timber industry related businesses. This economic infrastructure depends on the annual allowable cut from federal land as well as harvest on private land. An estimated 69,000 people or 12.5 percent of the statewide population reside in southeast Alaska and will be significantly impacted by final decisions as a result of the Tongass Land Management Plan revision.

Given this regional base, one of the most difficult issues which faced Congress during the ANILCA deliberations and the Tongass Timber Reform (TTRA) debate was to simultaneously satisfy the national desire for the protection of large acreages of wilderness in the Tongass National Forest while continuing to maintain employment in the existing timber industry which depends on federal timber supplies.

In both cases, the State of Alaska strongly supported Congress's affirmation of the Forest Service's long-standing social and economic objectives of creating and maintaining year-round employment and community stability based on the timber resources of the Tongass forest. The economies of Ketchikan, Sitka, Wrangell, and Petersburg have, in varying degrees over the past 35 years or more, been shaped by this federal policy.

Foremost, it is the State's strongest desire that the revised forest plan will continue to provide these economic opportunities and lead to a well balanced approach with regard to the resources and economy of southeast Alaska. One that will deliver jobs in the region; provide for sustained long-term economic growth in timber, fisheries, wildlife, mining and tourism; and maintain subsistence opportunities.

To ensure a balanced economy and sustained economic growth, the State supports the following economic sector objectives:

> **Timber:** Allow opportunities to provide a timber supply cap to meet regional mill capacity. The annual allowable sale quantity must, in accordance with TTRA, seek to meet market demand to the extent consistent with providing for multiple use and sustained yield of all renewable forest resources.
>
> **Fish and Wildlife:** Provide opportunities for the continued

growth of the region's recreational fish and wildlife based economy. In the development of final timber management objectives, seek to minimize the loss and long-term decline of identified high-value fish and wildlife habitat.

Mining: Provide opportunities for mineral exploration, development and production by, 1) increasing the acreage allocated to the mineral prescription to include all 52 identified Mineral Activity Tracts (as identified in the SDEIS Appendix Volume 1, Appendix J, p.8), and 2) reducing the higher costs of mining in other LUDs open to mineral entry.

Tourism: Seek to increase positive economic impacts from tourism by providing increased opportunities for forest-wide roaded recreation and creating new destination areas, trails and cabins for recreation and tourism.

Secondly, the State's objective is to ensure that the FEIS provides an accurate portrayal of the impacts of the chosen alternative on the people, resources, environment, and economy of the region. We are seriously committed to working with the Forest Service in the development of a final forest plan alternative and a management strategy to implement the plan for the next ten years which fairly balances the region's timber, fish, wildlife, mining, and tourism related economies, while ensuring a level of resource protection commensurate with environmentally sound land management practices. While some impact is unavoidable in pursuing timber harvest objectives, this impact must be consistent with the provisions of the revised TLMP, and applicable laws and regulations, including where appropriate, ANILCA, Alaska's Coastal Management Program, and the Alaska Forest Resources and Practices Act.

In order to develop a higher degree of reliability in the forest planning process, the State strongly recommends that the Forest Service continue to refine the technical databases and models upon which forest and project planning are based, including the timber type and vegetation maps, models of fish and wildlife habitats, Sitka black-tail deer habitat capability model, streamflow and water quality, and second-growth timber yields. Additional research and monitoring funds should be prioritized to improve the models having the most influence on forest and project planning decisions.

Finally, given these objectives, the State is extremely concerned that the SDEIS has not provided adequate effects analysis of each alternative to clearly depict the ultimate social, economic, environmental, and resource trade-offs to the public. Specific recommendations for the development of an improved FEIS are

included in the following major sections.

MAJOR ISSUES

TIMBER SUPPLY

The State holds a strong responsibility and commitment in protecting the economic and tax base of the dependent communities associated with the forest products industry throughout southeast Alaska. Furthermore, the State recognizes that the timber program on the Tongass National Forest is unique, considering the unusual economic and resource situation in Alaska and the size of the investments needed to maintain the timber supply program. No other factor can influence the long-term, sustained viability of the southeast Alaska economy so profoundly as the available quantity and quality of the Tongass timber supply.

The Tongass National Forest has a total acreage of 16,997,181 acres. From this total, 6,997,441 acres or 41 percent of the Tongass have been withdrawn by Congress for designated wilderness, national monuments, and legislated LUD II areas (commercial timber harvest prohibited), and includes additional administrative withdrawals for Experimental Forests, Municipal Watersheds, Research Natural Areas, and mandatory stream buffers (TLMP, pg. 3-343, Table 3-122). Within this total withdrawn area is 1,908,903 acres of productive old growth timber.

Another 7,438,179 acres or an additional 43 percent of the Tongass will not be managed for timber harvest because of non-forest and non-productive forest classifications, and includes productive forest not suitable for timber harvest, i.e. operational difficulty, location, etc. As a result, the actual discretionary acres that are available to the Forest Service for the development of alternatives is 2,561,561 acres of tentatively suitable forest land, or 15 percent of the Tongass National Forest. This acreage is further reduced by Forest Service national diraction and policy, and required Minimum Implementation Requirements that apply to all alternatives, resulting in an SDEIS preferred alternative with only 1.7 million acres of suitable lands scheduled for timber harvest. (TLMP Table 3-122)

The differences in available timber supply between the alternatives displayed in the SDEIS is in fact the acreage that is further withdrawn from timber harvest for old growth habitat, beach fringe, semi-primitive recreation, special interest areas,

and wild or scenic rivers (TLMP Table B-24).

With over 5 million acres of the Tongass dedicated to Wilderness, and an additional .7 million of Congressionally dedicated LUD II, the proposed designation of an additional 4+ million acres to primitive and semi primitive recreation in the preferred alternative is not sustainable with responsible multiple land use management of the Tongass. Increasing this allocation to 5.5 million acres in the "commodity emphasis" Alternative D is even more disconcerting. These spatial allocations produce severe restrictions to both the forest products and mining industries and related economies of the region, and threaten their long-term viability.

When tentatively suitable forest acres are withdrawn for such "Natural Setting" allocations the existing balance of multiple-use activity is shifted with the ASQ, number of jobs, and annual income decreasing while increasing the protection given to management indicator species (red squirrel, deer, marten, etc.). The State supports Forest Service efforts to meet multiple use objectives of the State's resources as mandated in the State of Alaska Constitution. **The State objects, however, to land management tradeoffs which reflect a <u>disproportionate</u> forest-wide allocation to " Natural Setting " at the expense of economic stability within the region.**

The State requests additional analysis which removes these administrative limitations and reclassifies tentatively suitable forest land in the Semi-Primitive and Primitive LUD's to the Moderate Development LUD. The State believes such allocation adjustments will provide far greater economic opportunities for timber, minerals, and collateral roaded recreational destinations while ensuring ample forest-wide wildland recreational opportunities. Through innovative and cooperative land use and development practices, and appropriate standards and guidelines revisions, the predominant character of most of these lands can be retained, except for the actual areas developed. A moderate development LUD will provide improved flexibility to yield a greater number of multiple use benefits during project-level planning. These multiple-use decisions are best determined during subsequent project specific NEPA reviews.

Of principal concern to the State, given the unyielding spatial allocations proposed in the SDEIS, are the decisive land-use constraints which far outweigh the opportunities for long-term viability of the regions forest products industry as we know it today. The FEIS must contain an alternative that provides for the potential of the southeast Alaskan economy and allows the timber industry to "seek to meet" projected market demand. **The State of Alaska requests that the Forest Service undertake this**

additional alternative analysis (Alternative D++) emphasizing an allowable sale quantity of 520 mmbf net sawlog volume which will support the current mill capacity on the Tongass National Forest, while providing opportunity to meet market demand throughout the decade. The Alternative D++ analysis should fully disclose the opportunities and constraints related to the difficult land use allocation decisions facing the Forest Service to meet current mill capacity. The analysis must fully disclose current market demand trends and forecasts regarding the demand for Tongass timber supply. If the final alternative selected in the FEIS provides a decadal timber supply to meet market demand based on stand-alone historical harvest data and results in an ASQ less than the current mill capacity infrastructure, the public and industry should be fully apprised of the resource and socio-economic effects of the decision.

The State's request for analysis of Alternative D++ is based on the failure of the SDEIS to display an alternative with sufficient analysis and consideration of the substantive factors which profoundly impact the present and forecasted short and long-term market demand in Alaska solid wood markets. The SDEIS reference documents regarding the historical interaction of timber supply and demand, on a stand-alone basis, are of limited value due to major changes that have occurred in the marketplace in the last two years. In accordance with Section 705(a) of the Tongass Timber Reform Act, the Forest Service is directed to "seek to meet market demand to the extent consistent with providing for multiple-use and sustained yield of all renewable forest resources." Based on the State of Alaska's review and analysis of the timber supply and demand relationships and forecasts, the SDEIS fails to display an alternative which provides an opportunity to "seek to meet market demand" over the decade. Our request for Alternative D++ analysis is further substantiated by our preliminary review which indicates that, during the ten-year planning period, the increased ASQ resulting from this alternative may result in some additional impacts on habitats while the commodity outputs would be substantial. The additional ASQ has the potential to provide 900 additional jobs per year and an increase in southeast Alaska income of over $37 million per year (SDEIS Table 2-23 and DOF-1, Enclosure 1). A comprehensive analysis and display of the full effects of Alternative D++ on the forest-wide resources, environment and the socio-economic base is required.

<u>Summary of Recommendations for Major SDEIS Timber Supply Issues that need to be adequately addressed in the FEIS</u>

1. The Forest Service must undertake an additional alternative analysis (Alternative D++) emphasizing an allowable sale quantity of 520 mmbf. This alternative should emphasize the opportunity

to meet market demand over the next decade and provide a timber supply to meet current mill capacity within the region. Recognizing that present net value (PNV) declines as you include additional marginal volume to upwardly adjust ASQ, the alternative analysis should display the point at which additional volume allocation shows significant PNV declines.

2. The additional alternative analysis should re-allocate tentatively suitable forest land in the " Semi-Primitive" and "Primitive recreation" LUDs to the " Moderate Development " LUD and display the full effects. The D++ analysis should retain the beach fringe and estuarine prescription.

3. The Forest Service should fully consider the industry's current capacity and the major supply and demand changes that have occurred in the market place in the past two years. Enclosure 1 contains additional discussion and information on timber industry capacity and future product demand.

4. The Forest Service should display the ASQ net of encumbered acres throughout the FEIS (see Land Ownership and ASQ comment, pp. 21-21 of this document).

5. That the Forest Service fully display both the effects analysis and the consequences that adoption of an ASQ less than 520 mmbf will have on the forest industry dependent communities within the Tongass.

SOCIO-ECONOMIC CONSEQUENCES

The analysis and disclosure of the socio-economic impacts of the proposed plan, as presented within the SDEIS, presents a grossly misleading picture of the likely economic consequences of the alternatives. The economic impacts of the plan on all sectors of the regional economy are understated or misrepresented throughout the document.

Forest Products Economy

The SDEIS accurately implies that management of the Tongass National Forest has been, and will continue to be closely tied to the issue of regional and community socio-economic development and structure. What the SDEIS has not confronted accurately and comprehensively are the effects of a limiting timber supply on timber related employment and the existing forest products infrastructure in Southeast Alaska.

Of major concern to the State is the fate of the independent

mills that is being decided by the plan. Yet, this serious and pending impact of mill closures programmed to occur under the preferred alternative is only briefly implied at the bottom of page 3-609:

> "Although there is some reduction in the available timber supply in Alternatives A, B, and P, long-term contract requirements could be met in these alternatives with some adjustments to sale area boundaries, but would likely affect jobs associated with their independent and small business set aside program and **could lead to a change in current mill capacity infrastructure."**

The dominant influences on the future of the timber industry in Southeast Alaska are the international market place and the Forest Service management of its timber supply. The revised draft plan fails to provide sufficient material or careful consideration of either of these forces. Nor has the draft plan addressed the opportunities to encourage the development of value added activity in the timber being harvested from the Tongass National Forest. Enclosure 1 provides a summary of the current forest industry capability and the critical issues related to the supply and demand components of the industry. We also reference the recently produced report prepared by the McDowell Group entitled, "The Role of the Forest Products Industry in the Southeast Alaska Economy", dated September 1991. We encourage your review of the McDowell Group report which provides an up-to-date disclosure of the forest products industry contribution to the regional economy and an important summary of the contribution of each of the basic sectors, including timber (25%), mining (2%), seafood (22%), tourism (12%), and government (8%) to the regional economy.

The State of Alaska expects that the market demand for Alaskan forest products will absorb available supplies as long as timber is provided in a steady flow and with reasonable increments of volume change. The FEIS must demonstrate the Forest Service's awareness of this market situation and the loss of supply from private land and other sources. The analytical efforts must then focus on providing a steady timber supply from the Tongass, which is rapidly becoming the single source provider for this demand.

The long term contracts for the two pulp mills will aid the Forest Service in mitigating negative factors in the timber supply management during the life of these contracts. The independent mills, buying short term sales, have no such advantage or opportunity. **The likelihood of permanent sawmill closures in Haines and Klawock under each alternative (providing inadequate timber supply to meet current mill capacity) and the related economic impacts need to be clearly addressed. Such**

closures might be avoided under the D++ Alternative requested by the State.

By indicating on page 3-339 of the SDEIS that the Forest Service will continue to assess its assumptions about supply, the implication is that the Plan allows flexibility to adjust the available volumes. We question the flexibility, as for example, the ASQ of the commodity emphasis, " Alternative D", designates semi-primitive recreation acreage comparable to levels in the "non-market" emphasis alternatives, and effectively "caps" the upper end of the ASQ at 418 mmbf. We re-emphasize that current pulp and saw mill processing capacity operates efficiently with 520 mmbf. actually sold. Major downward shifts in secondary timber supply for the coming decade makes the Allowable Sales Quantity (ASQ) at the minimum of 520 mmbf. necessary to maintain current mill capacity. **An accurate display of the ability or inability to meet current mill capacity, and the resulting socio-economic and resource effects is critical to this forest planning process.**

Minerals

Mineral industry contribution to the economy of southeast Alaska is directly related to the availability of cost effective lands on the Tongass National Forest for mineral exploration, development, and production. Restrictive land management practices which escalate the cost of mineral exploration, development, and mining and which further limit the land base available for mineral entry will have significant negative impacts on the regional economy. Just as one Greens Creek sized mine adds over 250 jobs and $100 million in economic value to the region, the lack of development opportunities brought about by restrictive management allocations ("natural setting" allocations and lands closed to mineral entry) takes away a similar economic opportunity for the region. Not only does this lost opportunity cost the region in jobs and value, it also has negative impacts on individual property values and the lack of the positive multiplier effects brought on by development projects. An expanded analysis of our concerns regarding the effects of the TLMP revision on the economic developments and opportunities related to current and future mineral developments on the Tongass National Forest is contained in Enclosure 2.

The mineral prescription covers the area of 13 identified mineral deposits that "appear economically viable for development under today's market conditions." The Forest Service should be commended for recognizing this development potential. However, by assigning "Natural Settings" designations to other lands with proven mineral potential or favorable mineralized geology, the

plan restricts the fundamental industry need for a land base to support exploration and to respond to future favorable economic conditions.

The EIS fails to address the economic effect of the excessive designation of primitive and semi-primitive recreation lands for the remainder of these mineralized lands. The Bureau of Mines designated 52 High Potential Mineral Activity Tracts of 605,000 acres and the U.S. Geological Survey estimates the mineral potential of the Tongass lands open to mineral entry as valued in excess of $24 billion. The State is opposed to restricting, by land-use designation, considerable mineralized areas to assessment and economic development. A message of high development and operating costs is sent to the minerals industry which effectively curtails their investment in future exploration.

These allocation concerns further support the State's request for additional analysis and the display of effects for re-allocating " Semi-Primitive Recreation " and " Primitive Recreation " LUDs to the " Moderate Development " LUD. This additional analysis is necessary for the State and public to fully evaluate the balance of resource tradeoffs necessary to provide legitimate commodity resource opportunities while responsibly ensuring that other important resource and public needs are met.

Recreation and Tourism

The State of Alaska fully supports the expansion of back country and roaded recreation opportunities on the Tongass to increase and diversify tourism in southeast Alaska.

Congressional designation of over 6 million acres of the Tongass to Wilderness and LUD II uses provides significant opportunity for development of the specialized eco-tourism businesses. The FEIS should identify opportunities that the Forest Service is planning to encourage within these limited use designations.

In addition, at this phase of planning for recreation and tourism development in the Tongass, the Forest Service could also serve the majority of residents and travelers to the region and enhance the diversity of their experience by increasing its emphasis on destination facilities and recreational sites along the road systems. The State maintains that Forest Service development of limited access, via logging roads, into the wild areas of southeast Alaska can provide positive economic impacts by creating access to new destination areas for recreation and tourism. The Forest Service can further the availability of recreation opportunities by considering the potential for trails,

campsites, and docks that will complement an area and it's resource values after the logging operations are complete.

Fish and Wildlife Economy

Statistics indicate that tourism and fish and wildlife recreation and harvest are increasing at about 5% annually compounded. In 1989, the DFG provided the Forest Service with data on the number of businesses and their clients using each watershed during 1989 to view, photograph or film wildlife. In that year, 120 business served about 146,000 clients who spent over $43 million. As an example on the consumptive use side of the economy, guided brown bear hunters spend about $600,000 annually in southeast Alaska. Wildlife is clearly of growing importance to the region's economy.

Recent information indicates that many of the anglers in southeast Alaska employ the services of one of the 360 charter boats in the region, a fleet which has tripled in size during the last decade. Preliminary analysis of results from a 1988 southeast-wide sport fishing survey (DFG April 1991 draft) indicate that total output by southeast Alaska firms as a result of angler spending in the region was nearly $66 million and the employment of about 950 full time equivalent workers. Almost $25 million was spent by the anglers in the Juneau area (Mills 1991).

The State strongly encourages opportunities for the continued growth of sport and commercial fishing, hunting and viewing wildlife and subsistence harvest on the Tongass National Forest.

In summary, the State recommends that, in addition to the analytical deficiencies discussed in the socio-economic section, the following additional socio-economic factors should be considered and presented in the Final EIS:

--The economic and social impacts on the principal communities if one or more wood processing mills close.

--The value and variable economic impacts of different level salaries of employment being displayed.

--How the USFS intends to encourage the development of more value added activity in the timber being harvested from the Tongass National Forest. Specific concepts and financial resources intended for such programs need to be identified.

--How the USFS intends, as the principal land owner, to aid and encourage the development of tourist and recreational related facilities and attractions in southeast Alaska.

Specific concepts and financial resources intended for such programs need to be identified.

--The effects of proposed plans on sport and subsistence hunters and anglers, commercial guides and outfitters, and commercial fisheries which are dependent on fish and wildlife resources.

FISH AND WILDLIFE

The State is pleased to see the Tongass Timber Reform Act (TTRA), Section 103 fisheries protection measures incorporated in the draft forest plan revision. The protection of riparian habitat has been, and will continue to be of significant concern to the State. The State recognizes that appropriate protection of riparian areas beyond the mandatory 100-ft. buffers as established by TTRA, or along streams not qualifying for mandatory buffers, will be determined administratively for site-specific conditions. However, neither TTRA nor the SDEIS clearly address permissible activities within the mandatory buffer zones. **We recommend the Forest Service undertake efforts to include in the FEIS, procedural standards and guidelines used for operations that occur within streamcourse buffers which ensure, at a minimum, equivalent levels of protection as that required under the Alaska Forest Resources and Practices Act for activities within the riparian area.** To this end, the State supports the continued use of joint State/federal forest-wide monitoring trips to insure the continued refinement of management skills to achieve adequate fishery resource protection on the Tongass.

It is the State's position that, for the foreseeable future, the greatest challenge is the strengthening of the socioeconomic base of the region and protection of the workforce. In order to achieve this in a balanced multiple use approach to forest management, relationships on the tongass must include reconciliation of timber harvest methods with wildlife production. If true multiple-use forestry is to be achieved over the long-term, these two resources must be balanced, along with water, recreation, esthetics, and other forest land uses. Some modifications are to be expected in the handling of each if the greatest good is to be attained.

The State's recommendations found in Enclosure 3 are intended to aid the Forest Service in the development of the final selected alternative so that it better meets the demand for fish and wildlife, and to more clearly depict to the public the trade-offs and multiple-use decisions supporting it in the Final EIS (FEIS). Our comments are intended to further that objective for fish and wildlife habitat and for the public uses of these renewable

resources. Finally, if there is a trade-off of wildlife for timber in the final plan, the trade-off should be clearly described so that affected communities and the greater public understand the benefits and costs of the decision.
The potential for adverse impacts from timber harvesting and associated activities is greatest on those portions of the Tongass Forest which possess commercially valuable timber close to communities. It is from these areas that much of the fish and wildlife harvesting occurs, and water is drawn for human consumption. We believe that inadequate implementation of balanced resource objectives may jeopardize the important wildlife and fisheries values in these areas.

The State has been on record over the years with concerns that previous management of wildlife habitat on the Tongass has committed many areas of the highest quality wildlife habitat to irretrievable, long-term declines of wildlife dependent on the old-growth forests of the Tongass. For its part, the DFG can contribute to a process which would lead to improved identification of DFG Wildlife Analysis Areas (WAAs) that are of greatest importance to community hunters. Such cooperation will lead to minimizing conflicts and a more reliable display of timber/wildlife trade-offs in the FEIS.

Numerous analysis deficiencies exist in the SDEIS which has led to alternatives, including the preferred alternative, that do not adequately address major fish and wildlife resources and needs. **The State of Alaska recommends in development of the FEIS, that in addition to the D plus plus alternative, the Forest Service modify an existing alternative to clearly describe the extent to which the timber and minerals industry can continue while protecting important fish and wildlife resources. This alternative analysis should seek a balance between the diversity of communities and businesses dependent upon fish, wildlife, timber, and minerals and foster a more stable and diversified regional economy in the long term.**

This alternative analysis will require differing spatial allocations to land use prescriptions than displayed in any of the SDEIS alternatives and should be constrained by the following criteria:

1) providing the timber industry with an ASQ of 418 mmbf while implementing the proportionality requirements of TTRA [sec. 301 (c) (2)], for volume class six and for volume class seven, by some period of time shorter than the entire rotation (e.g., every decade, every timber sale, or other specified period), and applied to the cumulative harvest of all timber from both the long-term and independent sales within a contiguous management area;

2) avoid to the maximum extent practical logging that would jeopardize the quality of experience in the intensively used

fishing areas located within the DFG's Class I drainages with the highest quality sport fishing;

3) adopt to the maximum extent practical the Interagency Viable Population Committee's recommendations to prevent species from being listed under the Endangered Species Act (Suring et al. 1991)

4) use to the maximum extent practical the Stream and Lake Protection prescription to ensure the sustained yields of anadromous and high value resident fish;

5) use DFG's deer population objectives, as specified in the Strategic Plan for the Management of Deer in Southeast Alaska, 1991-1995, as an advisory tool for management decisions in determining the balance between timber harvest and deer harvest opportunities. In deciding where to manage for deer habitat, the Forest Service should avoid or minimize to the maximum extent practical the impacts to deer hunters in the Wildlife Analysis Areas (WAAs) most important to individual communities; and

6) while meeting the above criteria and the other forest-wide standards and guidelines, maximize the sustained yield of timber and the opportunities for mineral exploration and production.

Where possible, the additional analysis should display the effects on each community's opportunity to harvest deer by WAA. In addition, for each WAA, the comparison of the deer habitat capability with the DFG's deer population objectives should be displayed so that trade-offs between deer and timber objectives in this alternative are clear. Finally, the economic impact of this alternative on the economy of the region and the individual communities should be fully described.

The following summarizes the major technical SDEIS issues and major recommendations that need to be adequately addressed in the final EIS. More detailed discussion of these issues and recommendations can also be found in Enclosures 3 and 4. It is the State's hope that further analyses of these issues and concerns will allow an improved display of the timber/wildlife trade-offs in the final EIS.

Mr. Michael A. Barton December 6, 1991

MAJOR TECHNICAL SDEIS ISSUES THAT NEED TO BE ADEQUATELY ADDRESSED IN THE FINAL EIS.

1. The SDEIS understates the adverse effects the proposed plan would have on sport hunters and anglers, and on commercial guides and outfitters dependent on fish and wildlife resources.

2. The subsistence analysis understates effects on each community's opportunities to harvest fish and wildlife and fails to make a clear ANILCA Sec. 810 determination.

3. **The State maintains that the standards and guidelines in the Proposed Revised Forest Plan must be enforced. In the development of the final ASQ, the Forest Service should evaluate and reconcile any differences to ensure that the standards and guidelines can be fully enforced while meeting the timber harvest objectives.**

4. In order to fully satisfy the cumulative effects analysis requirements of the National Environmental Policy Act (NEPA), the FEIS for the Tongass Plan Revision must depict the planned timber harvests in more detail and more clearly report the short and long-term impacts on fish and wildlife and their users. Under the two-step planning process, the forest-wide plan is the appropriate planning phase to evaluate the overall effects of timber harvest over the entire forest and a timber rotation.

5. The SDEIS understates the demand for wildlife resources because it describes demand in terms of hunter days instead of in terms of the number of each species that the public has indicated they want to be produced from the national forest lands. In addition, the FEIS needs to use a reasonable growth trend in the public's demand for each species based on the best available data

6. The State Constitution requires that fish and wildlife belonging to the State be utilized, developed and maintained on the sustained yield principle, subject to preferences among beneficial uses. Given that sustained yield of fish and wildlife in southeast Alaska is dependent on the production of fish and wildlife from the Tongass National Forest, the Forest Service should describe the cumulative effects of timber harvest on the Tongass in terms of changes in the long-term habitat capabilities, and as changes relative to population levels in any one year. There is too much annual variation in a species' population to use population level as a stand-alone basis for an analysis of long-term effects.

7. The way the interagency models of the effects of timber harvest on fish and wildlife were used underestimates the effects on wildlife, largely because the discriminating capabilities of

the models was lost when only the average habitat capability of a FORPLAN Analysis Area was used in the effects analysis.

8. The FEIS must provide an improved assessment and display of the costs and benefits of the fish habitat enhancement projects scheduled under the final plan.

MAJOR RECOMMENDATIONS THAT NEED TO BE ADEQUATELY ADDRESSED IN FINAL PLAN

1. The final plan should specify the Forest Service's objectives for the management of wildlife habitat, for each of the Wildlife Analysis Areas (WAAs) by which the DFG manages the wildlife populations and harvests, to foster better coordination between the habitat manager and the population manager. In determining these habitat objectives, the Forest Service should attempt to minimize to the maximum extent practical the impacts to hunters in the WAAs most important to individual communities. The DFG's strategic plans for deer and moose and the historic harvest levels of all species provide the Forest Service useful information on the WAAs most important to hunters in seeking to supply the public demand for wildlife on a sustained yield basis.

The usefulness of the DFG deer population objectives is to illustrate the extent and location of conflicts between deer production and timber extraction. Given that planning for multiple use is an optimization process, these deer objectives provide the Forest Service with information to seek the balance between timber harvest and deer harvest and identify the areas in which it is most important to reduce the impacts on deer hunters. When the balance of multiple use resource management tradeoffs shift to favor timber over deer in a specific area, the focus of the harvest should be in areas of least importance to community deer harvest to reduce resource use conflicts.

2. The economic value of the sport fish resources can be better maintained if the DFG's Class I drainages with the highest quality sport fishing values are managed so that the localized areas in which the intensive sport fishing occurs have these values maintained to the maximum extent practicable.

3. Discrete areas offering unique opportunities to watch and photograph fish and wildlife are important to a large segment of the growing tourism industry and should be maintained, to the maximum extent practicable, to ensure the success of this sector of the economy. The industry should be asked to identify the areas most important to them.

4. The Interagency Viable Population Committee's recommended standards and guidelines to ensure viable populations remain well-distributed across the Tongass should be adopted, to the maximum extent practicable, to prevent species from being listed under the Endangered Species Act.

5. The State endorses modifications to the long-term contracts, pursuant to Section 301 (c)(2) of the Tongass Timber Reform Act, which directs the Forest Service to " eliminate the practice of harvesting a disproportionate amount of old-growth timber by limiting the volume harvested over the rotation in volume classes 6 and 7, as defined by TLMP and supporting documents, so that the proportion of volume harvested in these classes within a contiguous management area does not exceed the proportion of volume currently represented by these classes within the management area". **The State recognizes that the proportionality provision may be subject to different interpretations and may be challenging to implement. The FEIS should fully disclose an explanation of the Forest Service interpretation and proposed TLMP implementation of this important provision.**

6. The standards and guidelines generally provide useful direction as to how to implement the Tongass Plan Revision. However, changes are needed to: 1) clarify the DFG's role in the protection of fish habitat (Title 16) and the management of fish and wildlife populations on the Tongass; 2) revise the standards so that they will be consistently applied; 3) directly relate the resource objectives set in the revision to the project planning areas in which the revision will be implemented; and 4) recognize the Alaska Forest Resources and Practices Act (FPA).

Furthermore, many of the standards and guidelines need to be clarified by defining the following terms to ensure consistent implementation of the plan. The Forest Service should refer to definitions for these phrases in NEPA and the Coastal Zone Management Act.

* minimize
* to extent possible
* to extent practicable
* to extent compatible with objective of land use designation (e.g., Timber Production)
* consider needs of wildlife within overall objective of land use designation
* Special consideration will be required
* Include integration of other resource objectives, particularly wildlife and vegetative diversity, if they do not have a significant adverse impact on the timber resource goals and objectives

7. The FEIS needs to display an improved program to effectively monitor wildlife populations as a result of project proposals with specific consideration to, 1) sufficiency of baseline data, 2) determination of population levels of management indicator species, 3) cumulative impacts, and 4) volume class proportionality.

WATER QUALITY

The primary directives for the Alaska Department of Environmental Conservation (DEC) with respect to the regulation and monitoring of land management activities on the Tongass National Forest are set out in the Alaska Nonpoint Pollution Control Strategy, which was approved by the Environmental Protection Agency in August 1990. The primary responsibilities of ADEC under this document include, but are not limited to: 1) reviewing Forest Service planning documents for water quality concerns, 2) conducting water quality-related field inspections, and 3) planning and conducting best management practices (BMP) implementation and effectiveness monitoring, jointly with the Forest Service.

The following comments and concerns should be incorporated into further analysis of all alternative analyses undertaken during development of the FEIS.

SDEIS General Comments

A. Water Quality Impacts of Timber Harvesting, Road Building, and Minerals Development

1. The method used by the Forest Service to determine the degree of water quality impacts from land-disturbing activities is too simplistic.

The SDEIS does not adequately assess the impacts on water quality of timber harvest at levels in excess of 400 mmbf. The Forest Service uses total number of acres harvested and total acres of land disturbed by road building as the primary measure of potential water quality impacts. Such a measure is inadequate since it does not account for other significant factors such as the geology, soils, slopes and channel types that occur in planned harvest and road building areas.

2. Entry into more "marginal" areas in the future will create more water quality impacts and affect planned levels of timber harvest.

More "marginal" areas, in terms of the factors mentioned in section 1. above, will be entered in this and future decades, as

compared to the past. The recent difficulty in finding a suitable quantity of timber for the Alaska Pulp Corporation is an example of this trend. On page 3-275 of the SDEIS (under the section, Environment and Effects: Soils) is the following statement: "...to meet timber volume objectives in later decades (following the third to fourth decade after revised plan implementation), more than the historical level of road construction and timber harvest may be done on moderate to steep slopes with a "high" mass movement index and with a timber operability rating of difficult." The State believes that this situation poses a future threat to water quality and may result in the deletion of many marginal areas from the timber supply base in order to meet the intent of the Clean Water Act and the TLMP standards and guidelines. This factor, as well as the cumulative impacts of timber harvest in areas with a higher degree of difficulty of operation, should be carefully considered when estimating the quantity of available timber, and the allowable sale quantity is calculated.

3. Water quality Best Management Practices (BMP's) must be fully implemented forest-wide and monitored for effectiveness.

The State maintains that in order to minimize adverse water quality impacts from future timber harvest activities as a result of this plan, that BMP's must be fully implemented and monitored for effectiveness. Of particular concern to the State are the following BMP's as described in the Soil and Water Conservation Handbook (FSH 2509.22): Section 12, Watershed Management: BMP 12.6; Section 13, Timber Management: BMP's 13.2, 13.3, 13.7, 13.9, 13.14, and 13.16; Section 14, Transportation Facilities: BMP's 14.5, 14.7, 14.8, 14.9, 14.12, 14.17, 14.18, 14.20, and 14.24.

The Soil and Water Conservation Handbook and the Stream and Lake Protection prescription both state that water quality will take precedence where conflicts arise between water quality and land-disturbing activities. If BMP's are fully implemented, the number of such conflicts can be reduced and the conflicts resolved. While we understand that BMP's are a relatively new concept in Alaska, unless BMP's are fully implemented, assertions in the SDEIS relating to BMP implementation and resultant effects to minimize or avoid water quality impacts are at best misleading.

4. The FEIS should include a comprehensive discussion of how the BMP iterative process will be implemented forest-wide.

The State is very interested in how the BMP iterative process, including BMP implementation, documentation, monitoring, and revision will be conducted, and how the Forest Service proposes

to ensure that BMP's for timber harvesting and road building will be implemented (including documentation) on a project or site-specific basis. To the extent that the State can assist the Forest Service in these efforts, we will do so.

5. The FEIS should include an improved risk analysis of impacts to water quality resulting from land-disturbing activities.

It is only the best professional judgement of the Forest Service that the impacts on water quality, such as, sedimentation of streams will not be significant. Reliable information and data (both baseline and experimental) is needed to make these assessments. It would be helpful to have a report and/or database incorporating existing data to assist in these assessments. Results obtained in the Pacific Northwest and British Columbia could provide useful information as well, though they may not be strictly applicable to southeast Alaska. Further, some kind of risk-rating system needs to be applied at the project planning level, to assess the probability of significant impacts to specific streams or watersheds. A simple system is currently used to determine temperature sensitivity. The DEC would like to see the Forest Service move in the direction of using a systematic method for assessing the risk of sedimentation impacts to streams and watersheds from timber harvest and road building activities. Deletion of high-risk areas and recommendations for mitigation measures in areas approved for timber harvest and road building should be based in part on such a risk assessment. Finally, in several place the SDEIS indicates that there does not appear to be any significant difference between the alternatives with respect to risks of cumulative impacts. The DEC feels that there could in fact be significant differences, and that the Forest Service should provide a more complete risk analysis in this regard.

6. The Forest Service must carefully consider the water quality impacts of minerals development.

The State supports the SDEIS directive for Minerals LUD groups which states that minerals exploration and development will be encouraged in areas having high potential for mineral commodities including nationally-designated strategic and critical minerals. These activities, when initiated, will override the underlying land use designation, superseding natural setting LUD values. The highest and best use of these lands becomes that of minerals development. It is crucial, therefore, that the project-specific NEPA documents proposing minerals development adequately address the water quality impacts of intensive development on these underlying land use groups.

OTHER ISSUES OF STATE CONCERN

STATE OF ALASKA JURISDICTIONAL CONCERNS

Over the last several years, the State has worked with the Fish and Wildlife Service and National Park Service to develop standard language to include in federal planning documents regarding; Shorelands, Tidelands, and Submerged Land; Management of Watercolumns; ANCSA 17(b) Easements; RS 2477 Rights-of-Way; and Water Rights. The state recommends this standard language contained in Enclosure 4 be incorporated in the FEIS.

LAND OWNERSHIP AND ASQ

The State is concerned that the Forest Service misrepresented the ASQ throughout the DEIS by overstating the actual volume availability. This misrepresentation is due to the inclusion of acres that are encumbered by the State of Alaska pursuant to Section 6(a), Alaska Statehood Act and the Native Corporations (under ANCSA). Most of this acreage has been approved by the Forest Service, but the final conveyance has not been completed. Our analysis indicates the actual ASQ's of the five Forest Service Alternatives follows:

	Alt A	Alt B	Alt C	Alt D	Alt P
TLMP ASQ	298	343	451	472	418
ASQ net of Encumbered acres	274	319	428	439	389

Source: TLMP Table B-30

Regarding Section 6(a) selections, the Statehood Act provided that selected land was to be conveyed by the federal government to the State of Alaska subject to valid existing rights, including timber sale contracts, which existed at the time of selection. Where such rights have been properly identified by the Forest Service (as managing agency), and the Bureau of Land Management (as conveying agency), the State of Alaska respects those rights as it is required to do so by the Alaska Statehood Act.

By far the largest acreage of national forest land selected by the state has been in close proximity to existing communities, or in areas with popular recreational values for adjacent

communities. Only in rare instances would the state grant an ANILCA 906 (k) concurrence to allow the Forest Service to remove timber within an approved selection. **We believe, therefore, that continued Forest Service management in these locations will result in a reduced level of timber harvesting and a greater emphasis on protecting visual and aesthetic values. We conclude that the SDEIS overestimates the ASQ in all alternative analyses.**

STATE OF ALASKA AREA PLANS

The Department of Natural Resources (DNR) has completed two area plans (Prince of Wales Island Area Plan and southwest Prince of Wales Island Area Plan) and is currently in progress on three additional area plans: The Central Southeast Area Plan, Juneau Land Use Plan, and the Yakataga Area Plan. These plans make site-specific decisions for managing state tide and submerged lands adjacent to National Forest System lands. The Forest Service has and will continue to participate as a planning team member in making these decisions. The decisions, among other things, identify location and guidelines for log transfer facilities and other timber harvest support facilities. The State encourages the Forest Service to ensure that designations on uplands are consistent with state area plan designations, and that the Forest Service rely on the area plans for making its site-specific decisions for uplands. **The FEIS should include a clear statement referencing the DNR area plans and that efforts will be undertaken to ensure, to the maximum extent practicable, that site-specific decisions on national forest system land will be consistent with state area plan designations.**

The FEIS, to correct inadequacies of the SDEIS, should include a detailed discussion about the impact of different alternatives on tideland uses, such as anchorages and mariculture. For example, the FEIS should state the total acres of tidelands and number of anchorages used by commercial fishermen, recreational users, and the marine transportation industry that will be impacted by timber harvest alternatives. Timber harvest activities and log transfer facilities can make anchorages unavailable for use. These and other anticipated tideland impacts need to be identified and presented in the affects analysis.

TRANSPORTATION AND UTILITY CORRIDORS

A primary concern of the State is that the Tongass Land Management Plan revision recognize and preserve opportunities for regional transportation corridors, including developed road access to Canada, and the orderly, cost effective electrical generation and transmission for communities and load centers

within the forest planning area.

In furtherance of preserving these opportunities, Forest Service must provide a clear management intent which is consistent with AMILCA Title XI and congressional mandates. Consideration must be given to future needed transportation and utilities systems in and across conservation system units.

The Alaska Energy Authority, and the Alaska Department of Transportation and Public Facilities have worked with the Forest Service since the early 1980's to identify transportation and transmission line corridors that would serve the future needs of Southeast Alaska communities. One very important product of this effort has been the AEA's Southeast Alaska Transmission Intertie Study, published in 1987.

The State is pleased that the Forest Service has adopted the Transportation and Utility System Land Use Designation (TUS) and that the transmission intertie corridors identified in the 1987 study have been included in Alternatives B, D, and P. Our review of the Transportation and Utility Systems Corridor Map confirms the routes have been accurately depicted and reflect the most current thoughts on alignment. Several minor changes have been suggested which we understand will be displayed in the final version of the maps. The State reserves judgement on a Kadashan transportation/utility corridor until such time as the Congressionally mandated study (Sec. 203, TTRA) is completed.

The State requests that the Forest Service allow the AEA the opportunity to provide future corridors, especially that related to the Swan Lake/Tyee Hydroelectric Project Intertie Study, which is now in progress and have it incorporated into the TLMP revision. We understand from Mr. Steve Brink (TLMP revision Team Leader) that the Forest Service will accept and act upon additional information provided it is submitted in a reasonable time prior to the preparation of the Record of Decision. The State is prepared to cooperate in this manner.

In addition to the designation of utility corridors within Alternatives B, D, and P, the State believes that designation of such corridors should be included for all alternatives. The routes depicted in the Southeast Intertie Study have been chosen to minimize impacts to fish, wildlife, and aesthetics.

The State strongly recommends the following hydroelectric sites be assigned the TUS land use designation:

1. Swan Lake adjacent to Thomas Bay, north of Petersburg.

2. Sunrise Lake on Woronofski Island.

3. Dorothy Lake near Juneau and the coastline area between Dorothy lake to the Snettisham transmission line.

4. Baranof Island coastline from Takatz Lake to Manleyville.

Specific information regarding the above proposed designations will be provided directly to the Forest Service TLMP Planning Team along with other future route refinements.

STATE PARKS AND COMMUNITY RECREATION AREAS

The State maintains that the Forest Service must undertake a cooperative planning and management approach with the State of Alaska when planning project activities in conjunction with State Marine Park sites and National Forest Community Grant Lands (Section 6(a)) selected by the State primarily for community recreation. These areas are listed below;

Existing State Marine Parks: Chilkat Islands, Sullivan Island, St. James Bay, Shelter Island, Funter Bay, Oliver Inlet, Taku Harbor, Big Bear/Baby Bear, Magoun Islands, Security Bay, Beecher Pass, Joe Mace Island,Thoms Place, and Dall Bay.

State (6(a))Selections Primarily for Community Recreation: Juneau Channel Islands, Katzehin River, Eagle River, Lynn Sisters, Swanson Harbor and Addition, Frederick Portage, Goose Flats, Pavlof Harbor, Kalinin Bay, High Island, Ideal Cove, Woodpecker Cove, Thoms Lake and Addition, Salmon Bay, McHenry Anchorage, Control Lake, Hole in the Wall, Virgin Bay, Grant Island, South Betton Island, Grindall Island, and Menefee Anchorage.

The State, on behalf of the Alaska Division of Parks, is requesting that the Cabin Site and anchorage on Grindall Island be managed by Interagency Land Management Assignment.

WILD AND SCENIC RIVERS

The State strongly recommends that the Forest Service follow the Bureau of Land Management (BLM) Draft Manual Section concerning Wild and Scenic Rivers --Policy and Program Direction for Identification, Evaluation and Management. Section 8351.06(F) of the proposed manual states that the BLM will not identify any wild and scenic rivers in Alaska. The State is on record in support of the BLM policy as, " the policy is consistent with the State's understanding of previous agreements, statutes, and court orders." This state position must be incorporated into the FEIS.

For example, Section 101(d) of the Alaska National Interest Lands Conservation Act (ANILCA) states Congress's intent that ANILCA provides " a proper balance between the reservation of national conservation system units and those public lands necessary and appropriate for more intensive use and disposition" and the need for new CSU designations is therefore unnecessary. Congress amended ANILCA in 1990 by passage of the Tongass Timber Reform Act and the designation of 299,697 acres of wilderness additions, in addition to 727,764 acres of LUD II additions.

In addition, Section 1326(b) of ANILCA specifically states that no further studies to consider establishment of new CSU's shall be conducted without congressional authorization.

The State believes that the Forest Service has sufficient administrative tools to manage, with greater multiple-use benefit, river-oriented recreation and resources on national forest lands without a Wild and Scenic River designation.

Finally, the State believes that undoubtedly some of the 112 candidate rivers are or will be found navigable. When this determination is made, the State is the owner of the riverbed.

NAVIGABLE WATERS

In Chapter 3 of the Proposed Revised Forest Plan entitled Management Prescriptions, the Forest Service asserts the right to impose management restrictions in navigable rivers. Navigable waters and their management are the responsibility of the State of Alaska, not the Forest Service.

Sincerely,

Paul C. Rusanowski, PhD
Director

006341

CITY OF CRAIG ALASKA

P.O. Box 23, Craig, Alaska 99921 (907) 826-3275

December 6, 1991

Steve Brink, Planning Team Leader
Forest Plan Revision Team
8465 Old Dairy Road
Juneau, Alaska 99801

Dear Mr. Brink:

During its December 5, 1991, regular meeting, the City Council of the City of Craig adopted Resolution 91-47, a resolution requesting the U.S. Forest Service to designate the City's watershed as the Craig Municipal Watershed in the Revised Tongass Land Management Plan.

A copy of that resolution is enclosed.

If you have questions regarding this matter, please contact me. Thank you.

Sincerely,

James A. Van Altvorst
Interim City Administrator

Enclosure (1)

L-420

CITY OF CRAIG, ALASKA

RESOLUTION NO. 91-47

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CRAIG, ALASKA REQUESTING THE U.S. FOREST SERVICE TO DESIGNATE THE CITY'S WATERSHED AS A MUNICIPAL WATERSHED IN THE REVISED TONGASS LAND MANAGEMENT PLAN

WHEREAS, reliable sources of high-quality domestic water are critical to public health and safety, and to the economic development and diversification of any community, and

WHEREAS, Craig's development to date has been stifled by inadequate water supplies, and

WHEREAS, the primary water supply serving the community of Craig, Alaska lies within the Tongass National Forest, and

WHEREAS, the Tongass Land Management Plan, including its future revisions, will direct all land management activities on the Forest by identifying what land is to be managed for various uses and how the environment is to be protected so these uses can be maintained, and

WHEREAS, the City Council of the City of Craig strongly believes that the City's watershed must be designated as a municipal watershed in the Revised Tongass Land Management Plan to best ensure that the community's water system will continue to provide adequate supplies of domestic water which fully meets the State of Alaska's Water Quality Standards, and will be capable of supporting present and future residential, commercial and industrial development within the community.

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Craig, Alaska as follows:

Section 1. The City of Craig hereby requests the Regional Forester to designate the City's watershed, which area is more particularly described on the map (Exhibit 1) attached to and made a part of this resolution, as the "Craig Municipal Watershed".

Section 2. The City of Craig further requests the Regional Forester to administer the Craig Municipal Watershed in full accordance with the Management Prescriptions for Enacted Municipal Watersheds as such Prescriptions are set forth in the Tongass Land Management Plan Revision, Supplement to the Draft Environmental Impact Statement, Proposed Revised Forest Plan, dated August 1991.

Section 3. Effective Date. This resolution shall be effective immediately upon adoption.

Adopted this 5th day of December, 1991.

Mayor

Attest:

Clerk

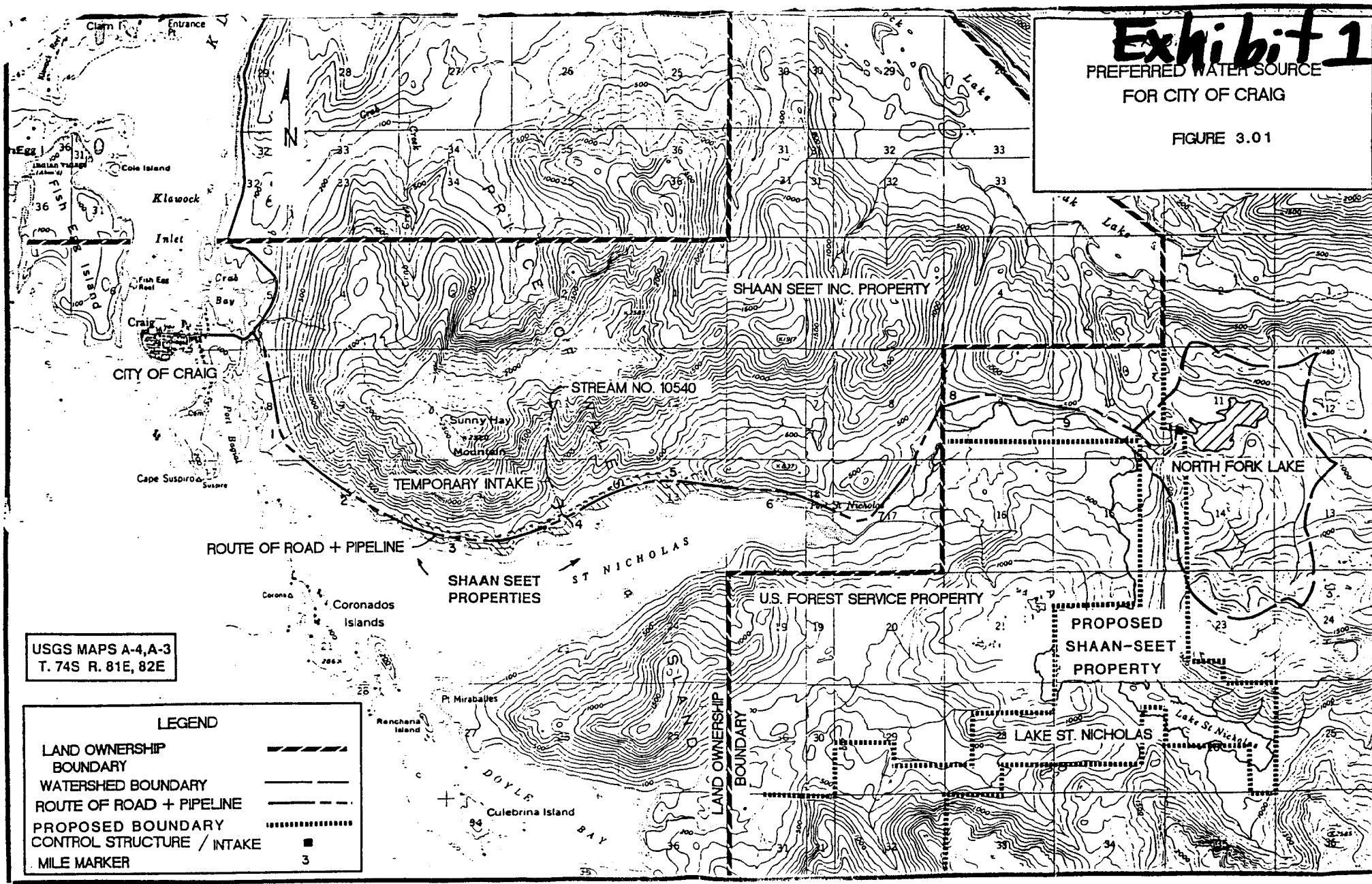
Exhibit 1
PREFERRED WATER SOURCE
FOR CITY OF CRAIG
FIGURE 3.01
SHAAN SEET INC. PROPERTY
CITY OF CRAIG
STREAM NO. 10540
TEMPORARY INTAKE
ROUTE OF ROAD + PIPELINE
SHAAN SEET
PROPERTIES
NORTH FORK LAKE
U.S. FOREST SERVICE PROPERTY
PROPOSED
SHAAN-SEET
PROPERTY
LAKE ST. NICHOLAS
LAND OWNERSHIP
BOUNDARY
Coronados
Islands
Klawock
Inlet
Craig
Cape Suspiro
Sunny Hay
Mountain
Port St. Nicholas
Pt Mirabalies
Ranchana
Island
Culebrina Island
DOYLE
BAY
ST NICHOLAS
Lake St Nicholas
Cole Island
Fish Egg
Reef
Port Bagot
Crab
Bay
Claim
Entrance
Pt
USGS MAPS A-4,A-3
T. 74S R. 81E, 82E
LEGEND
LAND OWNERSHIP
BOUNDARY
WATERSHED BOUNDARY
ROUTE OF ROAD + PIPELINE
PROPOSED BOUNDARY
CONTROL STRUCTURE / INTAKE
MILE MARKER
3

006349

CITY OF THORNE BAY
P. O. BOX 19110
THORNE BAY, ALASKA 99919
(907) 828-3380
FAX (907) 828-3374

December 6, 1991

Mr. Michael A. Barton
Regional Forester
Alaska Region
USDA Forest Service
P. O. Box 21628
Juneau, AK 99802-1628

Re: TLMP Comments

Dear Mr. Barton:

At the December 5, 1991 regular meeting of the Thorne Bay City Council, administration was directed to forward the following comments to you regarding the draft TLMP and alternatives therein set forth.

A steady supply of timber from the Tongass National Forest is vital to the economic well-being and existence of the City of Thorne Bay. Development and use of the renewable timber resource can co-exist with fishing, recreation, tourism and mineral uses and, in may cases, compliment the same.

We ask that you prepare a final alternative that will meet market demand for timber supply while allowing for multiple use of the Tongass.

Thank you for the opportunity to comment.

Sincerely,

Ginny L. Tierney
City Administrator

GLT:gt
cc: All City Council Members

L-424

United States
Environmental Protection
Agency

Region 10
1200 Sixth Avenue
Seattle WA 98101

Alaska
Idaho
Oregon
Washington

006389

EPA

DEC 0 8 1991

REPLY TO
ATTN OF: WD-126

Steven A. Brink, Team Leader
Forest Plan Revision Team
Tongass National Forest
8465 Old Dairy Road
Juneau, Alaska 99801

Dear Mr. Brink:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and s 309 of the Clean Air Act, we have reviewed the Supplement to the Draft Environmental Impact Statement (draft EIS) for the **Tongass Land Management Plan Revision** (the plan). We provided scoping comments on February 18, 1988.

Based on our review, we have rated the draft EIS EC-2 (Environmental Concerns - Insufficient Information). This rating and a summary of our comments will be published in the *Federal Register*.

Our primary concerns are for the plan's effect on water quality from timber harvest, road construction, log transfer facilities, and mining. The enclosed comments provide more detail.

Thank you for the opportunity to review this draft EIS. Please contact Wayne Elson at (206) 553-1463 if you have any questions about our comments.

Sincerely,

Ronald A. Lee

Ronald A. Lee, Chief
Environmental Evaluation Branch

Enclosure

Environmental Protection Agency Detailed Comments on the Supplement to the Draft Environmental Impact Statement for the Tongass Land Management Plan Revision

Log Transfer Facilities

In the supplemental draft EIS for the Tongass Land Management Plan (the plan), the U.S. Forest Service outlines the goal to develop log transfer facilities in areas which will "best avoid or minimize potential impacts on water quality, aquatic habitat and other resources." They further state that log transfer facility design "should be the least environmentally damaging, practicable alternative." [1] EPA is pleased to see that "the USDA Forest Service has adopted the 'Log Transfer Facility Siting, Construction, Operation, and Monitoring/Reporting Guidelines' developed by the Alaska Timber Task Force [ATTF]." [2] In addition, the draft EIS correctly states that these guidelines form the basis for standard conditions required by EPA in NPDES permits issued for log transfer facilities.

We agree that adherence to the ATTF Guidelines is essential to minimize direct and secondary impacts associated with the proposed plan. Section 404 of the Clean Water Act requires that discharge of dredged or fill material into waters of the United States must comply with the 404(b)(1) Guidelines. Proposed discharges fail to comply with the 404(b)(1) Guidelines where, "(i) There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem, so long as such alternative does not have other significant adverse environmental consequences; or (ii) The proposed discharge will result in significant degradation of the aquatic ecosystem ... ; or (iii) The proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem; or (iv) There does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with these Guidelines." [3] Compliance with **all** of the ATTF Guidelines is necessary to ensure that the plan complies the 404(b)(1) Guidelines.

The plan does not demonstrate adequate commitment to the ATTF Guidelines. The U.S. Forest Service commits to "plan and construct log transfer facilities in accordance with management area objectives and the Alaska Timber Task Force Guidelines." [4] However, in the selection of new log transfer facility sites, the plan only commits to **consideration** of "all of these [ATTF] guidelines when proposing new

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[1] M.A. Barton, et al., *Draft Environmental Impact Statement - Tongass National Forest Land Management Plan Revision* (U.S. Forest Service, Juneau), p. G-90-92.

[2] Ibid., p. 3-419.

[3] 40 CFR 230.12(a)(3).

[4] M.A. Barton, et al. p. G-92.

facility sites."[5] The final Plan needs to include siting criteria from the overall **adoption** of ATTF Guidelines.

A lack of commitment to the ATTF Guidelines is further evident in the reliance on an "interdisciplinary analysis" to allow deviations from siting criteria. The plan states that "when an existing log transfer facility in a less than optimal location is considered for reconstruction, an interdisciplinary analysis will be performed to determine whether adverse impacts of relocating the facility exceed those resulting from continued use at the existing site."[6] Thus, the plan does not commit to following the guidelines, but only to conduct an "interdisciplinary analysis" when criteria from the guidelines are not met. The details regarding this "interdisciplinary analysis" are not developed. Is the analysis to be held in-house, or are other agencies to be consulted? What are the roles of other state and federal agencies in these analyses?

The plan does not include all elements of the ATTF Guidelines. While the plan adopts the ATTF guidelines, it does not include all of its provisions in the draft EIS. In Appendix G of the plan, all ten of the ATTF siting criteria are listed verbatim. However, the section of the appendix dealing with design and construction omits several elements of the ATTF construction and operation criteria. The plan specifically refers to "the Alaska Timber Task Force Construction Guidelines **listed below**."[7] The exclusion of several criteria found in the ATTF guidelines directly conflicts with earlier statements regarding the adoption of those guidelines. Specifically, the following criteria have been excluded from the appendix of the plan:

> Solid Waste Management: Solid waste, including wood and other solid waste generated from the LTF, contiguous and other collateral facilities shall be routinely removed from the log transfer facilities and adjacent facilities and disposed of at an approved upland solid waste disposal site.
>
> Bark Accumulation: The regulatory agency(ies) will impose an interim intertidal and submarine threshold bark accumulation level. When accumulations exceed the threshold level, cleanup -- if any -- will occur at the discretion of the permitting agency(ies). The interim threshold bark accumulation level is described as 100% coverage exceeding both 1 acre in size and a thickness greater than 10 cm (3.9 inches) at any point.
>
> Note: The appendix contains a clause on "Bark Accumulation Management" which differs significantly from the ATTF guidelines. The plan states that "The siting, design and operation of the LTF and contiguous collateral upland facilities shall utilize best practicable procedures and methodologies to control intertidal

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[5]Ibid., p. G-90-91.

[6]Ibid., p. G-91 (Item 14).

[7]Ibid., p. G-92.

and submarine accumulations of bark."[8] This revised guideline is unenforceable and difficult to interpret. What are best practicable procedures? What is the threshold accumulation level at which a determination is needed regarding clean-up? Who makes this determination?

Control of Hydrocarbons: The log transfer system and adjacent sort yard handling equipment shall be operated and maintained to minimize petroleum and lubricating products from entering waters.

Note: Inadequate containment of fuel has been observed during EPA inspections of log transfer facilities.[9]

Onshore Log Storage: Where feasible, preference must be given to onshore storage and barging of logs.

Facility Maintenance and Reclamation: The permittee shall maintain the structure or work authorized in good condition and in reasonable accordance with the approved plans and drawings. If and when the permittee desires to abandon the authorized activity herein, unless such abandonment is part of a transfer procedure by which the permittee is transferring its interests to a third party, the permittee must restore the area to a satisfactory condition.

The plan gives special consideration to visual impacts above other environmental concerns. The plan lists two elements under "LTF Design and Construction." The first element is compliance with the ATTF Guidelines, while the second element is visual impacts of log transfer facilities. EPA disagrees with the inclusion of visual impact as a primary consideration in design of log transfer facilities. The plan states that "a low-angled slide would be more likely to be compatible with natural topography than a bulkhead design."[10] While aesthetic considerations may be important, they alone should not be used to justify the construction of a slide rather than a bulkhead. Visual concerns should not be given equal weight with compliance with the ATTF Guidelines and other environmental concerns (bark accumulation, habitat displacement). If a log slide facility cannot meet entry speed requirements of the ATTF Guidelines, EPA believes that other log entry devices may be more acceptable, regardless of visual impacts.

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[8]Ibid., p. G-92 (Item A-4).

[9]Memo of May 22, 1990, from S. Cantor, EPA, to C. Robison, EPA: Inspection of log transfer facilities in southeast Alaska.

[10]M.A. Barton, et al., p. G-92.

Summary

We fully support the plan's commitment to develop log transfer facilities in order to "best avoid or minimize potential impacts on water quality, aquatic habitat and other resources." The plan purports to adopt the ATTF Guidelines in order to achieve this goal. However, the plan only commits to "consider" the guidelines for log transfer facility siting. Furthermore, the plan excludes several of the ATTF guidelines dealing with log transfer facility design and construction. Notably, the plan omits references to solid waste disposal, fuel containment, on-shore log storage, and restoration of log transfer facility sites after operations are complete. The plan also revised the ATTF guideline dealing with bark accumulation. Adherence to all (original) ATTF Guidelines is essential to minimize primary and secondary impacts of the proposed plan.

Page Specific Comments for the draft EIS

3-8 A "limited prescribed fire program" is referred to. This needs to be quantified to further define the significance of prescribed fire (example: tons of particulates per year). Particulate concentrations have been measured that exceed health standards up to three miles downwind of a prescribed burn. There may be recreational areas or areas of expected human activity that could be affected by particulate emissions.

3-8 As indicated on page 3-331 timber is available for free for use as firewood. As an indirect effect the health effects of wood smoke have not been considered. Smoke particles emitted from incomplete combustion of wood are small enough to penetrate deep into the lower respiratory tract when inhaled; these particles may have relatively high concentrations of compounds that are known and suspected carcinogens. The final EIS and Plan should identify the health impacts of wood smoke.

3-75 to 3-80 To illustrate environmental effects to fish from timber harvest the draft EIS graphically shows Coho and Dolly Varden smolt habitat capability per foot for selected channel types over 210 years. In most instances there is only at most a modest recovery in smolt habitat capability in 210 years. Is this to say the timber harvest does damage that can never naturally recover? What are the implications to effectiveness of best management practices?

3-82 Cumulative fishery effect models need to include temperature and sediment as well as large woody debris.

3-83 It is unclear what the "site-specific objectives of individual streams sections for fish habitat" (plan, 4-20) are. The summary discussion of effects from past management implies that since forest wide reductions of fish habitat are small (1 to 3 percent) specific areas could be sacrificed (10 to 15 percent on Prince of Wales Island). We would expect that the "maintain or improve" terminology means that if current habitat capability is below the objective that enhancement would be planned or harvest would not occur until the habitat quality improved. Site specific fish habitat watershed objectives should be included in the final EIS. This was explained in our scoping comments.

3-96 The text states that, "Although none of the alternatives are anticipated to significantly, or even measurably, affect fish habitat capability. . ." The basis for this statement needs to be explained especially since there is a lack of fish habitat and water quality data in SE Alaska. This should highlight the need for comprehensive effectiveness monitoring.

3-101 The text states, "Road construction and use are often the greatest potential sediment source of all land-disturbing activities, over both the short-term and the long-term." In a study of the lower ends of 44 basins it was found that when the roaded area exceeded 2-3 percent of the subbasin area, the accumulations of sediment were most pronounced.[11] What percent of roads are there currently in watersheds? What percent is expected in the alternatives? As indicted on page 3-274 future forestwide percentages may exceed 1 percent and individual watersheds may be much higher. Since "Information on suspended sediment as a result of management activities is limited, especially for timber harvest and road construction activities (page 3-427)," limiting road percentages in subwatersheds should be considered as a mitigation measure (i.e standards and guidelines).

3-140 The paragraph on marine tailings disposal should be rewritten. The third sentence states: "The fjord-estuarine systems of SE Alaska, which are not found in any other waters of the U.S, appear to have characteristics which suit them as inert and stable repositories for mine tailings disposal." EPA's modeling shows that fjords are not "stable repositories;" the tailings would be quite mobile, moving with currents out into the open water. The last sentence should be modified to state that marine tailings is not precluded under any of the U.S. Forest Service alternatives, but except for the Pacific Coast Molybdenum Company, Quartz Hill Project, it is precluded by the Clean Water Act.

3-275 The text states, "However, to meet timber volume objectives in later decades (following the third to fourth decade after revised plan implementation), more than the historical level of road construction and timber harvest may be done on moderate to steep slopes with a "high" mass movement index and with a timber operability rating of difficult." We find this statement to be very troubling. Compliance with water quality standards must take precedence over timber harvest plans. A very conservative approach is necessary when the cause and effect relationships are not well understood, especially for soils, when high mass movement hazard ratings are so prevalent, heavy rainfall is common, and extremely important fish resources are present. We agree that implementation of BMPs and buffer strip requirements will reduce sediment effects. However, the responsibility is on the Forest Service to demonstrate in advance that timber harvest and road construction will not cause

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[11]Cederholm, C. J., Salo, E. O. *The effects of landslide situation on salmon and trout spawning gravels of Stedauleho Creek and Clearwater River Basin*, Jefferson County, Washington, 1972-1978: Seattle WA: 1979.

beneficial use impairment and cause standards to be exceeded. Again the need for effectiveness and validation monitoring becomes preeminent.

Page Specific Comments for the Plan

3-79 to 3-85 The municipal watershed prescription needs to be expanded to include all sources of drinking water supplied by the Forest, not only the enacted municipal watersheds of Ketchikan, Sitka and Petersburg.

3-162 The timber production management prescription states that, "The primary objective is to manage the area, using silvicultural techniques, to maintain and promote industrial wood production." "Optimize" should be substituted for "promote."

3-172 The minerals management prescription states that, "The emphasis of this land use designation is to encourage and facilitate the prospecting, exploration, development, mining, and processing of locatable mineral resources in areas with the highest potential for minerals development in an environmentally sensitive manner." This statement should be revised to read: "The emphasis of this land use designation is to allow valid prospecting, exploration, development, mining, and processing of locatable mineral resources in a manner that minimizes surface disturbance, water sedimentation, pollution, and visual impairment."

3-172 to 3-173 The phrase "to the maximum extent feasible" under Fish and Soil and Water headings should be struck. Those phrases create a loophole allowing environmental degradation, exceedance of water quality standards, and would be inconsistent with the Antidegradation Policy [40 CFR 131.12].

3-173 Under minerals, "Management should facilitate the prospecting. . ." should read "Management should allow the prospecting. . ."

3-181 to 3-189 For the reasons stated above the Stream and Lake Protection Management Prescription phrases "to the maximum extent feasible" or "to the extent practicable" or "whenever possible" should be struck.

3-184 to 3-185 The typical objective for management of fish habitat in Class III streams is, "Maintain water quality for Class I and Class II streams." If more specific and restrictive mitigation measure like a 100 foot or greater buffer is needed on Class III streams to prevent downstream temperature increases, downstream sedimentation, or be a source for large woody debris, how will it be implemented? How will consistency with the Plan be verified?

3-426 The discussion of domestic water supplies should be expanded to include all drinking water supplied by the forest. Refer to our scoping comments for details.

4-20 to 4-24 For the reasons stated above the phrase in the fish standard and guidelines "to the extent practicable" should be struck.

4-39 Under Minerals and Geology Administration II. A. replace "encourage the exploration" with "optimize the exploration."

4-40 For the reasons stated above the phrase in the mineral standard and guidelines "to the maximum extent feasible" should be struck.

4-63 The soil and water standards and guidelines include a provision to: "Limit large scale ground-disturbing activities and associated roading to no more than 35 percent for the acres of 3rd order or larger watershed in less than a 15-year period unless a cumulative watershed effects analysis during project planning indicates otherwise." Setting a rule for when cumulative watershed effects (CWE) analyses will be done is a good approach. However, the basis for the "35 percent of the acres in 3rd order drainages" needs to be explained. Perhaps road acreage as was mentioned above could be used as a rule as well. The standards and guidelines should also specify the type of CWE analysis that is expected. There are many levels of sophistication of CWE analyses. Reliable CWE analysis and management is consistent with our approach to total maximum daily loads.

4-66 "Gathering" should be added to the standard and guideline for subsistence.

4-67 In paragraph D, village councils should be consulted in annual surveys of wildlife populations.

4-67 Given the difficulty in preventing wildlife harassment, how will "appropriate use for subsistence purposes of snowmachines, motorboats . . ." be enforced?

6-1 to 6-89 The monitoring plan needs to be expanded. We understand that additional monitoring plans are being prepared. They need to be included in the final Plan. The monitoring plan needs to address the lack of baseline data. We recommend a priority list of watersheds and milestone dates as a starting point. For project monitoring we would recommend the final Plan include a prototype project monitoring plan. This would be useful in a forest as large and complex as the Tongass. The monitoring plan should include types of surveys, location and frequency of sampling, parameters to be monitored, indicator species, budget, procedures for using data or results in plan implementation, and availability of results to interested and affected groups. A helpful document has recently been completed for developing water quality monitoring plans: *Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska*, EPA/910/9-91-001, May 1991.

6-1 Reference is made to "an essential feedback mechanism to help keep the Plan dynamic." This feedback mechanism should be explained in detail. A *Feedback Mechanism* heading could be added to the monitoring descriptions (pages 6-12 to 6-89) that explains how standards and guidelines, best management practices, standard operation procedures, intensity of monitoring, and timber sale administration is adjusted when monitoring indicates a need. Describing such a process for adjustment

will ensure that mitigation measures will improve in the future and that unforeseen effects are recognized and minimized.

6-3 The commitment to fund monitoring at the commensurate level with program administration is important and we support it fully.

6-4 If effectiveness monitoring only follows implementation monitoring, does this mean that projects which are not in compliance with standards and guidelines through oversight or error will automatically not have any effectiveness monitoring? (See also pages 6-32 and 6-66, Sampling Methods.) This should be clarified.

6-30 and 6-64 The 20 percent of projects sampled should include those watershed are stream segments that are identified as impaired by the Alaska nonpoint source control strategy and water quality assessment.

6-36 This monitoring question should be refocused on whether models accurately predict changes in fish habitat quality or capability rather than population trends.

SUMMARY OF THE EPA RATING SYSTEM FOR DRAFT ENVIRONMENTAL IMPACT STATEMENTS: DEFINITIONS AND FOLLOW-UP ACTION *

Environmental Impact of the Action

LO--Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities with no more than minor changes to the proposal.

EC--Environmental Concerns

The EPA review has identified 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.

EO--Environmental Objections

The EPA review has identified significant environmental impacts that must 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

The 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 CEQ.

Adequacy of the Impact Statement

Category I--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 or 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 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 NEPA 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

006338

United States Department of the Interior

GEOLOGICAL SURVEY

Branch of Alaskan Geology
4200 University Drive
Anchorage, Alaska 99508-4667

December 10, 1991

Steven A. Brink
Leader, Forest Plan Revision Team
U.S. Forest Service
Tongass National Forest
8465 Old Dairy Road
Juneau, Alaska 99801

Dear Mr. Brink and Members of the Revision Team:

Enclosed are our comments on the "Tongass Land Management Plan Revision-Supplement to the Draft Environmental Impact Statement-August 1991".

The comments are organized by volume and by the specific maps for Alternative P and for the Tongass National Forest Land Management Plan, March 1991 version.

In preparing these comments, we have followed two main guidelines: (1) the available information clearly indicates that mineral-resource values have been important in the Tongass National Forest region in the past, that they are important now, and that they will be important in the near and distant future; and (2) the roles of the U.S. Geological Survey in the planning and environmental impact analysis processes are to both provide objective undiscovered-mineral-resource information and to interpret that information in light of different alternatives. You will note, however, that we have offered at least one opinion on an area without mineral resource values!

We are prepared to work with you and your team as you continue the planning and environmental impact analysis processes to the final stage.

Sincerely,

Willis H. White

Willis H. White, Chief
Branch of Alaskan Geology

L-435

COMMENTS ON "TONGASS LAND MANAGEMENT PLAN REVISION--SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT--SUMMARY"

We consider this to be a very good introduction to and summary of the supplement, and offer the following suggestions with the intent of appropriately broadening the scope of the summary.

Summary, page 3, ¶8 and ¶11: Insert the words "and mining" after the word "timber".

Summary, page 4: Either delete the names "Admiralty Island National Monument Wilderness" [It's Kootznoowoo now, anyway] and "Misty Fiords National Monument Wilderness", or add the names and boundaries of the several other Wilderness areas to the map.

Summary, page 5, ¶3 and ¶6: Insert the words "and mining" after the word "timber".

COMMENTS ON "TONGASS LAND MANAGEMENT PLAN REVISION--SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT"

Purpose and Need, p. 1-11: Either delete the names "Admiralty Island National Monument Wilderness" [It's Kootznoowoo now, anyway] and "Misty Fiords National Monument Wilderness", or add the names and boundaries of the several other Wilderness areas to the map.

Alternative, p. 2-8, 2-8, section titled "Summary of the "AMS": Although identified and undiscovered mineral-resource values may not be quantifiable in the same manner as the other resources discussed in this section, we suggest that minerals be mentioned as an important resource component.

Minerals, p.3-126, section titled "Identified locatable minerals", next-to-last sentence: Singer himself (oral comm., 1990) is insistent that the world-wide tonnage and grade models are not intended to be used in the estimation of identified resources. Even if the USBM really did so, it may not be appropriate to call attention to what the authors of those models would consider a mis-use. Perhaps the words "or were calculated using statistical tonnage and grade models developed by Cox and Singer (1986)" should be deleted?

Minerals, p.3-127, section titled "Undiscovered locatable minerals, ¶1, first sentence: The correct reference is "Brew, et al., 1990"; ¶2: Insert the word "models" after "tonnage".

Minerals, p.3-128, Table 3-40: "Gross metal value" should be more fully defined in a footnote; we would prefer that something like the complete discussion given in Brew et al. (1990, p. 7), be used, it reads as follows: "The gross-in-place monetary values (GIPV) calculated are not a direct measure of the value of the undiscovered mineral-resource endowment to the economy because they do not take into account the costs of finding, exploring, developing, mining, beneficiating, and transporting the resources. These factors have to be evaluated separately for each tract..."; also, the correct reference for the table is "Brew, et al., 1990".

Minerals, p.3-140, section titled "Locatable Minerals", ¶2, sentence 2: Correct the spelling of last word, "studied".

Minerals, p.3-142, section titled "Identified Mineral Resources: Given the differences between the different alternatives, it is not clear why, back in the "Alternatives" section, in Tables 2-4a through 2-4P, a constant number of jobs (1,100) and a constant value for income ($56.7 MM) is given for each of the alternatives. [The explanation may be somewhere and we may have missed it!]

Minerals, p.3-147, section titled "Undiscovered Mineral Resources", ¶1, first sentence: The correct reference is "Brew, et al., 1990".

Minerals, p.3-148, ¶1, second sentence: Correct spelling is "probabilistically".

Minerals, p.3-148, Table 3-49: The table title or a footnote should make it clear that these are "Gross-In-Place-Values" and reference made to the complete footnote we suggest above for Table 3-40; also, the correct reference for the table is "Brew, et al., 1990".

Minerals, p.3-155, Tables 3-50 and 3-51: The correct reference is "Brew, et al., 1990".

COMMENTS ON "TONGASS LAND MANAGEMENT PLAN REVISION--SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT--PROPOSED REVISED FOREST PLAN"

Introduction, p. 1-4: Either delete the names "Admiralty Island National Monument Wilderness" [It's Kootznoowoo now, anyway] and "Misty Fiords National Monument Wilderness", or add the names and boundaries of the several other Wilderness areas to the map.

Introduction, p. 1-5, 1-6: section titled "Summary of the "AMS": Although identified and undiscovered mineral-resource values may not be quantifiable in the same manner as the other resources discussed in this section, we suggest that minerals be mentioned as an important resource component.

Standards and Guidelines, p. 4-39 to 4-43, section titled "Minerals, Geology, and Caves": We are prepared to work with the Forest Service in the maintenance of the mineral-resource inventory; we suggest that the Forest Service include here a section covering the preservation of buried forests, both petrified and un-petrified, as these are important features similar to caves.

GENERAL: The remainder of our comments on the "Proposed Revised Forest Plan" are given below in our discussion of the map depicting "Alternative P".

COMMENTS ON "TONGASS LAND MANAGEMENT PLAN REVISION--SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT--APPENDIX, VOLUME 1--

APPENDICES D AND F--Research Natural Areas (RNA) and Special Interest Areas (SIA)

Coast Range Geographic Province, p. D-10, Blue Lake Lava, and p. F-6, Blue River Lava Flow: We support the proposed RNA or SIA on the basis of its unique geologic significance for future research.

Northern Outer Islands Geographic Province, p. D-15, Crater Ridge-Freds Creek, and p. F-2, Mount Edgecumbe: We support the proposed RNA or SIA on the basis of its unique geologic significance for future research.

Northern Outer Islands Geographic Province, p. D-18, Redoubt Lake: We support the proposed RNA on the basis of its unique hydro-geologic significance for future research.

Northern Interior Islands Geographic Province, p. D-20, Tonalite Creek: This locality was left off the map on p. D-39.

Northern Interior Islands Geographic Province, p. D-20, Gambier Bay: We support the proposed RNA on the basis of its unique geologic significance for future research.

Northern Interior Islands Geographic Province, p. D-22, Pleasant Island: We support the proposed RNA on the basis of its unique geologic significance for future research.

Northern Interior Islands Geographic Province, p. D-23, Upper Tenakee Inlet Hot Springs: We support the proposed RNA on the basis of its unique hydro-geologic significance for future research.

Central Interior Islands Geographic Province, p. D-26, Bailey Bay Hot Springs, and p. F-6, Bailey Bay Hot Springs: We support the proposed RNA or SIA on the basis of its unique hydro-geologic significance for future research.

Central Interior Islands Geographic Province, p. D-30, West Duncan Uplift: Correct the spelling of "Kupreanof".

Central Interior Islands Geographic Province, p. D-31, Port Camden Fossil: This is shown on the map on p. D-39 as a priority area, but is not in that category in the text; we support the proposed RNA on the basis of its unique geologic significance.

Coast Range Geographic Province, p.F-3, Patterson Glacier: We support the proposed SIA on the basis of its unique geologic significance.

Central Interior Islands Geographic Province, p. F-37 Karst Areas: We support the proposed SIA's on the basis of their geologic significance.

Southern Outer Islands Geographic Province, p. F-8, Soda Springs: We support the proposed SIA on the basis of its geologic significance.

APPENDIX J--Minerals Analysis

Effects of Alternatives, Identified Locateable Mineral Resources, p. J-1, ¶2, second sentence: Correct the spelling of "location".

Methodology and Scientific Accuracy, p. J-8 to J-12: Each of the first paragraphs for each of the seven methodologies is actually a title, and as such they are all incomplete sentences; we suggest that their correct status be indicated by either typography or by ending each of them with a colon instead of a period.

Methodology and Scientific Accuracy, Identified Locateable Mineral Resources, p. J-8 and J-9, title: Correct the spelling of "Locatable".

Methodology and Scientific Accuracy, Undiscovered Locateable Mineral Resources, p. J-9, title: Correct the spelling of "Locatable".

Methodology and Scientific Accuracy, Undiscovered Locatable Mineral Resources, p. J-10, ¶2, first sentence: Insert the words " of Brew, et al. (1990)" after "...Tables 3 & 4".

Methodology and Scientific Accuracy, Identified Locateable Mineral Resources, p. J-11, title: Correct the spelling of "Locatable".

Methodology and Scientific Accuracy, Undiscovered Locateable Mineral Resources, p. J-11, title: Correct the spelling of "Locatable".

DISCUSSION OF ALTERNATIVE P, BASED ON THE MAP FOR THAT ALTERNATIVE AND ON THE MAP TITLED "TONGASS NATIONAL FOREST, LAND MANAGEMENT PLAN, MARCH 1991"

GENERAL: From a mineral-resources point-of-view, one of the most important results of the Tongass National Forest Land Management Plan Revision will be the Land-Use Designation applied to large areas that were formerly not in the Forest or otherwise not covered by a Land-Use Designation. These specific areas, which are discussed individually below, are the "Barbazon Range Addition", "Juneau Icefield Addition", "Kates Needle Addition", and the unnamed area that includes Hessa Lake west of Kendrick Bay and McLean Arm on southeastern Prince of Wales Island.

Barbazon Range Addition: We support a Semi-primitive Recreation (SP) designation for this area, rather than the proposed Primitive Recreation (PR) designation, based on the evaluation of undiscovered mineral resources given in Brew and others (1991).

Juneau Icefield Addition: We support a Semi-primitive Recreation (SP) designation for the westernmost part of this area, rather than the proposed Primitive Recreation (PR) designation, based on the evaluation of undiscovered mineral resources given in Brew and others (1991).

Kates Needle Addition: We support the Semi-primitive Recreation (SP) designation for this area, based on the evaluation of undiscovered mineral resources given in Brew and others (1991).

Hessa Lake Area: We support a Semi-primitive Recreation (SP) designation for this area, rather that the Primitive Recreation (PR) designation presently proposed, based on proximity to the known and inferred undiscovered mineral resources in the adjacent Bokan Mountain area.

OTHER AREAS: In our opinion, given the increased number of Land-Use Designations and the present abundance of resource information, there should be no need to have this category. Its very existence may somehow make the long-term plans for these areas suspect! There are three areas proposed for designation in the Other Area (OA) category that we comment on individually here.

North Coast of Kupreanof Island: We have no mineral-resource-based comments on this area; however, it is generally a poorly timbered area with somewhat difficult access and it is almost fully enclosed in a proposed Timber Production (TM) area; a Semi-primitive Recreation (SP) designation might therefore be appropriate.

International Boundary east of head of Bradfield Canal: Part of this area is estimated to have significant mineral-resource values (Brew and others, 1990) and it lies between the Misty Fiords Wilderness to the southeast and a proposed Timber Production (TM) area and a Primitive Recreation Area (PR) to the northwest. In our opinion, a Semi-primitive Recreation (SP) designation might therefore be appropriate.

Southern Kuiu Island: Most of this area is estimated to have significant mineral-resource values (Brew and others, 1990) and it adjoins the Kuiu Wilderness to the north. In our opinion, a Semi-primitive Recreation (SP) designation might therefore be appropriate.

ADDITIONAL POINTS: There are several other important points concerning the map for Alternative P. They are discussed individually in this section.

Research Natural Areas (RNA's) and Special Interest Areas (SIA's): These are commented on above in the paragraphs concerning Appendices D and F. In addition, there are some richly fossiliferous areas in the western Prince of Wales Island area, such as Wadleigh Island, Trocadero Bay, and the southwest shore of Esquibel Island, and on northwestern Kuiu Island, such as Halleck Harbor, that would be appropriate as Special Interest Areas (SIA's).

Missing Minerals (MM) Designations: This overprint and the dots indicating the locations of known deposits should be added to the claim-block areas in the Chichagof mining district, at Greens Creek, and at Quartz Hill, even though these areas are within Non-Wilderness Mounment lands.

Redesignation of Young Bay Experimental Forest to Modified Landscape (ML) category: We support this redesignation on the basis of this area's proximity to the known mineral deposit at Greens Creek.

Designation of the Cape Chacon (southeasternmost) part of Prince of Wales Island as Semi-primitive Recreation (SP) category: We support a Modified Landscape (ML) designation for all of this area instead of the proposed SP, based on the evaluation of undiscovered mineral resources given in Brew and others (1991).

006336

United States Department of the Interior
GEOLOGICAL SURVEY
Branch of Alaskan Geology
345 Middlefield Road, MS-904
Menlo Park, California 94025-3591

FTS: 459 5726; Com'l: 415 329 5726; FAX: 415 329 5110 or 415 329 5134

December 2, 1991

MR. STEVE BRINK
LEADER, FOREST PLAN REVISION TEAM
USDA/FOREST SERVICE, TONGASS NATIONAL FOREST
8465 OLD DAIRY ROAD
JUNEAU, ALASKA 99801

Dear Steve:

This letter is to inform you that the Alaskan Branch of the U.S. Geological Survey has not forgotten the December 6, 1991, deadline for comments on the "Tongass Land Management Plan Revision-Supplement to the Draft Environmental Impact Statement-August 1991". We will, however, be about a week late because of too many of us being in too many different places at critical times.

Look for the official USGS comments in a letter signed by W.H. White, Chief, Branch of Alaskan Geology, on or about December 12, 1991.

Thanks for your attention to this matter.

Sincerely,

David A. Brew

David A. Brew
Research Geologist

cc: W.H. White

L-440

006376

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Affairs
1689 C Street, Room 119
Anchorage, Alaska 99501-5126

ER 91/829

1795 (918)

Mr. Steven A. Brank, Forest Plan Team Leader
Forest Plan Revision Team
8465 Old Dairy Road
Juneau, Alaska 99801

Dear Mr. Brank:

In response to your August 27, 1991 request, we have reviewed the Tongass Land Management Plan Revision Supplement to the Draft Environmental Impact Statement (EIS). We offer the following comments for your consideration.

General Comments

The U.S. Forest Service has developed a series of alternatives for managing the Tongass National Forest. Each alternative involves the planned cutting of a high volume of old growth timber within the forest. Although the management prescriptions would only impact a relatively limited percentage of the entire forest, the affected areas represent the most important and productive habitat types for fish and wildlife.

This factor, coupled with the isolated nature of different areas comprising the forest, results in potential management problems unique to island ecosystems. Such areas often support genetically and possibly morphologically unique species or subspecies of organisms. While this phenomenon of island ecosystems is now only in the initial stages of investigation, it is possible that implementation of any of the management prescriptions, which entail cutting large areas of productive old growth habitats, would result in adverse impacts on a wide variety of game and non-game animals and fish over the next 10- to 20-years.

The spotted frog (Rana pretiosa) is classified as a Category 2 species by the Fish and Wildlife Service and a biological assessment under the Endangered Species Act must be completed. This species should be included in all sections referring to Candidate, and Sensitive Species throughout the EIS. The Fish and Wildlife Service anticipates continuing to work with the

Forest Service in collecting further information on this Candidate amphibian species.

We also recommend further study, such as status surveys, for all Candidate species occurring on the Tongass National Forest. These studies must be completed before their habitats' capabilities can be determined and their viable populations maintained.

Moose (Alces alces) move between the Chilkat Peninsula and the southern reaches of Glacier Bay National Park and Preserve. Forest management practices could affect the natural movement and distribution of moose between Glacier Bay National Park and Preserve and the Chilkat Peninsula. We suggest the EIS contain an analysis of the potential effects of timber harvesting and related activities on the movement and distribution of moose within the Park and the peninsula.

In numerous locations throughout the EIS and amongst all of the alternatives, areas are closed to mineral location and development. However, there is no analysis of the cumulative socio-economic impacts such closures may have on Southeast Alaska. We suggest that a cumulative impact analysis of closure to mining be addressed in the EIS, so that it is understood what economic opportunities may be foregone should these areas remain withdrawn from mining.

Specific Comments

Map Set: Colors used on the alternatives maps to indicate old growth habitat and primitive recreation are very similar, making it difficult to distinguish between them. We suggest that stippling or a distinctive pattern be used to more clearly differentiate between the two classifications.

Land and Timber Type Map: This map does not explain if the areas colored in all shades of green are old growth forest or another type. The map identifies it only as "Productive Forest Land." The legend also does not identify the white areas as rock and ice. We suggest that the management units should be shown on this map so that the reader can tell what timber type will be cut in these areas.

Because of map scales used for the EIS, many of the areas scheduled to managed as "Old Growth Habitat" are not old growth, but are "Unforested Areas." The percentage of area that is actually old growth in each of these units should be clearly presented in the Final EIS.

The EIS states that 82 percent of productive old growth outside of Wilderness, National Monuments, and Legislated Land Use

Designation (roadless and primitive recreation) areas is available to be cut within 150 years. We suggest that the EIS address managing these areas for old growth and the fish, wildlife and habitats associated with old growth.

Page 2-20, paragraph 2, Declassifying Designated Wilderness: The EIS states, "[T]he possibility of declassifying portions of Wilderness areas to make additional timber available for harvest was also considered." We suggest that the EIS be expanded to include consideration of other resources such as minerals.

Page 3-9, paragraph 5, Biological Diversity: The citation "(Samson, 1991)" should be added to the bibliography.

Page 3-114, paragraph 2: We suggest that the EIS address techniques to be developed for selection of windfirm boundaries for leave strips. A key for determining characteristics for site-specific susceptibility to blowdown, and guidelines for site-specific identification of windfirm trees needs to be developed.

Page 3-285, paragraph 3: The Biological Assessments are not included in Appendix L, as stated in the document. These need to be added in the Final EIS.

Page 3-286, paragraph 1: The definition for "Category 2" candidate species is incorrect. The EIS states that "conclusive biological vulnerability and threat to species data are not currently available to support proposed rules." This statement has been reworded and misinterprets the definition of Category 2 taxa in 50 CFR Part 17 (Federal Register, Vol. 55, No 35, February 21, 1991), which states "there is some evidence of vulnerability" to support it, but "[F]urther biological research and field study usually will be necessary to ascertain the status of the taxa in Category 2." It should be understood that some taxa in Category 2 "will be in greater danger of extinction than some taxa in Category 1." We suggest that this section be revised to correct the definition.

Page 3-298 and 3-299, Threatened, Endangered, Candidate and Sensitive Species: We suggest that the potential for impacts from land-based resource development activities, such as timber harvesting and mining, on whale prey species in the Point Adolphus area of Chichagof Island be addressed in the EIS. We recommend specific attention be given to this relationship as it relates to Glacier Bay National Park and Preserve.

Page 3-302, paragraph 6 and page 3-303, paragraph 3: It is unclear as to what "practicable" means in these discussions. We suggest that the EIS include further guidelines to address what

is practicable and a definition should be included in this section.

Page 3-302, 3-303, 3-527, and 3-529: The source for the distance guidelines in the EIS to minimize disturbance of seabirds, herons, and waterfowl should be identified. We suggest all aircraft and vessels maintain at least a 1-mile horizontal and aircraft maintain a minimum 1,500 foot vertical distance above known or observed bird colonies and concentrations.

Page 3-303, paragraph 9: Waterfowl habitat that has suffered significant adverse effects from human uses could be rehabilitated in cooperation with appropriate State and Federal agencies. This potential for rehabilitation should be added to the discussion.

Page 3-304, paragraph 11: If a transportation analysis for a timber harvest determines there are no practical routes to avoid high use waterfowl wetlands, the timber harvest plan should be reevaluated to determine if the harvest can be conducted to minimize impacts on those wetland habitats. We believe logging should be conducted during periods when the waterfowl are not using the areas to avoid disturbance and displacement of migrating and staging waterfowl during the spring and fall, and nesting waterfowl during the summer breeding and nesting season.

Page 3-308, paragraph 1: The Forest Service has acknowledged that more information is needed in determining how important old growth is in Southeast Alaska, and that "in areas with timber harvesting, the amount of nesting habitat for murrelets will be reduced". We suggest the document be expanded to consider the option of scheduling the harvest in documented or suspected murrelet nesting areas after studies provide baseline information for protection of this species.

Page 3-312, Peale's Peregrine Falcon: We recommend that the following standard be added to the list of standards and guidelines for Peale's Peregrine Falcon: "Aircraft flights on Forest Service approved projects, when weather ceilings permit, should maintain at least a 1-mile horizontal and 1,500 foot vertical distance from known or potential peregrine falcon nest sites to avoid conflict."

Page 3-312: Consideration should be given to adding a neotropical migrant (a bird that breeds in North America, but returns to the tropics to winter) representative to the Sensitive Species list. There is considerable concern for the rapid decline of neotropical birds in North America (Robbins, et al., 1989). The Townsend's warbler is a Tongass Forest species that could serve as a representative of this group of birds. We

suggest that Townsend's Warbler be added to the Sensitive Species list.

Page 3-316, Sensitive Species: The EIS does not state under what circumstances it will be " desirable to implement habitat enhancement projects to increase habitat capabilities and expand species distribution." We believe this issue should be discussed in greater detail in the EIS. How State and Federal resource agencies with responsibilities for fish and wildlife will be involved in these efforts also needs to be clarified.

Page 3-395, Mitigation: The EIS does not provide for any rehabilitation techniques to be applied to past or future degraded habitats. This omission should be corrected and other resource agency involvement in identifying affected areas and methods to be used should be outlined, as noted above.

Page 3-410, Visual Resources: The Chilkat Peninsula is a very significant scenic viewshed for visitors traveling to and from Glacier Bay National Park and Preserve via ship and airplane. The EIS's preferred alternative has classified the peninsula as a modified landscape without providing an assessment of the potential effect on the visual experience of those traveling by airplane between Juneau and Gustavus. We suggest that the EIS assess the importance of the Chilkat Peninsula scenic viewshed to visitors traveling to Glacier Bay National Park and Preserve. In addition, we suggest the EIS analyze the potential for various alternatives to affect the visual experience of those traveling from Juneau to Gustavus. Proposed mitigation, if any, should also be included in the discussion.

Page 3-422 and 3-423: We suggest including a map of the wetlands to accompany the discussion of the no net loss of wetlands policy.

Page 3-426, Table 3-160: It is unclear how the last two columns of numbers were calculated. On Page 3-425, paragraph 5 states "[T]he table shows that 97, 94 and 89 percent of the Chatham, Stikine and Ketchikan Areas, respectively, have received even-aged timber harvest activities." The table does not present that information and the numbers appear to be inconsistent. If the percentages in the text are correct, then the numbers and percentages in the table need to be corrected to support the above statement.

Page 3-435: We suggest that a development scenario be formulated that will identify the infrastructure, such as sort yards, or other non-road facilities requiring the filling of wetlands for the life of the plan.

Page 3-475, paragraph 2: Acknowledging that models do not exactly reflect habitat capability for a particular species, studies should be completed and/or continued to verify the models. We do not believe the Forest Service should continue to use these models without verification, stating that "they are based on current knowledge and best available information." In light of the fact that current habitat value data are limited and many assumptions are used, these models are given too much weight in projecting actual impacts of the various alternatives.

Testing and modification of the models will be needed before they can be used with confidence by technical experts and reviewers in quantitative assessments. We request the opportunity to review the studies that are to be done to validate wildlife models and to review the annual and final reports. A time schedule showing when the studies will be under way to validate the models should be included in the EIS.

Projects that have the potential for depleting populations of threatened, endangered, candidate, or sensitive species should be planned with the benefit of validated models. At this point, the EIS relies too heavily on the assumption that the models are correct. Until the models can be fine tuned and ground truthing can take place to ascertain their accuracy, the likelihood of underestimating and understating expected impacts on fish, wildlife and their habitats is high. The models cannot yet be used to quantify the proposed levels of timber harvest's full effects on habitat losses and fish and wildlife populations. The Fish and Wildlife Service will continue to work with the Forest Service to refine the models.

Page 3-515, paragraph 6: The definition of "well distributed" for the Tongass Forest needs to be revised. Species located in the areas designated for "Development" should not be allowed to be totally extirpated from whole islands and large land masses.

Page 3-522, paragraph 3: Forty-two percent of the total productive old growth acreage is classified as suitable for timber management. We believe that this is an extremely high percentage of the old growth habitat to be cut without adequate information on old growth species to allow management for viable populations.

Page 3-526, paragraph 4: The EIS should consider competition among cavity dwelling species for snags when evaluating the relationship between the number of species present in an area, and the percent of maximum individuals in a species population that can be supported. Interspecific competition would require an increase in the number of snags to manage for, or decrease the habitat capability for all affected species.

Page 3-527 (Supplement to Draft EIS) and 4-97, (Proposed Revised Forest Plan) Section 1(C) - Monitoring Plan: The habitat value of the wetland should also be considered when determining if an alternative is practical to avoid construction that would result in loss of part or all of a wetland area. The value of the wetland may outweigh the value of the timber or project being considered. We do not believe an alternative should be eliminated from consideration simply because it costs more than other alternatives.

Page 3-537: The Viability Task Group is composed of ten fish and wildlife biologists representing the Forest Service, Alaska Department of Fish and Game, and the Fish and Wildlife Service. These biologists contributed their expertise and time researching and compiling data to formulate their recommendations regarding forest management for viable populations of certain species. The initial draft was presented to the Forest Service, and the final report is due to be completed by the end of 1991. These recommendations will need to be reconsidered at that time and be included in the Final EIS. We agree with the definition of "well distributed" the group presented. We support the Forest Service biologists' recommendation to avoid or minimize cutting the most productive old growth acreages. We suggest that the Task Group's recommendations be followed until more research can be completed regarding how much old growth is needed to maintain viable populations.

Page 3-538, paragraph 5: The EIS mentions "A review of goshawk literature. . ." This literature should be cited in the bibliography.

Page 3-540, paragraph 3: Further guidelines need to be provided to avoid disturbance of waterfowl, falcon, heron, and seabird nesting and resting areas due to all kinds of human activities, not just aircraft. The Fish and Wildlife Service is willing to assist in the development of these guidelines.

The citation "(USFWS, 1985)" is not listed in the bibliography, and should be included in the Final EIS.

Page 3-605, paragraph 1, Mining and Mineral Development: The statement, "[T]here are 13 identified mineral deposits on the Tongass National Forest that appear economically viable for development under today's market conditions. The present net value of these 13 deposits is estimated at 25.6 billion dollars," should be clarified since only seven deposits appear economically viable under today's market conditions. The other 6 deposits may have some economic potential in the future, but it is unlikely that this potential will be realized within the next ten years.

We appreciate the opportunity to review the draft supplement to the EIS.

Sincerely,

Paul D. Gates
Regional Environmental Officer
Alaska

Literature Cited

Robbins, C.S., et al. 1989. Population declines in North American birds that migrate to the neotropics. Proc. Natl. Acad. Sci. USA 86:7658-7662.

PPB

006349

CITY OF THORNE BAY

P. O. BOX 19110
THORNE BAY, ALASKA 99919
(907) 828-3380
FAX (907) 828-3374

December 24, 1991

Mr. Mike A. Barton, Regional Forester
Alaska Region
USDA Forest Service
P.O. Box 21628
Juneau, AK 99802-1628

RE: TLMP Comments

Dear Mr. Barton:

The Thorne Bay City Council, at their regular meeting of December 19, 1991, passed Resolution 91-12-19-03 in support of Alternative D of the Forest Service Timber Land managment Plan as the preferred alternative for the 1989 to 1994 operating period for the Ketchikan Pulp Company long-term sale area. A copy of that resolution is enclosed for your information.

Sincerely,

H J Edwards

Harriett J. Edwards
City Clerk

Enclosures

RECEIVED
DEC 27 1991
REGIONAL FORESTER
FREST SERVICE
ANCHORAGE

L-449

RESOLUTION 91-12-19-03

A RESOLUTION OF THE CITY COUNCIL FOR THE CITY OF THORNE BAY, ALASKA, IN SUPPORT OF ALTERNATIVE D OF THE FOREST SERVICE TIMBER LAND MANAGEMENT PLAN AS THE PREFERRED ALTERNATIVE FOR THE 1989 TO 1994 OPERATING PERIOD FOR THE KETCHIKAN PULP COMPANY LONG-TERM SALE AREA.

WHEREAS, the City Council is the governing body for the City of Thorne Bay, Alaska; and

WHEREAS, the City Council has had an opportunity to review the revised Timber Land Management Plan for the 1989 to 1994 operating period for the Ketchikan Pulp Company long-term sale area; and

WHEREAS, the economic stability of the City of Thorne Bay is dependent upon an adequate supply of timber for the community's largest employer, Ketchikan Pulp Company; and

WHEREAS, any reduction in the timber base available for harvest directly impacts Ketchikan Pulp Company operations in Thorne Bay;

NOW, THEREFORE, BE IT RESOLVED, that the City Council for the City of Thorne Bay, hereby expresses its support of Alternative D of the Forest Service Timber Land Management Plan as the preferred alternative for the 1989 to 1994 operating period for the Ketchikan Pulp Company long-term sale area.

PASSED AND APPROVED on December 19, 1991.

Harvey E. McDonald

Harvey McDonald, Vice Mayor

ATTEST:

Janiette P. Edwards

City Clerk

(Sponsor: Mike Berkey)

FROM

TRANSCRIPT OF PROCEEDINGS:

TONGASS LAND MANAGEMENT PLAN REVISION

PUBLIC HEARING ON ANILCA §810
SUBSISTENCE AND DRAFT FOREST PLAN

MEG MITCHELL, HEARING OFFICER

Wrangell, Alaska
St. Rose Parish Hall

Wednesday, May 22, 1996
7:00 o'clock p.m.

PUBLIC TESTIMONY OF SENATOR ROBIN TAYLOR

My name is Robin Taylor. I'm currently serving as senator for District A in the Alaska State Legislature. That is a district made up of about 28,000 people. Contrary to some

1 people who have talked today claiming representation of various
2 groups, I know who my constituents are and I'll find out if
3 they still are my constituents this fall when they get a chance
4 to either keep me in there or throw me out, and that's the
5 beauty of our system.
6 We don't have that opportunity, unfortunately, with
7 the U.S. Forest Service or with the people that manage our land
8 because we have no opportunity to vote them in or out. If we
9 did, you would not be here today. We would not be wasting our
10 time.
11 I reflected this evening before coming in on how long
12 I've been at this battle. I feel a lot like Don Quixote riding
13 an old swayback horse going after that damned windmill one more
14 time. I've been at it, according to my records, for 27 years
15 now. I've been appearing before boards and panels made up of
16 one bureaucratic airhead after another, and we keep trying to
17 talk to you, and we keep begging, and we keep pleading. And
18 every time, it gets a little worse as each year passes, and
19 every time our hearts break a little further.
20 Unfortunately, you've not seen 40 percent of your
21 Forest Service colleagues have to pack up pickup trucks in a
22 rainstorm and throw a blue tarp over it and get their neighbor,
23 Robin Taylor, to come out and help them tie the tarp down so
24 that their few worldly goods that they can put in that truck
25 will not be destroyed while they wait to get on the ferry in

1 the middle of the night so they can go back, broke, to some
2 town where they've still got some family left, maybe that own a
3 little farm in Oregon, or have a little place in Forks where
4 they can go and work and hope to get by.
5 You haven't had to do that yet because, you see, if
6 any of you people lose your jobs up here, the U.S. Forest
7 Service will buy your house for you if you can't sell it.
8 That's part of the contract you have when you come up here.
9 And you'll give us the same lame excuse that we heard at the
10 Nuremberg trials after World War II. Every war criminal that
11 was tried said, 'I was only obeying orders. I was only doing
12 these things to you people because I had to.'
13 In fact, isn't that the same comment that your Chief,
14 Jack Ward Thomas, gave when he sat in our high school about two
15 years ago and the whole community said, 'Please listen to us
16 Chief. We're really got a -- we've really got a major economic
17 problem going on here. And by the way, Chief, you're the
18 problem, and would you please solve it?'
19 And he interrupted the second speaker that came up
20 and said, 'I don't have time to listen to you. That isn't what
21 I'm here for; I'm here obeying orders.' The first chief of the
22 United States Forest Service ever to be appointed based on his
23 political affiliation. Nine regional foresters across the
24 United States threatened to quit if he received that
25 appointment. The man was a biologist who created the spotted

1 owl controversy in the Pacific Northwest. He now sits at the
2 right hand of God, and who is God? It's a lady by the name of
3 Katy McGinty. Katy McGinty is the person who instructs the
4 Bill Clinton Administration.
5 And who do they all listen to? They all listen to
6 people that are full-time employed advocates and fanatics of
7 environmental movement organizations. And they do that because
8 it's a cheap political vote. There's a myth out there that the
9 world's going to hell in a hand basket, and they're going to
10 somehow save us from ourselves.
11 And the real tragedy is, is that for 25 years again,
12 I've watched all of these things take place, and I've watched
13 the federal government. As Judy so poignantly put it, your
14 word is no good. You speak with forked tongue.
15 In 1954, the federal government advocated publicly
16 for people to come to Alaska to build industrial plants that
17 would provide year-round employment for a constituency of
18 people on the largest national forest in America. The first
19 group to show up was Puget Sound Pulp and Timber. They built
20 the Ketchikan Pulp Mill. The second group to show up was ALP
21 over in Sitka. They were both awarded 50-year contracts, not
22 10 years, 50-year contracts.
23 And by the way, Forest Service hasn't allowed any 10-
24 year contracts either, even though you talk about it. That
25 incentive was given to them so they would establish year-round

1 communities with an economic base so people could raise
2 families, build schools, build hospitals, et cetera.
3 By the way, has any of you ever asked one of these
4 jerks out of the Sierra Club, or SEACC, or someplace else, how
5 many little league baseball teams have they ever supported?
6 How many x-ray machines have they ever bought for a hospital?
7 How many trails have they actually ever gone out and
8 constructed, and by the way, Buck, have you ever even emptied
9 one garbage can in one state park? No, because the salaries
10 that they earn, that's for them to carry out their dedicated
11 zeal to put you and I out of work.
12 And are we talking about, as the Governor would
13 suggest, good science, or are we talking about subsistence
14 tonight? No. Subsistence is a word they've put up here on the
15 board so that they can hold a joint hearing on both
16 "subsistence" and TLMP, and try and put them both together
17 because subsistence may have some impact on the Tongass, or the
18 Tongass may have some impact on subsistence.
19 What is subsistence? I'll tell you what subsistence
20 is. It's a word that Congress came up with that says, we, the
21 United States government, are going to take over all fish and
22 game management in Alaska, and they have. If you don't believe
23 me, how did you go hunting on the Stikine for the last two
24 years for moose? By getting a permit from the Forest Service;
25 right? Were you able to invite a friend up from Ketchikan to

1 go hunting with you, or from Seattle? No. They don't qualify,
2 do they?
3 First off, in your plan, the 700 and some pages, you
4 have no viable socioeconomic information that is valid. Your
5 own people know that because the guy you hired to work with the
6 TLMP team out of New Zealand quit in total disgust because
7 nobody would listen to him. You took some old data, over 10
8 years old, and fabricated that chart right over there.
9 Why do you think the community of Ketchikan and Mayor
10 Carlson has come up with a program where he and the community
11 of Juneau and the state legislature are going to personally
12 fund a study on socioeconomics? Because you didn't do it.
13 Jack Ward Thomas personally promised us he would do it.
14 (Off record)
15 (Tape Change - Tape No. 2 of 2)
16 (On record)
17 BY SENATOR TAYLOR (Resuming):
18 And nothing happens? I have a problem with your
19 credibility. Want to talk about good science for the Governor?
20 Because that was certainly raised by Ms. Flanders. Let me tell
21 you something about good science. You want to talk about
22 subsistence?
23 The single biggest deer populations in Southeast
24 Alaska are located on Prince of Wales Island where my fish and
25 game department allows the harvesting of five deer, and the

1 subsistence boards decided that they would allow the harvesting
2 of one doe deer by those same people. So you could kill six
3 deer on Prince of Wales Island, the most heavily harvested
4 piece of land in all of Alaska. How many dear can you harvest
5 on Wrangell? How many can you harvest on Mitkof? How many can
6 you harvest on Etolin? Should I keep going? One. One
7 antlered buck; right? Why is that if harvesting of timber has
8 something to do with deer?
9 When I asked these questions when TLMP was presented
10 about a month ago in Congress, and I was there to do it, I
11 asked, Can you tell me what the deer populations are, highest
12 ever record? Can you tell me what the bear populations are in
13 Southeast Alaska? This Forest Service, that was Mr. -- the guy
14 who got transferred now because he told the truth, so now he
15 got moved out. You know it, Breich (ph).
16 Breich (ph), Steve Breich (ph), yeah. He was there
17 testifying in front of the Senate Resources Committee. He was
18 asked about bear, highest level of bear populations, brown
19 bear, ever recorded in Alaska currently exist. Okay. What
20 about moose? Well, you and I both know how successful the
21 state has been in managing moose on the Stikine. You can't
22 find one up there to kill anymore. The wolves got most of
23 them.
24 How about fish, Bill? Where's -- Bill still here?
25 MR. BYFORD: Right back here.

1 BY SENATOR TAYLOR (Resuming):

2 Okay, Bill, how about fish? 1961, I got here
3 fishing, and let me do the talking because I listened to you.
4 In 1961, I started fishing, when in 1959 the federal government
5 still had traps up here and it damn near destroyed every fish
6 run in Alaska. What's happened to our fish run since 1959? I
7 can tell you. Maybe you don't want to discuss that.

8 Our fish runs today in Southeast Alaska are three-
9 fold what they were at that time. Now our -- is our timber
10 harvesting hurting those fish? If it is, the fish don't seem
11 to know it, number one. Do we have laws in place to protect
12 those fish? Alaska has the strongest state act on private land
13 for fisheries and habitat protection, which by the way was
14 fully funded in this legislative session, fully funded.

15 Have they ever done -- our Fish and Game Department
16 ever denied a request for a permit across any one of those
17 salmon streams in the last four years since habitat division
18 started doing it? Not one, Bill. Have they ever gone out and
19 found a bad area where destruction was caused or damage was
20 caused? Their report to the state fish and game board this
21 year was, not one.

22 Now what happened on the forest service lands? The
23 Forest Service used to do stream site-specific management.
24 They sent a biologist out to see how close you could come or
25 how far you had to stay back. That wasn't good enough. We

1 went to cookie-cutter mentality, where you have to stay a
2 minimum of X number of feet from each stream. You know, when
3 the gradient gets low, Bill, some streams they ought to stay a
4 thousand feet away from. Their cookie-cutter doesn't do
5 that -- 300 feet. It doesn't matter whether the stream
6 gradient is low, stream gradient's high -- they throw a cookie-
7 cutter at it.
8 Has that cookie-cutter done a better job for us than
9 it was doing before? Not according to their own Ph.D., Dave
10 Gibbons, who wrote his doctoral thesis on it. He's the one
11 that changed and put large woody debris back into the streams
12 after we'd been ordered by the Forest Service to yank it out
13 for years.
14 Now, if we're having such problems with our fish,
15 then somebody better explain why we've got a three-fold return,
16 and it ain't just hatcheries, Bill. Fish are doing real good.
17 God bless them. I hope they keep doing good because I keep
18 fighting to keep every fisherman alive too. But when I see 40
19 percent of the fishing fleet go down the drain, I will expect
20 an outpouring from that fishing fleet that says, hey, wait a
21 minute, your Endangered Species Act, Mr. Clinton, is killing us
22 now. We can't put up with endangered Columbia River sockeye
23 and king salmon. We're tired of watching our trollers be tied
24 up for months because of less than three-quarters of one fish
25 making it up the Columbia.

1 So yes, we've protected our fish and we're going to
2 continue to protect our fish. We're not building dams; we're
3 not raping in those stream beds. In fact, some -- of the 16
4 streams found by biologists to be "threatened streams" in
5 Alaska, 8 of those 16 streams were in areas that had never been
6 logged, and 4 more were in wilderness areas that could never be
7 touched. How come are they in trouble?
8 Why's Anan Creek in trouble? Is Anan Creek in
9 trouble because somebody harvested timber around it? Not as
10 far as I know. Biggest catch of salmon ever made in the
11 history of Southeast Alaska occurred off the mouth of Anan
12 Creek by a Wrangell fisherman. How come there ain't no fish in
13 Anan Creek today? It isn't because of loggers.
14 Offset for litigation, is there any in your proposal?
15 HEARING OFFICER: You can come back.
16 SENATOR TAYLOR: I know. I got a minute left.
17 HEARING OFFICER: You just got a minute, but.....
18 BY SENATOR TAYLOR (Resuming):
19 I just wanted to ask you this one. Did you offset
20 any amount in your proposal for litigation, and injunctive
21 relief, and other actions being sought by the environmental
22 organizations? This question was asked of your regional
23 forester in Ketchikan. His statement was, no they had not.
24 Zero offset for litigation, even though you know and I know,
25 and your history records, that that that ASQ is never met, and

1 the main reason for it not being met is frequently litigation.
2 Now, if you're going to try and come in here and sell
3 something, you better have some numbers right because you
4 better have something in there that offsets litigation because
5 Buck over there's going to make damn good and sure you get all
6 the litigation you can handle. Otherwise, he's out of work.
7 That's all he's employed to do. He's a lawyer for SEACC out of
8 Juneau. He and a bunch of others spend their lives recruiting
9 funds from a bunch of people so they can come up here, live
10 among you, and then file lawsuits. So he's going to make
11 certain lots of lawsuits get filed and anything you choose to
12 do gets screwed up.
13 I just want to say one thing in closing, and that is,
14 thank God our fisheries were not left up to federal management
15 that we experienced in 1959. I know where they'd be today.
16 That fishing industry had been damn near destroyed by federal
17 incompetence, by creek robbers and traps, by every other device
18 that could be used to rape and ruin and pillage those fish
19 runs. I fished during '61 through '67 and tried to put myself
20 through college on it, and I did a lot more washing dishes than
21 I made off of fish. Why? Because the federal government
22 almost destroyed those fish runs.
23 Now let's look at how successful you've been in the
24 management of the Tongass. You've got it just about to the
25 place where you're going to destroy the last vestiges of a very

1 healthy economy known as the timber industry, and if you think
2 it's going to be replaced by tourism, if you think it's going
3 to be replaced by some guy in his garage making decorative
4 wooden door knobs, you're nuts.
5 But you don't think that, and I know that for a fact
6 because you don't care. It ain't your job, it ain't Jack
7 Ward's job that's being threatened here. It's little folks
8 like I and my family and the people sitting in this room,
9 that's who you're threatening. That's who you're destroying
10 because those folks, some of them have already gone down that
11 road.
12 Now I'd like to think that being here and saying
13 this, and the listening to my friends say this to you, would
14 have some affect. I personally believe it will have absolutely
15 no affect, that you will impose whatever Preferred Alternative
16 Jack Ward likes and the rest of the group likes because are we
17 talking about good science? Are we concerned about species
18 viability? Are we concerned about human socioeconomics? No.
19 We're concerned about a political theory and a myth.
20 And as long as that political theory and myth prevails, and it
21 will until at least November this year in the White House, none
22 of this will make a bit of difference because the Forest
23 Service gave up its credibility and integrity when Jack Ward
24 Thomas got appointed because of his politics, not because he'd
25 earned the job.

1 And let me tell you something. When you hire a
2 scientist and you tell the scientist what to come up with, and
3 the scientist just happens to come up with that conclusion,
4 you're not talking to a good scientist, you're talking to a
5 prostitute. That's who I've been discussing this with for far
6 too long, and unfortunately, I don't get to pay the whore, I
7 just have to put up with the results.
8 (Applause)

FRom

TRANSCRIPT OF PROCEEDINGS

TONGASS LAND MANAGEMENT PLAN REVISION

PUBLIC HEARING ON ANILCA §810
SUBSISTENCE AND DRAFT FOREST PLAN

DAVID ARRASMITH, HEARING OFFICER

Ketchikan, Alaska
Ted Ferry Civic Center

Friday, May 31, 1996
7:00 o'clock p.m.

PUBLIC TESTIMONY OF MAYOR JIM CARLTON

Thank you for the opportunity. And for the record, my name is Jim Carlton. C-a-r-l-t-o-n. I represent the Ketchikan Gateway Borough as the Mayor. I'll make this short. I just have some bullet items that I'd like to cover here.

First of all, the 104th Congress, S1 §204, state,

1 local and tribal governments were supposed to participate in
2 any draft plans that were made. I believe this whole TLMP plan
3 is basically what I would refer to as illegal.
4 Second, habitat conservation areas, HCAs. The
5 original study was done in the South Sea Islands. It's
6 literally thousands of miles from the mainland. This same
7 study was transported to the Washington and Oregon area when
8 they did the spotted owl down there, and now you've moved in up
9 here. I think it's not admissible and should be thrown out
10 completely. Anything that has to do with a bird that's in that
11 report shouldn't be in it.
12 Next, I was extremely disappointed when I -- your
13 chief forester, Phil Janik, got in. I understand that he said
14 that because he knew that we were going to ask for extensions,
15 and the Borough did, the state did and so forth, and it's been
16 turned down, and yet there has been little or no public
17 comment. To me I can't understand how anyone, no matter what
18 your position is, that you can make a statement like that
19 before the fact and not after. You took four years to do the
20 study, and you want us to read this complicated, illegal and
21 obscure document and give all the input in 90 days.
22 Fourth, the socioeconomic study, I understand the
23 facilitator of the original study was in a timber study that
24 was similar to this in the state of Wisconsin. They devised a
25 new plan, set down and figured out the best way to do it when

it was over with. The person that was in charge said this is not the way to do it. And yet this district, the Tongass Land Management Plan, picked the same one. And he was only talking about the socioeconomic portion of that plan.

Therefore, I do not understand how you can have five people sit down and evaluate this thing, come up with a plan, present it to three more people, and you got the whole idea from a study that was done in Wisconsin and the person that said it said it isn't worth a darn. Thank you very much. That's it. You're lucky because I'm color blind and I wouldn't have been able to see that zero.

cc: RF

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

016393

August 15, 1996

Mr. Phil Janik
Regional Forester
USDA Forest Service, Alaska Region
709 West 9th Street
Juneau, Alaska 99801

Dear ~~Mr. Janik~~ Phil:

Thank you for the opportunity to meet this past Tuesday with you, members of your staff, and representatives from the other federal and state resources agencies which have been involved in the TLMP process. Not only did I find those meetings to be very useful, I have been genuinely impressed with the overall approach and manner with which you and your agency have conducted the TLMP revision and EIS process to date. EPA fully supports the inter-agency and multi-discpline approach that you have advanced in the management of the Tongass.

I appreciated the opportunity during the meeting to highlight EPA's major comments on the Plan/EIS. Since time did not allow for extensive discussion of our key points, I have enclosed for your use a draft of EPA's key recommendations and rationale in advance of our fomal transmittal. If, after review of these comments, you or your staff would like to meet to clarify any points, please contact us. We recognize the timeframe this project is under and are prepared to make available whatever EPA personnel necessary to discuss our comments. Steve Torok and Chris Meade are available to coordinate such a meeting.

Again, thank you for arranging the meeting and I look forward to continuing and strengthening our Forest Service/EPA partnership.

Sincerely,

Charles E. Findley,
Deputy Regional Administrator

Enclosure

cc: Abigail Kimbell
Gary Morrison
Brad Powell
Beth Pendleton

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DRAFT

EPA's Key Recommendations and Rationale on the Draft TLMP

EPA fully supports the interagency and interdisciplinary planning process that the Forest Service has used to develop the Revised Supplement to the Draft EIS. We look forward to continuing our interagency consultation and cooperation as the planning process progresses. We also applaud the Forest Service for using the best available science to inform the public and the decisionmaker of the likely consequences of this important decision.

EPA advocates an Aquatic Protection Strategy that includes the AFHA recommendations for protecting fish habitat and additional mitigation measures to maintain or restore other aquatic ecosytem functions and values and other beneficial uses of water. Our recommendations tend to focus on aquatic resources due to our statutory responsibilities and related program experience with respect to the Clean Water Act and the Safe Drinking Water Act.

Our recommendations address the following elements:

- Goals and objectives
- Standards vs. guidelines
- Monitoring and evaluation
- Riparian buffers and watershed analysis
- Municipal watersheds
- Wetlands
- Watershed restoration
- Estuaries
- Log Transfer Facilities

Goals and Objectives

Recommendation:

We strongly recommend that the proposed Plan be revised to clearly identify the management goals and objectives for the Tongass and identify how the direction presented in the Plan will achieve the goals and objectives specified in the Plan.

Rationale:

The proposed Plan could be improved immensely by including more clearly defined goals and objectives. We see the goals and objectives (as defined in the Forest planning regulations, 40 CFR 219.3) as the "glue" binding the various elements of the Plan together. Unfortunately, we

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find that the proposed Plan is inconsistent in its identification of goals and objectives, particularly in Chapter 4 (Forest-wide Standards and Guidelines), making it difficult to determine the context for various elements of the proposed management practices and how they relate to one another. Also, with various "goals" and "objectives" distributed throughout different sections of the Plan, it is difficult to get a comprehensive view of the what the proposed Plan is ultimately trying to accomplish.

We agree with placing all goals and objectives in Section 2 of the proposed Plan. These would include those identified in the various sections of the proposed Plan as well as the April 5, 1996 letter outlining the preferred alternative (and any others that may potentially still need to be developed). Once the goals and objectives have been consolidated into a single section of the proposed Plan, direction presented in Sections 3, 4, 5, and 6 could be cross-referenced to the applicable goals and objectives in Section 2. This would facilitate an understanding of how specific direction is intended to meet Plan goals and objectives and also provides a mechanism for understanding how different elements of the proposed Plan relate to one another with the goals and objectives as the link (which they logically should be).

Standards and Guidelines

Recommendation:

We strongly recommend that the proposed Plan be revised to clearly distinguish between a standard and a guideline.

Rationale:

The proposed Plan does not, in most cases, distinguish between a standard (signifying mandatory application) and a guideline (signifying discretionary application). Because the Plan is intended to provide clear direction on how activities on the Forest are to be conducted, we believe that it is critical that the plan clearly indicate all direction presented in the Plan as being either a standard or a guideline (using the definitions presented in Chapter 7). Without clearly differentiating between a standard and a guideline, those charged with implementing the Plan (and those trying to understand how the Plan has been implemented) have no way of knowing which elements of the Plan are mandatory (i.e., standards) and which are discretionary (i.e., guidelines). We believe that this could be easily remedied by following each element of each standard and guideline with statements such as "this is a standard" or "this is a guideline" (or something similar).

We view the Standards and Guidelines contained in Chapter 4 of the proposed Plan as the mitigation measures for the potential impacts of the proposed action and find that the lack of clearly defined standards and guidelines makes it exceedingly difficult to determine the potential environmental consequences of each Plan alternative. For example, it is difficult to determine if

the environmental "consequences" presented in the draft EIS reflect the implementation of all standards and guidelines or a subset of them, given that many are presented as being desirable, yet optional. If the impacts presented in the draft EIS assume that all proposed standards and guidelines would be implemented, we are concerned that the draft EIS presents an overly optimistic characterization of outcomes associated with the implementation of the preferred alternative (or any other alternative). We are concerned because the present wording and unclear direction of the proposed Plan suggest that it is likely that all standards and guidelines would not be implemented as written. This reiterates the need for presenting clearly defined standards and guidelines in the Plan.

In general, we are concerned with the wording of many of the standards and guidelines contained in the Plan in that they provide a high degree of flexibility during implementation with no apparent accounting system to track the outcomes (expected or otherwise). While we understand that S&Gs need to be able to accommodate unique situations where a standardized approach is not applicable or ultimately unworkable, we also believe that S&Gs need to provide sufficient structure and direction to ensure that deviations are more the exception than the norm. With the liberal use of terms such as "to the extent feasible ....minimize ....consider the need ....where needed ....where feasible," we are concerned that Forest resources could ultimately be managed in a manner that is much different than the direction indicated in the S&Gs if the "flexibility" built into them remains so loosely structured.

We believe that the Plan should include criteria which aids the user in judging when deviation from an identified guideline (defined as a preferred or advisable course of action or level of attainment) is appropriate or acceptable. Without such criteria, the decision to apply any guideline (being merely an advisory action) seems to be an individual judgement that would result in inconsistent application of that guideline across the Forest. Additionally, we believe that the Plan should specify the type of pre- and/or post-implementation analyses/monitoring required to both justify deviation from a preferred course of action and to ensure that intended goals are being achieved through the implementation of alternative management practices. Given that one of the purposes of the Plan is to achieve specified goals throughout the Tongass through the implementation of a set of generally consistent practices, we believe that the Plan should provide clearer direction as to how guidelines are to be implemented.

We will provide additional recommendations and rationale on specific standards and guidelines when we submit our final comments.

Monitoring and Evaluation

Recommendation:

We recommend strengthening the Monitoring and Evaluation Plan in Chapter 6 of the proposed Plan to improve its effectiveness in 1) determining the degree to which the management

direction presented in the Plan is implemented on the ground, 2) determining the effectiveness of the management strategy in achieving the desired/anticipated results, 3) identifying necessary corrective actions when elements of the Plan are shown to be ineffective or in need of improvement.

Rationale:

We view the Monitoring and Evaluation Plan in Chapter 6 to be a critically important element of the proposed Plan, especially with the Forest Services' application of an adaptive management strategy to forest planning activities on the Tongass. A monitoring and evaluation program designed to provide the necessary feedback on the successes (and failures) of management practices specified in the Plan and implemented on-the-ground is the cornerstone of a successful adaptive management strategy. We have concerns that the proposed Monitoring and Evaluation Plan does not provide sufficient detail or direction to ensure consistent and useful feedback with respect to the management direction presented in the Plan. Our major concerns with the proposed monitoring plan are highlighted below.

1. It is not clear how the proposed monitoring strategy relates to the intended overall goals and objectives of Plan. This is largely attributable to, as mentioned above, the lack of clearly defined goals and objectives in the Plan. We believe that the development of a set of simply stated goals and objectives, and cross-referencing proposed monitoring activities to them, will provide the necessary link between proposed on-the-ground activities and stated goals and objectives of the Plan.

2. The monitoring plan identifies, in very general terms, the type of information that would be gathered with no indication of what would be done with that information. We believe it is essential that the monitoring plan not only identify the type of information to be collected, but also indicate what actions would be taken with the information gathered (How will data/information be analyzed? What actions might follow such analyses?). Without specifying how collected data/information will be used, we are concerned that the proposed monitoring activities would not be effectively integrated into the adaptive management strategy being proposed by the Forest Service.

3. We believe that the monitoring plan does not contain the following fundamental "details" that we see as being essential for it to be an effective tool in the implementation of an adaptive management strategy.
   a. Many of the monitoring items indicate that sampling will be done annually for 10 to 20 percent of harvest units and roads accepted. How will the 10 to 20 percent be selected? How are they to be distributed throughout the Forest? We believe that for the monitoring plan to be effective, it should either present the methodology to be used to determine the harvest units and roads to

sample/monitor, or indicate to the users of the Plan where such direction can be found.

b. What monitoring methods will be used? In general, the monitoring methodologies we are most familiar with are implemented using Standard Operating Procedures (SOPs) which outline how things are to be done in a consistent, repeatable manner. Without SOPs, monitoring approaches could be applied haphazardly across the Tongass with the concomitant inconsistent reporting of the findings from that monitoring. Does the Forest Service have SOPs for the various monitoring activities identified in the proposed Plan? If so, the monitoring plan should identify them explicitly by citation. If not, we believe they should be developed and either be included in the Plan, or identified as being available by reference.

c. How will results be reported? While the proposed Plan identifies general time-frames that results would be reported and by whom, we believe that the Plan should also identify the intended recipients of any monitoring reports and how the reports would relate to evaluating the relative successes and failures of Plan implementation.

We will provide additional recommendations and rationale on specific monitoring items when we submit our final comments.

Riparian Buffers and Watershed Analysis

Recommendation:

EPA strongly recommends adopting Riparian Option 2 as a Forest-wide standard and watershed analysis as a guideline. We also recommend that any deviations from the Riparian Option 2 standard shall be based on watershed analysis using "*Ecosystem Analysis at the Watershed Scale: Federal Guide for Watershed Analysis*" (August 1995 or subsequent versions) as the analytical framework. Finally, we recommend adding an implementation schedule for watershed analysis (or ecosystem analysis) to Chapter 2 of the revised Plan.

Rationale:

Riparian Option 1 generally provides wider buffers than recommended in AFHA, Riparian Option 2 is generally consistent with the AFHA recommendations for riparian buffers, and Riparian Option 3 provides substantially less protection than recommended in AFHA. This is the main reason we recommended Alternative 3 in our letter of March 1, 1996. Alternative 3 is the only alternative that is consistent with AFHA. Option 3 is based on Alternative P in the 1992 SDEIS, which was developed two years before the AFHA Report to Congress. Thus, it is substantially non-responsive to the concerns raised in AFHA.

Adopting watershed analysis as a guideline allows the responsible line officer the flexibility to decide when and where to conduct watershed analysis (or not). If the line officer chooses to

do a watershed analysis prior to a major land-disturbing project, he or she shall prescribe windfirm riparian buffers (and other appropriate mitigation measures) *designed specifically for that watershed* based on watershed analysis. If the line officer chooses not to do a watershed analysis before a major ground-disturbing project, then the Riparian Option 2 standard provides a reasonable assurance that riparian habitat will be protected over the long term.

We recommend using the *Federal Guide for Watershed Analysis* because it is the best available guidance document on watershed analysis. Conversely, we think that not adopting any guidance document for watershed analysis is unacceptable in light of the fact that AFHA determined current practices are inadequate to protect fish habitat in the long term. We were initially pleased to see the *Federal Guide* incorporated by reference in the proposed Plan, though we are now concerned that the Forest Supervisors are considering deleting it without incorporating an alternative guidance document. If the Alaska Region of the Forest Service rejects the *Federal Guide*, then we think it is incumbent upon the Alaska Region to develop a Tongass-specific guide for watershed analysis and incorporate it by reference in the revised Plan.

An implementation schedule for watershed analysis (or ecosystem analysis) will give the reader a general idea of what to expect and when to expect it.

Municipal Watersheds

Recommendation:

We request that the restrictions and requirements in the proposed "Enacted Municipal Watershed" land use designation (LUD) be incorporated in the forest plan in such a way that these same restrictions and requirements apply to all municipal watersheds on the Tongass, not just the three enacted municipal watersheds. We also recommend revising the Water S&G for non-municipal water supplies to ensure consistency with the source water protection provisions of the newly reauthorized Safe Drinking Water Act.

Rationale:

An essential goal of our aquatic protection strategy is to prevent public drinking water sources from becoming polluted by physical contaminants (sediment and turbidity), chemical contaminants (organic and inorganic compounds), and microbiological contaminants (bacteria, viruses and parasites). Although Forest Service regulations allow the Regional Forester the discretion to enter into written agreements with municipalities to assure protection of water supplies, 36 CFR 251.9(b) states, in part:

> "When deemed appropriate by the Regional Forester, requested restrictions and/or requirements shall be incorporated in the forest plan without written agreements."

We think that our request is appropriate in this case because it is the most efficient and

effective way to assure protection of municipal water supplies across the Tongass. Specifically, this will help municipalities: protect public health; avoid increased capital and operating expenditures; and comply with state drinking water regulations. We are very pleased that the Forest Supervisors and their staff have thus far been most responsive to our concerns on this matter.

As you may know, President Clinton recently signed into law amendments to the Safe Drinking Water Act. Included in these amendments are provisions related to source water protection. Although we have not yet received the final language of the reauthorization bill, we hope to provide more specific details on this subject in our final comments. Regardless, we will continue to cooperate with the Forest Service to provide leadership that will ensure the safety of both municipal and non-municipal source water supplies.

Wetlands

Recommendation:

We recommend that the proposed Wetlands S&G be revised to make the management direction consistent with the statutory and regulatory requirements under Section 404 of the Clean Water Act, as described in the Corps of Engineers' letter of June 14, 1996, from Mr. Towner to Ms. Pendleton.

Rationale:

EPA and the Corps of Engineers are authorized to carry out certain provisions of Section 404 of the Clean Water Act, including exemptions under Section 404(f). However, the U.S. Attorney General issued an opinion on September 5, 1979, that EPA rather than the Corps has ultimate administrative authority to construe Section 404(f) of the Act. With respect to TLMP, EPA generally concurs with the Corps' June 14 letter on the applicability of the 404(f) exemptions.

We have been working closely with the Corps and the Forest Service for several months to address issues related to implementing the 404 requirements on the Tongass. We commend the Regional Forester for communicating these issues to the Forest Supervisors. However, we are concerned that the Forest Supervisors are considering retaining and adding management direction in the Wetlands S&G that is contrary to the Corps' comments regarding Section 404(f). Therefore, we suggest that the Forest Service, the Corps and EPA continue to work together to resolve this issue cooperatively.

Watershed Restoration

Recommendation:

We recommend deleting "as funding allows" from the Watershed Restoration S&G and adding the following:

> "Consult and coordinate with other agencies and landowners when implementing and updating the Alaska Regional Watershed Restoration Strategy."

We also recommend adding an implementation schedule for watershed restoration projects to Chapter 2 of the revised Plan.

Rationale:

The phrase "as funding allows" indicates that watershed restoration is a very low priority that lacks management support. Needless to say, we think watershed restoration should be a high priority. However, we think this sort of management direction is inappropriate regardless of the resource in question.

The Alaska Regional Strategy is a good first step towards restoring the integrity of aquatic ecosystems that have been degraded due to past management practices. However, we think that involving other interested agencies and landowners will improve implementation and future updates to the strategy.

An implementation schedule for watershed restoration projects will give the reader a general idea of what to expect and when to expect it.

Estuary Fringe

Recommendation:

We recommend using the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) maps to identify estuaries. Specifically, we recommend applying the Estuary Fringe S&G to all NWI map units classified and field-verified as Estuarine (system), Intertidal (subsystem).

Alternatively, we recommend using the Alaska Region Channel Type Classification System per the Channel Type User Guide (USDA, April 1992) to identify estuaries. Specifically, we recommend applying the Estuary Fringe S&G to all stream channels classified and field-verified as one of the five channel types within the Estuarine Process Group (i.e., channel mapping symbols ES1, ES2, ES3, ES4 and ES8).

We also recommend retaining the standard to locate facilities more than 1000 feet from Class I streams or beds of aquatic vegetation.

Rationale:

We suggest a standardized mapping protocol for estuaries to ensure consistent implementation of the Estuary Fringe S&G across the Tongass. EPA assisted the Forest Service in researching various scientific and legal definitions of "estuary" that may be suitable to use in the Estuary Fringe S&G. At the time, we considered but ruled out the NWI definition of an "estuarine system" because it did not appear to fit the intended purpose of the Estuary Fringe S&G. However, upon further investigation, it became clear that the NWI definition did not fit because the "estuarine system" consists of two subsystems (intertidal and subtidal). Since the underlying purpose of the Estuary Fringe S&G is to protect intertidal flats, it seems appropriate to use the NWI estuarine intertidal subsystem definition. Furthermore, the U.S. Fish and Wildlife Service has already mapped and digitized almost all wetlands (including estuaries) for the Tongass National Forest. We believe that either of the above options will greatly improve the scientific credibility of the Estuary Fringe S&G.

EPA strongly supports the Estuary Fringe S&G, especially the objective to maintain a 1000 feet buffer of old growth forest, the 1000 feet no commercial timber harvest standard, and the standard to locate facilities more than 1000 feet from Class I streams or beds of aquatic vegetation. We believe the objective is clearly defined, and that the above standards are necessary to achieve the stated objective. The facilities location standard is logically consistent with the objective, whereas the facilities location guideline as stated in the Transportation S&G on page 4-119 ("generally a minimum of 300 feet") is inconsistent with the objective.

Log Transfer Facilities

Recommendation:

We recommend including the Alaska Timber Task Force (ATTF) *Log Transfer Facility Siting, Construction, Operation and Monitoring/Reporting Guidelines* in the revised Forest Plan.

Rationale:

We are very pleased to see the direct incorporation of the ATTF *Guidelines* in Appendix G of the proposed Plan. Because these *Guidelines* provide the basic framework used by EPA in the development and issuance of Section 402 permits for Log Transfer Facilities (LTFs), it is critical that they be followed in all planning activities prior to the application for permits. Their use in project planning on the Tongass should facilitate a more efficient permitting process, with fewer issues to resolve during permit development. We also encourage the Forest Service to actively pursue the development of 402 permits concurrently with the NEPA planning process to ensure consistency with the implementing regulations for NEPA [40 CFR 1500.2(c)].

Our final comments will include three minor comments on Appendix G to make it fully consistent with the current status of the ATTF guidelines.

CITY OF KUPREANOF ALASKA

Post Office Box 50
Petersburg, Alaska 99833

Tongass Forest Plan Revision Team
8465 Old Dairy Road
Juneau, AK 99801

19 Aug.96

The City of Kupreanof appreciates this opportunity to comment on the Tongass Land Management Plan Revision. The outcome of the current TLMP process will likely be the single greatest influence upon the long term socio-economic health of Southeast Alaska. The City of Kupreanof would like to remind the planning team of the inseparable condition of the ecological integrity of the Tongass with sustainable economic policy in Southeast. Thus, in the midst of the planning process, if there is but one imperative, it must necessarily be the ecological integrity of the Tongass.

Even on the dawn of the twenty-first century, scientists are struggling to grasp the full complexities of the coastal temperate rainforest and its inhabitants. If we are to err in this management plan, we must err in the true spirit of conservation and humility rather than the spirit of exploitation and arrogance. We would like to remind the management team the present regional economic health of Southeast is vibrant and growing. There is no economic crisis here, nor is this forest plan obligated to short-sighted economic policy relying on aggressive timber harvest .

Commercial fishing, our single largest segment of the private economy, relies primarily upon healthy forest ecosystems directly sustaining five species of salmon, vast, discrete populations of herring, and five commercial species of crab. The runoff from the watersheds of the Tongass directly influence a vast array of commercially important species including abalone, sea cucumbers, three species of sea urchins, three species of cod, five species of rockfish, and three species of shrimp, to name a few.

The incredible boom in the tourism industry relies upon all of these species and many more: trout, deer, bear, moose, wolves, whales, and waterfowl, to name a few. Currently, there exists a number of popular tourist destinations on the Tongass which suffer overuse. This forest plan should accommodate the growth of the tourism potential by encouraging and developing alternate destinations.

(cont.)

It is essential that this management plan not succumb to the political intervention which falsely states an aggressive timber harvest policy will not imperil other forest-dependent industries. Let us not forget the biological impacts of timber harvest which this agency has documented as already having undermined the subsistence and personal use harvest opportunities of the residents of the Tongass.

Given the above concerns, we offer the following recommendations;

1. The TLMP Revision must incorporate the latest and best biological science available. Incorporate all recommendations made by the Viable Populations Committee report, as well as the recommendations of the Anadromous Fish Habitat Assessment Report to Congress.

2. Terminate the long term contract with Ketchikan Pulp Company. An extension of this long term contract will send the wrong message to other corporations. Rather, the message should be clear it is not acceptable to be convicted of anti-trust violations, commit felony violations of the Clean Air and Clean Water Acts, and continue business as usual under federal subsidies which cost the american taxpayer millions of dollars annually.

3. Follow AFHA scientists' recommendations: Provide full protection for fish habitat (riparian management option 1) in high value watersheds and incorporate riparian management option 2 for all other watersheds.

4. All habitat reserves deserve a management buffer extension of 1/2 mile to accommodate windthrow, wildlife corridor opportunities, and inadvertent harvest of critical habitat areas.

5. Apply the deer habitat protection standard in order to accommodate the inevitable increased demand by residents and tourists of the Tongass, as well as to mitigate the displacement of deer from previously suitable habitat.

6. Adopt the 67 rivers identified by the Tongass Rivers Coalition as wild and scenic rivers.

7. Protect the following areas identified by local communities throughout the Tongass as important to personal use and subsistence harvesting: Port Houghton, Castle River, East Kuiu, Salmon Bay Lake watershed, Calder-Holbrook addition, north Sea Otter Sound Islands, Tenakee Inlet, Ushk Bay, Deep Bay, Poison Cove, Broad Finger Creek, Broad Creek, east Saook Bay, Nakwasina, Kalinin, and Chicken Creek.

(cont.)

8. Prohibit further clearcutting of high value wildlife habitat volume class 7 stands of timber. These stands have been targeted for timber harvest disproportionately to their occurrence on the Tongass and deserve a relief from intensive high-grading practices of the past.

9. Reduce the Allowable Sale Quantity to 250 mmbf per year and encourage more opportunities for value added manufacturing in the timber industry in order to maximize the number of jobs per board feet of timber harvested.

10. Provide for a land exchange with the State of Alaska Mental Health land holdings in the Petersburg Creek and Petersburg Mountain areas of Kupreanof Island in order to maintain present viewshed, tourism, watershed, and subsistence opportunities for the communities of Kupreanof and Petersburg.

Sincerely, David Beebe

David Beebe
Mayor, City of Kupreanof

016394

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240

AUG 22 1996

In Reply Refer To:
ER 96/299

Ms. Beth Pendleton
Co-Team Leader
Forest Plan Revision Team
8465 Old Dairy Road
Juneau, Alaska 99801

Dear Ms. Pendleton:

The Department of Interior has reviewed the March 1996, Tongass Land Management Plan (TLMP) Revision: Revised Supplement to the Draft Environmental Impact Statement (RSDEIS); the Forest Supervisors' April 5, 1996, cover letter identifying the Preferred Alternative; the proposed Forest Plan; and the full array of supporting documents. We are familiar with the aforementioned documents, given that the Department of the Interior's, Fish and Wildlife Service (Service), has had constant involvement with development of the TLMP revision. While preparing our comments, consideration of the long-term sustainability of the forest ecosystem and the well-being of trust resources has been our major focus.

Our comments are included as three enclosures. Enclosure 1 is an overall summary of forest planning and management issues and our recommendations based on a review of the Revised Supplement to the Draft Environmental Impact Statement, Tongass Land Management Plan Revision. Enclosure 2 is our general comments including an introduction and organized by sections within Chapter 3 of the RSDEIS. These general comments are for the Forest Service's (FS) use in preparing the TLMP Final Environmental Impact Statement (FEIS). Enclosure 3 is our comments for FS use in revising the Tongass Land Management Plan.

We greatly appreciate the opportunity to participate in the various aspects of this land management planning endeavor, and look forward to continued cooperation in the management of our Nation's resources in Southeast Alaska. If you have any questions, please contact Ken Havran in the Office of Environmental Policy and Compliance at (202) 208-7116.

Sincerely,

Willie R. Taylor

Willie R. Taylor
Director
Office of Environmental Policy and Compliance

Enclosures (3)

L-480

Enclosure 1

U.S. Department of the Interior's
Review of the Revised Supplement
to the
Draft Environmental Impact Statement
Tongass Land Management Plan Revision

SUMMARY

Forest Planning and Management Issues

- The Tongass National Forest shares common boundaries with Glacier Bay National Park and Preserve, Klondike Gold Rush National Historical Park, and Wrangell-St. Elias National Park and Preserve. The U. S. Forest Service (FS) activities, including permitted activities, which are conducted in the vicinity of National Park System units, if not carefully planned and managed, have the potential to adversely affect the resources and public use that are under the jurisdiction of the Department of the Interior's National Park Service (NPS). There is little, if any, discussion in the Revised Supplement to the Draft Environmental Impact Statement (RSDEIS) about the need or potential for improved interagency planning and project coordination.

- The Department of the Interior's Fish and Wildlife Service (Service) commends the Forest Service (FS) for its goal of incorporating the best available science in the forest planning process, and for establishing an intergovernmental, interdisciplinary team to facilitate the development of the revised Tongass Land Management Plan (TLMP).

- The Service recognizes the importance of the FS's multiple use mandate, and supports adoption of a plan that applies silvicultural and fish and wildlife conservation measures which are based on the best available scientific information.

- Alternative 3 may provide a suitable framework for a defensible multiple use alternative; however, incorporating certain elements from Alternatives 4 and 5, and recommendations from other scientific literature will strengthen natural resource conservation measures and provide an improved framework for final alternative. Specific related recommendations are contained within the detailed comments.

- The Service appreciates the FS's attention to the clear-cut logging issue. The Service is aware of FS policy on Ecosystem Management of the National Forests and Grasslands that establishes an objective "to reduce clearcutting on National Forest System lands and make greater use of individual tree selection, group selection...andother methods which provide more visually pleasing and diverse vegetative appearance on a forest-wide basis." "This policy would reduce clearcutting where it has been used as a standard timber harvest practice on the National Forests" (Memo to Regional Foresters and Station Directors, from Chief, USDA Forest Service, June 4, 1992). We encourage further consideration of the conservation principles contained in this policy in the revised plan.

- Current information indicates that cumulative impacts from the varied historical and ongoing uses of the Tongass National Forest have adversely affected certain wildlife and fish species' viability, and changed the distribution of certain species across the Tongass National Forest. Implementation of the Preferred Alternative would perpetuate the pattern of resource use which led to these effects, and may be expected to exacerbate certain adverse conditions.

- Past silvicultural practices disproportionately harvested the highest volume forest, which is the most valuable habitat for old-growth associated species. Current baseline figures indicate that two of the Forest's three management areas have approximately half the high volume old-growth timber already harvested. The Service is concerned that areas identified for harvest under the preferred alternative include remaining high volume stands.

- From the Service's perspective, the preferred alternative is not consistent with the planning process. The Forest Supervisors' selection of the preferred alternative independent from the planning team circumvented the FS's interdisciplinary approach. The Service endorses the FS's initial intention to use the best available information in a balanced scientifically valid decision-making process.

- Various types and degrees of uncertainty are associated with all physical, biological, economic, and sociological disciplines considered in the Tongass National Forest planning effort. Uncertainty related to the various disciplines was recognized in background material for the draft plan, but not appropriately addressed in the decision making process. The Service believes that the FS should explicitly address the risks associated with making choices based on uncertain information. For example, implementation of certain fish and wildlife conservation measures has been deferred until more information is gathered. The risks (i.e., probabilities of all short- and long-term adverse consequences) of that deferral should be evaluated in the effects analysis. In addition, rationale for decisions resulting in resource tradeoffs should be fully documented in the FEIS so that potential impacts and relative risks may be more thoroughly understood.

  Several techniques are available for explicitly and consistently addressing uncertainty related to all disciplines, and for weighing the effects of uncertainty in decision-making. Goodwin and Wright (1991) and Chechile and Carlisle (1991) are excellent resources for determining appropriate decision making techniques. The Service believes appropriate techniques should be used to reconsider adoption of certain conservation options.

- Continuing timber harvest on a 100-year rotation prevents cutover areas from ever recovering old-growth characteristics. The result is, productive older forest habitats become permanently converted to younger seral stages. It is our view that this permanent conversion may preclude the FS's fulfillment of the National Forest Management Act (NFMA) mandate to ensure viable wildlife populations of older-forest dependent species.

- The Service commends the FS on the improvements made to the Monitoring and Evaluation chapter of the Revised Plan. The Service believes monitoring and evaluation is essential to successful implementation of the TLMP. It is imperative that the FS provide adequate funding, and other necessary sources of support, to adequately perform the monitoring and feedback prescriptions.

- Standards and guidelines included in the draft plan are vague and will not provide for the intended accountability because compliance with the Standards and Guidelines will be difficult or impossible to measure. The Service recommends that Standards be measurable objectives for management practices, and that Guidelines provide recommendations for achieving the standards. Specific recommendations can be found throughout these comments.

U.S. Fish and Wildlife Service's Recommendations

- Management of the Tongass National Forest should be based on the best available scientific information and should incorporate the concepts presented in the January 1995, Report to Congress, Anadromous Fish Habitat Assessment (AFHA); the Interagency Viable Populations (VPOP) Committees' May, 1993, Strategy; the VPOP Committee's May, 1994, Response to the Peer Review; the Alexander Archipelago Wolf, Queen Charlotte Goshawk, and Marbled Murrelet Conservation Assessments; and the Alaska Department of Fish and Game (ADF&G) brown bear and marten studies results. The findings and recommendations contained in these documents represent the best scientifically defensible information for maintaining viable populations.

- Efforts should be made to maintain management options by conserving remaining large blocks of contiguous high volume old-growth to provide for biological and ecological viability of plant and animal species, and to minimize or mitigate the adverse effects of increased fragmentation, as recommended by the Pacific Northwest Experiment Station.

- Based on the best available scientific information as compiled in the Goshawk Conservation Assessment, a timber harvest rotation of at least 300 years is required to regain old-growth forest habitat characteristics in harvest units. If timber harvest rotations of less than 300 years are implemented, there will be a corresponding increased risk to species dependent on such habitats. Furthermore, if a system of old-growth reserves is implemented as part of conservation measures intended to compensate for harvest rotations of less than 300 years, the number and size of such reserves, containing desired habitats and accompanying habitat connectivity, should be increased from that contained in the preferred alternative to adequately diminish the risk to affected species.

- Forest management should more fully incorporate the recommendations contained in the AFHA report to assure protection of the Tongass National Forest's fishery resources. For example, we encourage you to reconsider AFHA recommendations regarding: (1) clear-cut harvesting on steep and unstable slopes (greater than 40 percent) which creates increased risk of landslides and associated sedimentation; (2) roads on unstable soils and constructed on wetlands; (3) fish passage through drainage culverts; and (4) deficiencies in maintaining road drainage systems and in closeouts of temporary road systems.

- A basic inventory, research, and monitoring program should be planned, initiated, funded, and pursued using reserve blocks to better understand the Tongass old-growth forest ecosystem and the wildlife populations that depend on them as part of the adaptive management strategy.

- The Final Forest Plan should include additional opportunities for timely incorporation of new issues and site-specific scientific information into forest management, preferably as quickly as information becomes available. Methods for adaptive management (for incorporation of new information) must be included in the Standards and Guidelines.

- The Service recommends that the Standards be separated from the Guidelines. The FS should prepare measurable Standards that will enable improved accountability for managing the public's trust resources. We recommend that wording like "where possible," "normally," "generally," "minimize," and "to the extent feasible," be replace with wording that provides specific and measurable stipulations on management activities.

Enclosure 2

Comments of the Department of the Interior For Use in Preparation of the Tongass Land Management Plan (TLMP), Final Environmental Impact Statement (FEIS).

GENERAL COMMENTS

Introduction

This enclosure provides comments on the March, 1996, Tongass Land Management Plan Revision, Revised Supplement to the Draft Environmental Impact Statement (RSDEIS). It also summarizes the Department's Fish and Wildlife Service (Service) recommendations for a management framework that will: 1) better provide for the long-term biological and economic sustainability of the forest ecosystem, and 2) maintain the ability of the forest to provide tangible and intangible benefits to the citizens of Alaska and for the Nation to depend upon and enjoy.

The Tongass National Forest land management planning process is a cyclical activity, designed to be reinitiated every several years for the foreseeable future. The Service views the process as the appropriate vehicle for comprehensive incorporation of new technologies and scientific knowledge into ongoing management of the Forest. The Service suggests that the Final Forest Plan include additional opportunities for timely incorporation of new issues and site-specific scientific information into forest management, preferably as quickly as information becomes available.

The purpose of this section is to clarify the Service's recommendations for improvements to be included in the approved plan. These recommendations are based on our understanding of the alternatives and the current status of the impact analyses. The Service believes that these recommendations will help ensure well distributed, viable fish and wildlife populations across the Forest, and avoid, or significantly reduce, threats to vulnerable species.

The Service endorses Forest Service (FS) efforts to solicit the best scientific information for planning purposes. As they relate to fish and wildlife resources, the Service considers the January 1995, Report to Congress, Anadromous Fish Habitat Assessment, the Interagency Viable Populations Committee's May 1993 report, A Proposed Strategy for Maintaining Well-distributed, Viable Populations of Wildlife Associated With Old-growth Forests in Southeast Alaska (Strategy) (Suring et al. 1993), the March 1994, USFS, Pacific Northwest Research Station (PNW) document, Review of Wildlife Management and Conservation Biology on the Tongass National Forest: A Synthesis with Recommendations (Peer Review)(Kiester and Eckhardt 1994), the VPOP Committee's May 1994, Response to the Peer Review of: A Proposed Strategy for Maintaining Well-Distributed, Viable Populations of Wildlife Associated with Old-Growth Forests in Southeast Alaska (Response) (Suring et al. 1994), the Alexander Archipelago Wolf, Queen Charlotte Goshawk, and Marbled Murrelet Conservation Assessments to represent the best scientifically based fish and wildlife management and planning tools available at this time.

The Service recommends that concepts presented in these documents be fully incorporated into the selected alternative. The Service also recommends that responsive vehicles for incorporation of new information and adaptive management schemes be included in the Standards and Guidelines.

A fundamental objective of the TLMP revision has been to develop a plan that incorporates the best available scientific understanding of the spectrum of biological, socioeconomic, and other extant forest management

issues, and to employ such knowledge in their resolution. The Service is concerned that the process employed by the Forest Supervisors to select their preferred alternative did not fulfill the FS's initial intent of the TLMP revision effort. The choice of "1992 Alternative P" precludes the FS's ability to break with past planning tradition and use state of the art science in plan revision.

Furthermore, for issues of fish and wildlife conservation, a degree of scientific uncertainty associated with any issue has been used in the Supervisors' letter to justify dismissal of the overall scientific impact assessment, particularly when resource analysis and biological recommendations could result in changes in future logging practices. Conversely, differing opinions in the socioeconomic realm have not been addressed in the document, and related operational changes have been avoided, implying that any change would negatively impact affected communities.

Inconsistent treatment of uncertainty factors has virtually precluded implementation of a fresh approach to management of the Tongass National Forest. Moreover, the Supervisors' assurance that future management changes could be effected when the science becomes more certain may actually serve as a basis for avoiding use of new management policies and tools, rather than implementing them. From a long-term, biological and habitat conservation perspective, scientific certainty in most of the non-physical sciences is almost always the exception rather than the rule.

Overall, the Forest Supervisors' letter shows major inadequacies in natural resource baseline and impact information; it also suffers from a disconnect between use of best available biological information and planning decisions. Even when reliable information has been provided through interagency efforts, such as activities under the 1994 Memorandum of Understanding between the Forest Service, Alaska Department of Fish and Game, and the Fish and Wildlife Service, this planning process does not discernibly integrate fish and wildlife findings and conclusions into Tongass Forest management decisions in the revised plan.

It has been the goal of the Service to make every effort to assist the Forest Service with conserving habitats and species as required by the National Forest Management Act (NFMA), so that the requirements of the Endangered Species Act (ESA) are not the only eventual management options. As stated in previous letters to the Forest Service, the Fish and Wildlife Service believes there is a need to preserve options for the future of the Tongass, by assuring well distributed, viable populations of fish and wildlife, and by preventing further fragmentation of old-growth habitat. These concerns have also been conveyed by Service representatives at many staff meetings, policy group meetings, in review letters, and other planning endeavors.

We have a great advantage in Alaska in that relatively large portions of habitat that have not been significantly influenced by human activity remain. Therefore, there are considerably more options for habitat conservation compared to the habitat degradation and fragmentation that have occurred in many other areas of the United States. Opportunities exist to implement large habitat block management objectives to address the issues of long-term viability of fish and wildlife populations, genetic diversity, and habitat fragmentation.

The Service is encouraged by and endorses an emerging new direction (habitat conservation reserves) of managing for diversity and viable populations across the forest. However, to move in this direction, the FS has pressing needs: 1) to respond to and use new information in the FEIS concerning habitat management for the maintenance of viable vertebrate species populations; 2) to keep all species well distributed throughout the Tongass National Forest; and 3) to maintain and preserve future management options.

BIODIVERSITY

The biodiversity section in Chapter 3 of the RSDEIS does not explicitly inform the public about key elements of biodiversity. We recommend that this section address issues such as species vulnerability, habitat fragmentation and its effects on indicator species, species extinctions, total number of plant and vertebrate species, ecological processes, plant associations, and vegetative conditions as described in Samson 1982, and Orme et al. 1989. Neither does this section provide the public with information on how diversity will be affected by the nine alternatives. Though the 1991 Supplemental DEIS provides some of this information (pages 3-9 through 3-30 of the Supplemental DEIS), the Service suggests that this same type of information, but in more current detail, be included in the FEIS.

The RSDEIS assumes that the biodiversity panel's conclusions adequately cover all terrestrial and aquatic vertebrates, invertebrates, and vascular and non-vascular plants. It is the Service's belief that this is a serious flaw. The scale of information used to evaluate biodiversity was inappropriate for evaluating many localized populations of flora and fauna. With the exception of certain tree species, this section made no reference to plants. The ESA and NFMA provide for jurisdiction over all biota, not just the vertebrates and trees evaluated in this document. The Service suggests that the FEIS include comprehensive discussions on invertebrates and flora other than trees.

Increased fragmentation of old-growth forest exacerbates the adverse effects of direct habitat conversion. Increased efforts must be made to maintain remaining large blocks of contiguous high volume old-growth. These blocks would provide for biological and ecological flow of plant and animal species and minimize or mitigate the adverse effects of increased fragmentation, including establishment of threshold harvest levels per Value Comparison Unit. Harvest in VCUs should not result in further fragmentation of contiguous blocks of old-growth habitat. This issue should be addressed in the FEIS.

Given today's knowledge, the Service believes that the "matrix management" scheme of small area uneven-age tree management that mimics the natural disturbance regime, is the best silvicultural strategy for retaining suitable old-growth forest components. The use of even-age (clear-cut) prescription should be minimized.

The RSDEIS (Page 3-16, second paragraph) listed several reasons the 500-1000 foot beach buffer has been found important for wildlife. The RSDEIS stated that beach fringe could provide more effective landscape linkages between habitat reserves, protect long-term bald eagle habitat capability, buffer the primary beach fringe zone from windthrow, maintain a functional interior forest condition within the entire primary beach fringe, sustain habitat for goshawks and indirectly contribute to overall landscape management of lands between habitat reserves. However, the Forest Supervisors have chosen not to select an alternative with this extended beach fringe.

The Preferred Alternative drops the attributes of Alternative 3 that were found to be important for marten: the 1000 foot beach fringe, AFHA Option 1 and 2 riparian habitat buffers, and a 200 year rotation (pages 3-232 to 3-234 of the RSDEIS). It is unclear what consideration was given to the recommendations of the Marten Assessment Panel experts. The Service suggests that well-founded explanations be provided for not including information or recommendations provided in the marten panel assessment. The Service remains an advocate for managing beach and estuary fringe under a Land Use Designation (USFWS, J. Hohn letter to the USFS, October 10, 1995). The Service has stated (USFWS id) that management under the proposed forest-wide Standards and Guidelines would not necessarily afford a level of protection needed to ensure that this critical landscape element serves the many functions intended. The beach and estuary fringe is one of the most resource-rich habitats of the Tongass National Forest. It serves many ecological functions, including

breeding and foraging habitats for bald eagles and habitat for old-growth dependent and associated wildlife and fish species. Beach fringe and estuary locations are definable, and compliance monitoring would be relatively easy. The letter also states that whatever the planning direction taken by the FS, the key to protection of these areas is that the Standards and Guidelines be written precisely and definitively, stringently monitored, and rigorously enforced.

Page 3-7 and 3-14. Descriptions of the provinces and the landscape positions do not include intertidal and shallow subtidal habitats potentially impacted by shore-based activities. These habitats are important to fish, shellfish, marine mammals, waterfowl, shorebirds, sport fish, commercial fish, and a variety of species used for subsistence. A description of these important habitats and how they would be affected should be included in the FEIS.

Page 3-12. Old-Growth Forest. The Service suggests that the FEIS describe more fully the importance and variety of old-growth and its relationship to habitat diversity and species viability. Productive old-growth forest is highly variable in terms of vegetative composition and structure, as is its functional value to numerous fish and wildlife species. Variability includes a range of forest types that, at the low end, is comprised of trees averaging less than 1 foot in diameter and 50 feet tall. Having access to this variety, or diversity, of stand types in the forest is extremely important in the annual life cycle of species such as Sitka black-tailed deer. The old-growth component also contributes to the biotic diversity of the forest. If anything, the old-growth inventory in its current form inadequately describes the important variations of the forest. From a wildlife perspective, more, not fewer, classifications are needed to describe the forest in ecologically meaningful terms.

Page 3-12, fifth paragraph. The RSDEIS states that the timber inventory used 150 years as a break point for separating young growth from old-growth; however, later in the paragraph it states that old-growth characteristics do not begin to develop until approximately 250 years. This period of time is supported by Alaback and Juday 1989, Alaback 1984, Alaback 1982, Wallmo and Schoen 1980, and Harris and Farr 1974. Considering this information, the FEIS should explain the rationale for using 150 years as a break point in the timber inventory and how this document's analysis can still be considered valid.

Page 3-13, Volume Classes. The RSDEIS proposes the following productive old-growth forest classifications: Higher Volumes, Middle Volumes, and Lower Volumes. Due to the lack of existing information in the timber inventory, the Service understands that the original Volume Classes 4-7, or the 1991 Supplemental Draft EIS four strata A-D definitions, were not statistically defensible at such a fine scale. The Higher Volume designation combines Volume Classes 5, 6, and 7 (Strata B, C and D) depending on size and number of trees. Volume Class 7 (Strata D) typically includes the largest trees (stem diameter and height). If Volume Class 7 is integrated with former Volume Class 5 and 6 definitions, it is unlikely that these large trees would be given any special consideration. Stands of Volume Class 7 have been identified by recent project planning as unique and rare (USDA 1996), and given special management consideration to minimize impacts. It is unclear how the FS would comply with Sec. 301(c)(2) of the Tongass Timber Reform Act (TTRA) without maintaining a separate definition and consideration for Volume Classes 6 and 7. The Service suggests that the Standards and Guidelines require that project areas be inventoried to identify Volume Class 6 and 7 stands, and measures implemented to conserve rare Volume Class 7 type stands. (See our comments below on Proportionality on page 3-183 in the RSDEIS.)

The FEIS needs to include a discussion of the influence of old-growth timber reclassification on management of the largest, oldest tree stands and the habitat they provide.

Page 3-15, second paragraph. The Service suggests that the FEIS describe how the beach fringe area is used as haulouts for marine mammals, including sea otters, seals, and sea lions.

Page 3-15, fourth paragraph. Management Indicator Species that were used in the habitat models to evaluate impacts to wildlife species do not include any species dependent on the intertidal or subtidal habitats. The FEIS should include intertidal or subtidal habitat impact analyses.

Page 3-18. Old-Growth Block Categories. It is unclear how the sizes of the old-growth block categories listed on this page were determined and how they would relate to wildlife habitat protection. An explanation should be given as to the significance of the sizes, how they were derived, and the purposes of the different categories. It is also unclear when Category 3 and 4 blocks would be identified. The Service agrees that this is a good method to inventory existing old-growth blocks, but the Service is concerned that project planning teams may interpret these Categories as Habitat Conservation Areas, similar to those described in the interagency 1993 VPOP Strategy, and large enough to sustain viable wildlife populations, *e.g.*, Swan Lake-Lake Tyee DEIS, page 3-148 (Foster Wheeler 1996). If old-growth reserves are implemented, the Service is concerned that 10,000 acres, a minimum old-growth size in the Category I definition, would be interpreted at the project level as a large "HCA" that would meet the minimum patch size for optimum habitat. A Category I block (10,000 to 100,000 acres) may be defined at the project level as a large "HCA", a Category 2 as a medium "HCA" (1,000 acres) and a Category 3 as a small "HCA" less than 1,000 acres. Though the paragraph below the Category list explains how this inventory can be used, the Service suggests that the FEIS elaborate on this procedure and explain the differences between these categories and HCAs.

If these categories are intended to serve the same purpose as HCAs, each category should be defined specifically in terms of structure (*i.e.*, tree size, canopy structure, understory component, etc.) and composition, in addition to acres contained and how they would meet old-growth dependent species habitat requirements.

Page 3-19, first paragraph. "Franklin 1993" is not in the Literature Cited list.

Page 3-19, sixth paragraph. The RSDEIS states that green tree patches would promote species diversity of fungi, lichens, plants, and arthropods. However, after harvest, such patches would become all "edge", which would quickly change the microclimate and the composition of the stands and may not promote long-term species diversity.

Page 3-21, Old-Growth. Forest stands having old-growth characteristics are a minimum age of 250 years (Alaback 1994). Page 3-207 states, "...productive old-growth (that is, conifer stands greater than 200 years in age and having a volume of 8,000 board feet per acre or higher) provide all of the highly-important habitats, and the preponderance of the moderately-important habitats for all the MIS." Yet, the RSDEIS uses 150 years to describe old-growth. This discrepancy should be corrected and reanalyzed, or explained in the FEIS.

Page 3-20, 3-21. Stand Initiation, Stem Exclusion, Understory Reinitiation, Old-Growth. A breakdown of estimated acreage figures for each of the four stand development stages should be provided in the FEIS to illustrate the acreage (induced and natural) by stage over time.

Page 3-22. Environmental Consequences. This section does not include consideration of marine environments. While the Service recognized the limitation of Forest Service authority over the marine environment, FS timber sales would have direct, indirect, and cumulative effects on marine resources due to

shore-based activities associated with timber operations. The Service suggests that the environmental consequences to the marine environment and biodiversity be included in the FEIS.

This section does not clearly address considerations given to the transport, storage, and handling of fuel and other hazardous substances. Particular emphasis should be given to the potential for fuel spills in the marine and freshwater environments. If this information is tiered from the 1991 Supplemental DEIS, a statement should have been included in the RSDEIS so stating. If not, the information should be included in the FEIS.

Page 3-23, Table 3-5. The RSDEIS should have included the estimated total acreage and percentages of old-growth harvest proposed in each alternative. The Service suggests that this information be included in the FEIS.

Page 3-31, Connectivity. The RSDEIS states, "Connectivity does not necessarily mean that old-growth areas need to be physically joined in space, since many associated animal species can move (or be carried) across areas that are not in old-growth ecosystem conditions." The FEIS should include a reference of scientific documentation to support this statement. On page 3-226, the RSDEIS states that Southeast Alaska most likely supports small, less mobile endemic species which have not been thoroughly investigated or described. The 1993 VPOP Strategy, page 29 states:

> "However, biological intuition does suggest that vegetation between HCAs similar to that within the HCAs would enhance the survival of dispersing individuals whether it is present in the matrix or as corridors (Fahrig and Merriam 1085, Noss 1987, Murphy and Noon 1992). Lack of definitive information on the need for corridors should not preclude their consideration in conservation planning unless better solutions to maintaining dispersal are available (Hobbs 1992). Generally, the maintenance of existing linkages should be a primary component of conservation planning since it is easier to retain them than to replace them in the future (Hobbs 1992)."

Conditions now exist in most places across the Tongass that make it possible to maintain corridors between old-growth reserves across the Tongass. The Service suggests that these corridors be protected from further harvest since they have positive habitat values for <u>many</u> species, and the importance of corridors for their dispersal are not fully understood. The greater the distance between old-growth blocks, the more important it is to have corridors. It is prudent to strive to maintain as much actual connectivity as possible. The 1993 VPOP Strategy (Suring et al. 1993) states that breaks in old-growth travel corridors should not exceed 65 feet. Thomas et al, (1990, page 26) states "What constitutes a suitable corridor varies by species, and experts have expressed concern that narrow corridors may sometimes be more detrimental than beneficial." The Service suggests that corridors meeting the VPOP strategy criteria be included in all proposed alternatives, including the preferred.

Page 3-35, number 5. The RSDEIS states, "The panel did not endorse alternative silviculture as better than reserves and do not have high confidence in either, since these are only working hypotheses." However, they gave alternatives which include alternative silviculture, reserves, and have a lower risk rating of short-term adverse effects to biodiversity (page 3-24) than those alternatives without them. Alternatives with 1) longer rotations; 2) old-growth reserves; 3) two-aged timber harvest systems; and 4) expanded beach and riparian areas were rated a lower risk than those that did not. This is a discrepancy that should be resolved in the FEIS.

Page 3-35, number 14. The RSDEIS states one of the assumptions or opinions held by one or more of the panel members was that "species that are well adapted to fragmented landscapes (such as those having the

ability to disperse) are the ones that tend to be found here." This statement is overly simplistic and implies that old-growth fragmentation is not a concern. It does not consider species such as small mammals that have limited dispersal capability. The VPOP Committee (Suring et al. 1993) recommended that wildlife travel corridors of old-growth forest habitats be provided to "increase the likelihood of successful dispersal of the species of concern throughout the landscape." They determined that there are four species in the Tongass for which dispersal is limited by behavioral patterns, capability, or unsuitable habitat, *i.e.*, northern flying squirrel, Sitka mouse, Coronation Island vole, and mountain goat. They recommended that breaks in travel corridors should not exceed 65 feet to ensure that flying squirrels can glide across the openings. The Other Terrestrial Mammals Assessment Panel (November 29, 1995, Assessment Summary. USFS. unpublished report) had concerns for the dispersal ability of the northern flying squirrel in areas of fragmentation, but decided that the Coronation Island vole would not be affected by proposed alternatives.

FISH

The Service is concerned that proposed protections for fish and riparian habitat are inadequate to protect the Tongass's highly productive fisheries of wild anadromous salmonids. The anadromous fishery resources produced on the Tongass National Forest, referred to in the RSDEIS as "major" should be more accurately characterized as being the most valuable resource, in terms of both fish production and Southeast Alaska employment. The Service advocates additional protection to ensure adequate fish protection throughout the Forest (*i.e.*, the application of AFHA recommended protective measures) prior to calculating a harvest level in the selected alternative.

To protect the Forest's valuable fishery resources the proposed forest plan needs to fully implement the recommendations of AFHA; this report represents the best available scientific information concerning the effects of past and current forest practices on anadromous fish spawning and rearing habitat. We suggest that the approved plan address the need for protection of AFHA Class IV streams, additional protection for high hazard soils in steep areas, and the need for watershed analysis across the forest. The RSDEIS adequately addresses the buffer-strip recommendations of AFHA, but excludes AFHA recommendations regarding: 1) clear-cut harvesting on steep and unstable slopes (>40 percent) which creates increased risk of landslides and associated sedimentation; 2) roads on unstable soils and constructed on wetlands; 3) fish passage through drainage culverts; and 4) deficiencies in maintaining road drainage systems and in closeout of temporary road systems. AFHA recommendations regarding these sources of risk to fisheries need to be comprehensively addressed in the FEIS.

AFHA requires a high level of riparian protection as a component of watershed protection, and lesser protection could be prescribed if determined to be adequate by means of watershed analysis. Watershed analysis in the draft forest plan has been severely down-graded to a suggestion in the forest-wide standards and guides (page 61). A clearly identifiable triggering mechanism for watershed analysis needs to be incorporated into the riparian area standards and guides. Watershed analysis is the current management regime throughout most of the nation (Murphy 1995); the Tongass deserves no lesser treatment.

The Service is concerned that the Preferred Alternative relies on the classification of stream systems based on the quality of watersheds as determined by the Alaska Department of Fish and Game's Forest Habitat Integrity Project (FHIP). This study, completed in 1978 and never updated, has no biological basis for the rating system used, and does not address fish stock viability or otherwise incorporate concepts of conservation biology. It is based only on the overall fish production figures of commercially harvested stocks. ADF&G acknowledges that FHIP is a subjective rating system and does not advocate its use (pers. comm., Steve Elliot, ADF&G Sport Division).

Justification for the Preferred Alternative's application of a two-tiered approach (Riparian Option 2 and Option 3) for fisheries habitat protection is lacking in the RSDEIS. The Service would prefer that the forest plan adequately protect fish habitat throughout the Forest by applying Riparian Protection Option 2 to most watersheds, and apply additional protection to watersheds of special significance to sport, commercial or subsistence fisheries through application of Riparian Option 1. Riparian Option 2 incorporates most of the recommendations of AFHA and the Service believes this level of protection is adequate in protecting the Forest's anadromous fishery resources. AFHA and the Fish/Riparian risk assessment panel both conclude that Riparian Option 2 is the minimum of riparian habitat protection that will adequately protect fish habitat throughout the Tongass. The FEIS should include a specific analysis of the projected effects of this management plan on fish and riparian habitat. Cumulative effects of the changes incorporated into the Preferred Alternative may substantially increase risks to Tongass fisheries, especially as a result of shorter timber rotations which are likely to increase disturbance levels. Application of Riparian Option 1 to watersheds of special significance will allow for increased assurance that these high-value resources remain intact.

Forest Management applying Riparian Option 3 is equivalent to current protection measures being implemented on the forest, which has been determined by AFHA to be inadequate in protecting anadromous fish habitat. Riparian Option 3, as described in the Preferred Alternative, is scheduled to be implemented on 80 percent of the fish bearing streams in timber harvest VCUs. Riparian Option 3 will likely result in serious degradation to small systems that are an important component of the Forest's fish stock biodiversity, and poses an exceptional risk to small spawning populations. Therefore, under the Preferred Alternative, 80 percent of the fish bearing streams on timber harvest VCUs would receive protection already documented to be inadequate; the Service does not recommend the use of Riparian Option 3.

Although the Service does not recommend application of the Preferred Alternative's Riparian Options 2 and 3, any watershed ranking approach should include factors such as:

1. Sportfish effort;
2. Subsistence fisheries (primary and secondary sites);
3. Known escapements (*e.g.*. pink salmon, which has most comprehensive escapement data, also consider coverage for chum and sockeye);
4. Coho capability index - which should be separated into two indices including both systems of high current production and those of high potential production with enhancement potential factored in;
5. Public input (commercial, sport and subsistence fishers) in deciding which streams have highest fish values;
6. Production per area rather than total production (small highly productive streams are also important and need protection);
7. Protection for sensitive stocks (Halupka et. al 1996); and
8. Protection afforded by wild and scenic rivers designation.

Page 3-41, Affected Environment. The RSDEIS identified 10,800 stream miles of anadromous fish habitat and 4,100 lakes and ponds, and another 12,200 stream miles and 4,700 lakes and ponds that would be afforded some level of protection. However, it does not specify how many of these stream miles, lakes, and ponds provide habitat for non-anadromous fish or the planned level of protection for non-anadromous fish resources. Also, it does not specify how many streams, lakes, and ponds provide habitat for non-anadromous fish only. The Service suggests that this information be provided in the FEIS.

The RSDEIS refers to the anadromous fishery resources produced on the Tongass National Forest as "major." The Service suggests that the fisheries may be more accurately characterized as being the most valuable resource, in terms of both fish production and Southeast Alaska employment.

The Service suggests that the FEIS provide an explanation for excluding from analysis all but commercial, sport, and subsistence harvested fish species in the Fish or Subsistence sections. Alternatively, we suggest that non-harvested and resident fish species of ecological significance be considered in analyses before selecting a final alternative.

Page 3-42. The Service suggests that the FEIS include documentation of actual production from fisheries enhancement projects rather than the projected yields presented in the RSDEIS. Production resulting from fisheries enhancement projects could be better understood if presented in terms of the percentage of total yield resulting from enhancement.

Page 3-43. When referencing PACFISH, the FEIS should clearly state that PACFISH science applies to the entire range of Pacific anadromous salmonids, including those occurring in Southeast Alaska and the Tongass National Forest.

Page 3-45, first paragraph. None of the fish management species include shellfish or marine finfish species (other than Pacific salmon species) or species that use the intertidal zone as a prime habitat area. The effects analysis is based on sediment risk to pink salmon, yet chum salmon are known to be at higher risk to suffocation from sedimentation (Holtby and Scrivener 1989; Scrivener 1991). The FEIS should address these issues.

Page 3-57, Watershed Reserves. The RSDEIS states that watershed reserves are identified to maintain a spatial distribution of watersheds in which no timber harvest would occur; however, these watersheds have not been identified in this document. The Service suggests that the FEIS fully discuss this strategy, and map the locations of proposed watershed reserves. It should also explain the criteria by which they were selected and how they relate to the Old-growth Reserves. The FEIS should explain how the watershed reserve strategy would comply with the National Forest Management Act requirement of maintaining viable, well-distributed habitat across the forest. The proposed watershed reserve strategy does not provide justification or adequate evidence for the premise that statistical troll districts represent differences or similarities between fish stocks. The Service is not aware of evidence that stocks of five salmon species from multiple watersheds, harvested by a variety of fisheries "take on consistent traits due to a common harvest management scheme". The Service suggests that the FEIS cite the scientific basis for this comment.

Also, the National Park Service (NPS) has expressed concern about the potential for resource development occurring on the Tongass National Forest to affect resident fish and wildlife populations and habitat quality in the contiguous lands and waters that are administered by NPS. For example, Glacier Bay National Park and Preserve and the Tongass National Forest share a common boundary on the northern part of the Chilkat Peninsula. On the west flank of the southernmost finger of the Chilkat Peninsula, there are areas of the forest proposed for logging within the Scenic Viewshed Areas. We are concerned that the fisheries within or contiguous to Park waters may be affected by logging. To provide a greater level of protection for these fisheries, we recommend that the FS provide Option 1 riparian protection for all Class I streams in this area.

RECREATION AND TOURISM

Page 3-79, Tourism. We are especially concerned about the FS's plans to permit helicopter "flight-seeing"

activities and the certainty that this activity will adversely affect the public's enjoyment of the National Park System. The RSDEIS indicates that the southeastern Alaska market for "flight-seeing" is expected to expand and suggests that the noise associated with "flight-seeing" may affect where people choose to recreate. Currently, helicopter "flight-seeing" is a considerable problem for Klondike Gold Rush National Historical Park. The Temsco Helicopter, Inc., staging area is located on the Skagway waterfront, 100 yards south of the Park's visitor center. Helicopters usually land and takeoff in groups of three or four at intervals of five to thirty minutes. Noise from landings and departures disrupt NPS interpretive programs in the visitor center and guided walks in the downtown Skagway Historic District. The disruptions distract audiences and degrade the quality of the park visitor's experience. Park visitors have complained.

In addition , we are concerned that FS activities, which are incompatible with recreation, may displace recreationers from the forest to the National Park System. The FS should address the potential for its activities to directly or indirectly affect the resources and public use of the National Park System in the FEIS.

SPECIAL INTEREST AREAS

Page 3-117, Special Interest Areas. There is no mention of the FS planned nomination of the Yakutat Forelands as a World Heritage Site. The FS should indicate the status of this nomination in the FEIS.

SUBSISTENCE

Subsistence uses of fish and wildlife are vital to the physical, economic, social, and cultural existence of rural residents of the area encompassed by the Tongass National Forest. In 1987-1988, 85% of almost 1500 rural households surveyed in Southeast Alaska reported harvesting at least one wild resource. Mean annual subsistence harvests were about 200 pounds per capita overall, with community averages ranging from 52 pounds per capita in Skagway to 517 pounds per capita in Edna Bay (Kruse and Muth 1990). An increase in subsistence harvests in the Tongass National Forest over the last ten years is suggested by the growing rural population in the area; U.S. Census data show that between 1980 and 1990 the rural Southeast Alaska population increased by 24%, from 23,223 to 28,779.

Harvest studies conducted in 1987-1988 showed that deer and salmon are the largest components of subsistence harvests in Southeast Alaska, each representing about 21% of total subsistence harvests (Kruse and Muth 1990). The habitats of both species are highly subject to impacts from forest practices.

Subsistence uses by Alaska Native and non-Native rural residents on Federal public lands are protected by Title VIII of Alaska National Interest Lands Conservation Act (ANILCA). The Service suggests that the TLMP revision should more explicitly recognize the subsistence priority, mandated by Congress, in the Tongass National Forest. It should also acknowledge the increasing levels of subsistence harvests by rural residents of Southeast Alaska.

Page 2-16, Goals Common to All Alternatives. A stated common goal is to provide for the continuation of customary and traditional subsistence uses for all rural Alaskans. However, the alternatives do not uniformly provide for the continuation of subsistence opportunities. For example, the alternatives vary greatly in the amount of habitat protection for deer or fish, which in turn affects subsistence opportunities. The Service suggests that a more detailed description of how each alternative would provide for the continuation of customary and traditional subsistence uses be included in the Final EIS.

Pages 2-17 through 2-57, Alternatives 1-9. Although recreation opportunities are quantified by such

measures as numbers of acres devoted to this use, miles of trails, or recreation visitor days, there is no similar quantification of subsistence opportunities and no explanation of which areas would be available for subsistence uses under the different alternatives. Subsistence opportunities should be quantified and included in the FEIS, especially for those alternatives for which subsistence is part of the theme (1-6). Partial measures of subsistence opportunities for the FEIS might include pounds per capita harvest, hunter days, number of hunters, amounts of resources (fish or wildlife populations) available for harvest, or number of acres available for subsistence harvests.

Page 3-120, paragraph 5. The Service suggests that the FEIS address the issue that, although sea otters are not used as a food resource by Alaska Natives, they are harvested for subsistence use to create handicrafts for sale and trade. Subsistence use may include parkas, gloves, hats, and other items.

Page 3-120, paragraph 7. The information presented in this paragraph (importance of shellfish to subsistence users) provides additional impetus to include consideration of the effects of the timber operations on shellfisheries and shellfish habitat in the FEIS.

Page 3-121, last paragraph. This sentence implies that the main, if not the only, source of increased competition for subsistence users is other subsistence users resulting from an increase in the populations of rural communities. However, in the case of wildlife, increased competition may also come directly from sport hunters and indirectly from timber harvesting. Subsistence users of fisheries resources compete with both sport and commercial users. The Service suggests that the FEIS include this information.

Page 3-122, paragraph 4. Although it is appropriate to use deer as an indicator species, it would be appropriate to include a second indicator species to reflect the potential impacts of timber operations on fish or marine invertebrates, since they, too, are important subsistence resources.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES

For the purposes of the Endangered Species Act (ESA), the Service no longer maintains lists of species being considered for listing, such as those formerly designated Category 2 candidate, or Species of Concern. Candidate species are now defined as those species for which the Service has on file sufficient information on biological vulnerability and threats to support proposals as threatened or endangered. No species meeting the current, revised definition of "Candidate" occur in Southeast Alaska.

Redefinition of Candidate Species does not reduce concerns that the Service may have about particular species or groups of species facing identified threats or population declines. The Service requests continued FS cooperation in efforts to identify species whose status may be at risk, and urges consideration of these species when developing and implementing area project plans so that these species are not significantly adversely impacted.

The Service is pleased that the RSDEIS identifies and discusses the conservation status of several species, including former Service "Species of Concern" and Alaska Natural Heritage Program "Species of Ecological Concern." Several of the species on the ANHP list are endemic to the Alexander Archipelago. The Service recognizes that management of the forest has the potential to significantly affect the status of the flora and fauna endemic to the Alexander Archipelago, particularly organisms having restricted ranges. The RSDEIS states that the environmental consequences for former Category 2 and Sensitive species were discussed in the 1991 Supplemental DEIS and are still considered accurate with improvements to the Standards and Guidelines. However, the RSDEIS does not consider the cumulative effects of all forest uses on these species,

nor does it provide sufficient analytical information or a risk assessment for the preferred alternative.

The Service recommends that the FS include a cumulative effects analysis on the fish and wildlife species mentioned in the Threatened, Endangered and Sensitive Species section of the RSDEIS before the plan is approved, and that each of FS's alternatives be given equally comprehensive analyses. The Service also recommends that the FS use the information and management recommendations contained in the Interagency Conservation Assessments for the Alexander Archipelago Wolf, Queen Charlotte Goshawk, and Marbled Murrelet as the best available scientific information when developing and implementing the forest plan and project plans in relation to those species. The analysis provided in Chapter 3 in the RSDEIS suggests that, in time, the viability of several endemic species of small mammals, and other vertebrates are of concern, particularly if certain proposed alternatives were implemented. Alternative 3 was identified as minimally acceptable for wildlife viability for several species. The Preferred Alternative is a modified Alternative 3 with attributes that were rated high risk for maintaining viable populations by members of the Marbled Murrelet, Goshawk, and Marten Assessment Panels.

The Rationale and Conclusion sections of the Forest Supervisors' letter state that the Preferred Alternative "incorporates a wildlife habitat strategy for maintaining well-distributed, viable wildlife populations similar to what was proposed in 1994 that was an important factor in the decision by the U.S. Fish and Wildlife Service not to list the Alexander Archipelago wolf and the Queen Charlotte goshawk under the Endangered Species Act." Similar statements are found on pages 4 and 11. This quote implies that the Preferred Alternative incorporates habitat management practices that the Service agreed would maintain viable populations of species for the long-term, i.e., 10 to 15 years, the period of time for which the Revised TLMP is intended to guide the management of the Forest. The Service did not object to the proposed implementation of Alternative D in the (never implemented) 1994 interim habitat management guidelines **as an interim measure**, with the understanding that the revised TLMP would contain the results of the goshawk conservation assessment. (USFWS, letter to USFS, March 22, 1995.) However, the Service has major concerns if the 1994 interim guidelines are to be implemented for the long-term, particularly for the Queen Charlotte goshawk and the Alexander Archipelago wolf. The Service recommends that a long-term ecosystem management strategy incorporating the goshawk and wolf conservation assessment information be developed and included in the Revised TLMP rather than incorporation of the 1994 interim guidelines.

Page 3-128, fourth paragraph. The Service notes that the following addition is needed after the fifth sentence:

> "In part, the decisions were based on expectations of the USFS employing species specific conservation strategies into the revised plan. The Service encourages USFS adoption of conservation reserve strategies in the Revised Forest Plan to avoid compromising the available habitat necessary to maintain population viability."

Page 3-129, Natural Heritage Program Rare Species Global Rankings. The Service is pleased to see the FS refer to the Alaska Natural Heritage Program's global ranking system. The Service has recently recognized the same resource as a valuable tool in its identification of potential candidate species. The consistency between our agencies will serve us well in the future. As a cautionary note, Alaska's Heritage Program is in its infancy compared to programs in most other states. Consequently, no lists or global rankings exist for nonvascular plants or invertebrates. Certain classes within these two taxonomic groupings are often highly speciated, and may serve as first order indicators of environmental degradation. The FS is encouraged to identify species within these taxa for further planning consideration and monitoring in the FEIS.

Page 3-131, Table 3-47. The second column of this table identifies Fish and Wildlife Service Species of Special Concern. The Service no longer maintains lists of species being considered for listing such as those formerly designated Species of Concern or Category 2 Candidate Species.

Page 3-133, first paragraph. The Service reaffirms its no effect determination for the American peregrine falcon (*Falco peregrinus anatum*).

TIMBER

We suggest that the FEIS give direction for project planners to modify current project planning to reflect the Revised Plan. The Service is concerned that current timber harvest planning may preclude management direction and habitat protection identified in the RSDEIS. The Service is concerned about the effects of current forest management practices on wildlife, fish, species diversity, viability, site productivity, and sustainable yield. Although the timber harvest component would impact annually a relatively limited percentage of the entire forest acreage, the areas identified for harvest represent the most diverse and productive habitat types for fish and wildlife (Schoen and Kirchhoff 1988).

Past logging also disproportionately targeted the highest volume forest that is the most important habitat for old-growth associated species. In fact, in at least two of the Forest's three management areas, approximately half of the high volume old-growth timber has already been liquidated (USFWS, W. Stieglitz letter to USFS, 8/8/94). A number of factors put various wildlife species and subspecies at disproportionate risk, because habitat loss has resulted in low population density, isolation of populations, restricted range, dispersal barriers, habitat fragmentation, and restricted prey bases (Suring et al. 1993, Kiester and Eckhardt 1994, USFWS, W. Stieglitz letter to USFS, 8/8/94).

Where rotation regimes are implemented, particularly in even-aged management areas, the selected rotation should be at least 300 years so that old forest habitat structure is achieved near the end of the rotation. If the FS implements a rotation of less than 300 years, significantly more and larger reserves of old-growth forest, particularly high volume old-growth forest, must be provided to ensure continued viability of dependent fish and wildlife resources. Forest lands allocated to timber production under a continuous 100 year rotation results in a permanent change from the natural steady-state old-growth forest condition (Alaback 1984).

Disturbance Ecology

The discussion of management that mimics natural disturbances as an alternative to even-aged management is deficient. The old-growth forest subsection beginning on page 3-12 needs discussion on the concept of disturbance ecology and the effects of disturbance regimes on stand development and structure. The natural disturbance regimes as characterized in the referenced research provide an ecological basis for nature-oriented forestry. However, spatially accurate inventory information (on size, frequency, and intensity of disturbance) is lacking. The opportunity exists to translate and integrate disturbance ecology into practice, to mimic the natural processes under which the Tongass Forest evolved through selective harvesting. The Service suggests that the FS develop and implement a forest management strategy that is based on natural disturbance regimes, and that the concept of disturbance ecology be incorporated into the FEIS using the natural disturbance research done by Nowacki 1995, and Ott 1995.

The Service is pleased that silvicultural alternatives to clearcutting are being considered in the proposed plan. Clearcutting was identified as one of the five major issues of the TLMP revision. Yet it appears that the Preferred Alternative proposed to implement only limited uneven-aged and two-aged management

silvicultural prescriptions. It is not clear what is meant by the term "where site-specific conditions permit." Unless there is some direction to apply silvicultural alternatives, there may be no departure from harvesting trees under the traditional, yet controversial, clearcut prescription. The Service recommends that the selected alternative include direction for applying more and different types of silvicultural alternatives.

The Service is concerned that landscapes have an increasing number of large areas in the stem exclusion stage, leaving little structural diversity and connectivity of forest blocks, and posing difficulty for some species to recolonize those areas from surrounding stands. Areas at this stage (young and uniform in structure and species) are of little value for wildlife and provide very little large woody debris to provide nutrients in streams and refugia for aquatic species. The stem exclusion stage prevents movement of animals through the forest stand due to the density of vegetation (Alaback 1984).

The Service is also concerned that harvesting in a short rotation period (100 years) would occur in young stands in which timber volume and value production are substantially less than their potential, preventing harvested areas from ever reaching old-growth stage again. In effect, a significant portion of the most productive old forest habitat would be permanently removed from the landscape.

Compliance with Best Management Practices

The alternatives analysis does not consider the significant cumulative impacts of failure to comply with Best Management Practices (BMPs) and Standards and Guidelines. Violations of these criteria have occurred in the past, as can be seen by evaluation of old timber contract non-compliance documentation. The results are a reduction in the effectiveness of the BMPs and Standards and Guidelines. Some examples of noncompliance incidents include: 1) failure to provide stream protection measures; 2) unauthorized harvest of Class III stream buffers; 3) incursions into LUD II estuarine areas to allow yarding of an adjacent harvest area; 4) breaching of buffer strips; and 5) failure to clean up debris from protected Class III streams.

The Service suggests that quantification of impacts of failure to comply with BMPs be presented and evaluated in the FEIS.

Page 2-10, third paragraph, second sentence. The RSDEIS states that the use of timber stand rotation averaging more than 200 years was eliminated from detailed study because it appeared to create uneconomic logging conditions that would likely be infeasible for any level of timber program. This position is unsupported in the document since it was not given further consideration. In the February 6, 1996, letter to Beth Pendleton, USFS, TLMP Team Co-leader, the Service recommended consideration of a 300 year rotation for alternatives where even-aged management would be implemented. The goshawk and murrelet Assessment Panels concluded that landscapes managed under a timber harvest rotation longer than 200 years would provide a high likelihood of sustaining viable populations of those species. The Service suggests that such an alternative be given further consideration, with a full analysis completed in order for this alternative to be compared with the others.

Page 2-55, second paragraph. The three alternative silvicultural methods for timber harvest used in the forest plan alternatives are mentioned in this paragraph. The Service believes that other methods such as shelterwood, seed tree, and overstory removal should be used as permitted in the Standards and Guidelines. All the appropriate methods should be available (considered) at the project level based upon site specific analysis done by the interdisciplinary team.

Page 3-135, Extended Rotation. The RSDEIS states that old-growth forest conditions are normally not

reached until a stand is 160 years old or older. However, on page 3-12 in the Biodiversity section it states "The development of old-growth characteristics begins at approximately 250 year." The FEIS should resolve this discrepancy. See the previous comments for Page 3-12.

Page 3-183, Proportionality. The RSDEIS suggests that the proportionality rule directed by the Tongass Timber Reform Act Section 301(c)(2) would be implemented at the project level. However, the Timber section beginning on page 4-101 of the Standards and Guidelines does not address compliance with the proportionality rule, or include identification of Volume Classes 6 and 7 during the resource inventory stage at the project planning level. The Service is concerned about the liquidation of a disproportionate amount of higher volume old-growth timber, especially Volume Classes 6 and 7, because the timber database has not been completely field verified, and the geographic information system (GIS) lacks precision in differentiating volume class characteristics or placement.

Consequently, the Service recommends a cautious approach be employed to conserve existing old-growth (particularly high volume) blocks, as recommended in the 1992 draft VPOP Strategy and to comply with TTRA. The GIS information should be used only to the extent that provides statistical accuracy. The proportionality rule cannot be implemented without identifying the Volume Classes 6 and 7 stands at the project level. The Service suggests that guidelines be added providing direction to conduct these inventories and that the FS continue to revise and standardize the application of the timber database. The Service also suggests that the proportionality requirement be applied to independent sales. (See comments for page 4-102, Timber Resource Planning)

TRANSPORTATION

Page 3-191. The Service suggests that this section be expanded to include more discussion of the effects roads have on wildlife. Some subsections in the Wildlife section briefly discuss the influence of roads on wildlife, but this issue should be discussed further in the Transportation, Environmental Consequences section.

The Service is concerned about the cumulative effects road expansions have had and will continue to have on fish and wildlife populations. Although the FS included a forest fragmentation analysis, it is incomplete without including past, present, and future effects of roads.

The Service is responsible for certain Federal trust resources, including migratory bird species, such as the Pacific-slope flycatcher, Townsend's warbler, hairy woodpecker, and brown creeper (the latter two are Forest Service Management Indicator Species). The Port Houghton/Cape Fanshaw Timber Sale Draft EIS (USDA 1995, page 4-34) states that old-growth is ranked as the most important breeding habitat for 41 bird species in Southeast Alaska, and that reduction of this habitat would result in loss and fragmentation of significant habitat for them. However, the RSDEIS does not adequately address direct and cumulative impacts each alternative would have on these species potentially affected by further fragmentation caused by roads.

Further old-growth fragmentation may reduce local populations of old-growth dependent neotropical bird species due to an increase of predation, competition, hatching failure, loss from inclement weather (Chasko and Gates 1982), and noise disturbance (Ferris 1979). Forest edge-effect predation can extend as far 50 to 600 meters into the forest, requiring forest tracts to be greater than 247 acres in size before forest-interior features are found (Chasko and Gates 1982, Wilcove et al. 1986, and Yahner and Scott 1988). Chasko and Gates (1982) found that due to predation, songbird nest success rates were lower in nests less than 45 meters from the forest edge than in nests further in the forest. [Corvids, such as crows, raven and jays, are edge

species that are known forest predators.]

Theoretically, as more forest is cut and roads built, more old-growth edges would be developed that are exposed to wind, snow accumulation, and radiant energy, thus changing the forest microenvironment (flora and fauna) that interior forest dependent species (*e.g.*, brown creeper) require (Wilcove 1987). Old-growth forest stands provide important winter habitat features, such as large dominant trees, dense tree canopy, multilayered canopy, and snags, for species such as golden-crowned kinglets and brown creepers. They provide thermal protection from wind and precipitation (Della Sala *et al.* 1994) that forest edges do not. Della Sala (*Id.*) observed particularly low numbers of golden-crowned kinglets in young-growth following storms that coated tree branches with ice and snow, preventing them from foraging for insects.

Studies have shown that roads and trails less than 10 meters wide adversely impact nesting bird communities in forested areas (Askins 1994). The FS has built an extensive road system into large tracts of old-growth forest blocks throughout the Tongass in order to harvest and transport logs to transfer facilities. We recommend that the FS begin analysis of the adverse impacts that the immense existing and planned road system (permanent and temporary) has on forest fragmentation and the old-growth dependent breeding bird populations.

Page 3-192. The Service suggests that additional information similar to the following be added to this section to better describe the environment that would be affected by the transportation system:

> "Activities that expose soil to erosion (such as logging and cutting roads into steep mountainsides) increase sediments entering streams, rivers and marine environments. Aquatic ecosystems, including estuarine and marine habitats, may be harmed by improper land-use practices at any location within a watershed.
>
> Suspended sediments, particularly fine silts and clays, can smother marine organisms by clogging their respiratory and feeding organs, and reducing the light available for photosynthesis. Upon settling, these sediments can cover photosynthetic surfaces, bury benthic organisms, and render hard substrates unsuitable for epifaunal colonization.
>
> In ecosystems with characteristically low sediment loads, increased sedimentation and turbidity can be especially harmful. Sedimentation is very low throughout most of the open ocean in Southeast Alaska, but is also low in some nearshore ecosystems. These areas produce communities of species that flourish in clear waters, such as kelp beds. Such communities are harmed by activities that increase suspended sediments. The logging of Southeast Alaska, an area of high rainfall and steep terrain, has markedly increased sediment loads in some rivers and coastal waters, degrading water quality, smothering salmon nursery areas, and coating rock bottoms with thick layers of silt (James 1956; Ellis 1970; Ellis 1973; Hancock 1981; Koski and Walter 1981; Sinnott 1988)."

Pages 3-192 and 3-193. Discussion of the environmental consequences of roads, log transfer facilities, and log rafts on the intertidal and subtidal environment is incomplete. The direct impacts are discussed very briefly, and no discussion is provided on the indirect and potential cumulative effects on species that forage in intertidal and subtidal areas including sea otters, harlequin ducks, pigeon guillemots, river otters, bald eagles, and other species. The Service suggests that a comprehensive discussion on the environmental consequences of these activities on intertidal and subtidal communities and habitats be included in the FEIS.

WILDLIFE

The Service agrees with the inclusion of large, medium, and small old-growth forest reserves and wildlife travel corridors. However, the Service continues to be concerned that the current flexibility of old-growth reserve locations, size, shape, and composition could compromise the fish and wildlife productivity of those remaining areas. The Service supports forest-wide landscape approaches that incorporate reserve components as defined in the VPOP Strategy with the Peer Review suggested modifications, be included in all project alternatives.

Page 3-207. The RSDEIS states that the Management Indicator Species models used in the 1991 SDEIS are not used in this draft for a variety of reasons. The Service suggests that these models be improved and refined to fit the scheme for the Revised Plan, and that models be developed for the species of concern for future analyses. Appropriate habitat capability and/or population viability models are needed for the entire Tongass Forest, not just individual timber sale areas or administrative regions. Project planners need this or some other method to measure the effects of the Standards and Guidelines.

Page 3-207, Table 3-87. None of the management indicator species provide a measure of evaluating the effects of timber operations on the marine environment. Additionally, the models appear to consider only the direct effects of timber harvest, and do not include indirect and cumulative effects of ongoing logging operations. The Service suggests that the FEIS address this need for information, and develop a wildlife model that would include these species for use at the project level.

Page 3-215, Table 3-88. This table uses volume classes, when these classifications have been changed to "Higher, Medium, and Lower Volumes."

Page 3-255, Table 3-100. This table shows the percent of remaining interior old-growth and higher-volume old-growth in a selected portion of the 21 biogeographic provinces on the Tongass. The RSDEIS states that the old-growth habitat changes for the areas in this table are such that there may be potential for reaching. local viability concern for old-growth dependent species with additional habitat alterations. The Service urges the FS to manage these areas conservatively in light of this concern, and defer timber harvests in these areas during this planning period (10-15 years).

Page 3-255, last paragraph. The Service encourages the FS to protect the "pinch-points" identified in the RSDEIS as important for natural connectivity to allow dispersal or migration of certain land-based species. The Service recommends that the FEIS include a map showing the location of these areas, and adopt Standards and Guidelines that would defer timber harvest in them.

Sitka Black-tailed Deer

Information provided on Subsistence (pages 3-119 through 3-127) and the description section of 32 Communities (pages 3-328 through 3-441) state that:

1. "Subsistence hunting, fishing, trapping and gathering activities represent a major focus of life for many Southeast Alaskan residents." (Page 3-119)

2. "...deer, in most communities, are the principal subsistence species likely to be affected by the alternatives." (Page 3-329)

In addition, the Sitka Black-tailed Deer Standard and Guideline Effects Analysis (February 18, 1996) analyzed the possible effects of the deer winter range Standard and Guideline and considered it to be "conservative relative to maintaining deer habitat capability because the standard does not account for potential increased demand for the deer resource." It also states, "This forestwide Standard and Guideline is specifically designed to address concerns raised by subsistence and sport users of the deer resources." Therefore, the Service suggests that the deer winter range Standard and Guideline be included in the selected alternative and applied forestwide to meet the objective of "maintaining current opportunities for deer hunting by maintaining deer habitat capability" (page 3-222 of the RSDEIS).

Page 3-208, Sitka Black-tailed Deer and Page 3-210 Gray (Alexander Archipelago) Wolf. The effects of timber harvest on deer are significantly understated. The FEIS should state that clear-cut logging results in high-magnitude, low-frequency disturbance of forests, just the opposite of what naturally occurs (Hanley 1992). After the initial years following logging there is a rapid increase in deer forage due to the large amount of light penetration created by open stand conditions (Alaback 1982, 1984a). However, after the initial 20-30 years, there is a 100-150 year period in which conifers overtake shrubs and the overstory canopy becomes so dense that little light reaches the forest floor. Understory vegetation (deer forage) is shaded out, often completely (Alaback 1982, 1984; Kessler 1982). During this even-aged stage, forest stands are of little value to wildlife, and are very low in biodiversity (Hanley 1992, Kessler 1982, Sidle 1985). Old-growth conditions characterized by a multilayered canopy, diversity in structure and composition, usually do not appear for at least 250 years in Southeast Alaska (Alaback 1982, 1984). The Service suggests that this section of the RSDEIS be revised to include this information.

Page 3-129, first paragraph. The Service suggests that project areas be inventoried at the project level to identify Volume 7 type stands separately and that harvest of this type of stand be prohibited or limited. Prior harvest of Volume 7 stands has had significant adverse impacts on deer populations in some areas of Tongass Forest. (See the comment above for page 3-13, Biodiversity.)

Page 3-221, third and fourth paragraphs. On May 1 and 15, 1996, a group of interagency biologists met to discuss the results of the Panel Assessment deer habitat capability model and make appropriate changes using the harvest data and new snow level and predator data. They determined that the carrying capacity of 75 deer per square mile used in the Panel model was too low, considering that more deer than that were being harvested in some areas. Therefore, 125 deer per square mile was used as the carrying capacity for optimum deer habitat (Habitat Suitability Index =1.0 - 125 deer/sq. mi.). Our experience indicates that the information generated from this model would be used literally, although not appropriately, at the project level. For example, if projected habitat conditions minimally meet those described in the model for a certain species after completion of forest projects, then it is assumed that the needs of the species are met and the project will not adversely affect that species. This assumption is made without questioning the adequacy of the model and in absence of a broad scale analysis of its application. The most updated information should be incorporated so that models more accurately define species' needs. The Service suggests that the FEIS use the updated model produced after the deer assessment panel to determine impacts to deer habitat. However, caution should be taken when applying this model, as the data used from hunter surveys may be biased due to inconsistent reporting by the hunters (J. Gustafson, ADF&G biologist, March 24, 1995, pers. comm.).

Page 3-222, last paragraph. The RSDEIS states that for the Wildlife Analysis Areas (WAA) in which the average deer harvest was 20 percent or higher than the carrying capacity, no more timber harvesting would be permitted. Table 3-89 also shows estimated changes from existing (1995) habitat capability after each alternative. The Service is concerned that this analysis does not consider the timber sales that are being released before this Revised Plan can be implemented (*i.e.*, Northeast Baranof). As a result of on-going

timber sales, the habitat base will be less by the time the Revised Plan is implemented than what is shown in this table for 1995. The WAA 3312 appears to be one of the WAAs in which the average deer harvest was 20 percent or higher than the carrying capacity, which according to the RSDEIS would have no additional timber harvest permitted. However, harvest units in the Northwest Baranof Timber Sale ROD are located in this WAA. The Service suggests that the FEIS include these sales in this analysis or defer harvest from the units recently planned for harvest located in these WAAs.

Page 3-223, Table 3-89. This table shows the deer habitat percent change from 1995, but it should also show changes from 1954 to give a better understanding of the cumulative effects of timber harvest on deer habitat in each WAA. For example, the table shows that in WAA 1317 the proportion of deer habitat capability remaining at 2095 from 1995 on Prince of Wales Island is 81 percent, but it does not show cumulative effects of timber harvest that occurred between 1954 and 1995. In other words, the table only displays incremental changes occurring between 1995 and 2095, but does not show the overall decline in deer habitat capability since the inception of commercial timber harvest 40 years prior to the evaluation period. As a result, the reader is presented with an incorrect, underestimated impression of the total impact of logging on deer.

Page 3-239, first paragraph. Concerns raised about reductions in deer winter habitat stated in this paragraph were not discussed in the Deer section of the RSDEIS. The Service suggests that they be included in the Deer and Subsistence sections in the FEIS. The Service also encourages the FS to select an alternative that provides protection to deer winter habitat.

Page 3-239, third paragraph, third sentence. The RSDEIS refers to Table 3-89 to show that six WAAs support comparable or lower modeled deer densities of 13 deer/mile^2, but the table does not identify these WAAs. The reader would have to complete several calculations to discover which six WAAs this section is discussing. The FEIS should clearly state which WAAs support comparable or lower modeled deer densities of 13 deer/mile^2, which "may be at risk of either not sustaining current wolf populations, or current levels of human deer harvest or both."

The Supplemental DEIS states that "(a) Forest-wide Standards and Guidelines in the Proposed Forest Plan maintain sufficient deer habitat capability to support at least 13 deer/mile^2 where deer are the principal prey of wolves." The Standards and Guidelines do <u>not</u> maintain sufficient deer habitat capability, rather they provide direction for the land managers to manage for sufficient deer habitat capability.

Page 3-239 and page 4-129 in the Standards and Guidelines. The RSDEIS states that a proposed Forest-wide Standard and Guideline maintains sufficient deer habitat capability to support at least 13 deer/mile^2 where deer are the principal prey of wolves. This Standard and Guideline should be flexible enough to allow use of the most current deer habitat information. The Deer Habitat Capability Model is still being updated using new hunter, snow, and predator information. Local empirical information would provide the best source for management direction. (See the comment for page 4-129 in the Forest Plan Section.)

Bear

Page 3-209, Brown Bear. The FS is commended for utilizing the panel assessment process to evaluate the alternatives in terms of the estimated relative risks to a species or habitat of concern. However, additional information is necessary to more fully assess the effects of the alternatives. For example, alterations in timber cover can affect the quality of brown bear food and cover (Blanchard 1983, USFS 1985a) causing bears to change their use of an area. Brown bear habitat can be affected by timber harvesting as follows:

1. Vegetation arrangement and abundance can be changed, affecting the quality and quantity of food and cover (Ruediger and Mealey 1978, Sigman 1985, USFS 1985b).

2. Existing aquatic regimes in which bears forage, may be indirectly impacted; surface and/or subsurface water movement and/or distribution may be changed (Archibald 1983, Ruediger and Mealey 1978). Logging around small grassy parks (bear foraging areas) substantially alters water levels by increasing runoff and blockage of water by slash (Russell 1974).

3. Roads have direct and indirect impacts on bear habitat. Human use patterns in the affected area may be altered (Ruediger and Mealey 1978, USFS 1985b) and this can be more detrimental to brown bears than actual alterations in vegetation. Logging practices make brown bear habitat much more accessible to humans (Craighead 1980), which may lead to increased brown bear/human confrontations.

The following excerpts were taken from a U.S. Fish and Wildlife Service July 18, 1989, letter to the FS referring to the Grizzly Bear Compendium (pages 69-71) discussing the effects of roads on brown bears:

> "Problems associated with roads and increased road densities have had a major influence on brown bear populations and habitat use patterns in numerous, widespread areas (Tracy 1977, Elgmark 1978, Schallenberger and Jonkel 1980, Jonkel, Burngarner and Lee 1981, Brannon 1985). Lyon and Basile (1980) and Lyon (1984) discussed the general nature of road impacts on wildlife with particular reference to brown bears and ungulates. These impacts include lethal encounters, habitat modification, and various stress-related behavioral adaptations."

Listed here are several types of impacts the Service suggests be addressed in the FEIS:

1. Increased human access into brown bear habitat. Consequences may include increased use of adjacent backcountry areas, settlement, introduction of artificial foods and attractants and additional mortality factors.

2. Use of roads, especially secondary roads, as brown bear travel corridors into developed areas causing bear/human conflicts.

3. Direct bear mortality from legal and illegal harvest and other factors resulting from increased human-bear encounters.

4. Avoidance/displacement of brown bears away from roads and road activity.

5. Changes in bear behavior, especially habituation, due to on-going contact with roads and road activity.

6. Brown bear habitat loss or modification due to roads and road construction, including vegetative and topographic disturbances.

The scientific literature indicates that the degree of impact to the brown bear largely depends upon how, where, when, and at what level timber harvest activities are carried out in brown bear habitat. Based upon the

scientific literature, the Service concludes that timber harvesting per se is not likely to jeopardize the habitat if:

1. Cutting unit sizes meet the Retention Visual Quality Objective (page 3-154 of the Proposed Revised Forest Plan).

2. Timber harvesting is deferred in areas adjacent to past cutting units until cut units reach the age when they provide adequate thermal and hiding cover (Ruedider and Mealy 1978).

3. The non-forested components, such as avalanche chutes, wet meadows, and side hill parks that provide bear food, are left undisturbed.

4. Adequate leave strips are left between cutting units and between roads and cutting units to provide cover for bear security and movement (page 3-88 and 4-126 of the Proposed Revised Forest Plan).

5. Roads are managed with considerations for:

   a. Obliterating the road and revegetating the road bed after logging.
   b. Closing roads on a seasonal or year-long basis to provide security and maintain habitat effectiveness.
   c. Avoiding loop roads in planning transportation systems.
   d. Designing roads to avoid impacting important habitat components.

We recommend that the above stipulations be incorporated into additional Standards and Guidelines to avoid and minimize impacts on brown bears.

Page 3-209, Brown Bear, third paragraph, third sentence. The number of brown bear kills not associated with legal hunting seasons should read "67 known kills"; the total is generally estimated by Alaska Department of Fish and Game (ADF&G) to be at least twice the known number.

Page 3-210, Black Bear. The comments above for brown bear also apply for the black bear.

Wolf

The Service recommends that winter deer range identification and management be part of an overall wolf management strategy that ensures wolf viability throughout its range in Southeast Alaska. The strategy should incorporate sport and subsistence harvest issues. Human take of deer should include habitat issues and not rely entirely on recent harvest statistics. The Service believes the current deer "habitat capability" model employed in the proposed plan is not adequate to accomplish the required environmental effects analysis. A new, comprehensive model or methodology using appropriate empirical information (*i.e.*, predators, snow accumulation) must be developed to meet the need for adequate analysis. The Conservation Assessment for the Alexander Archipelago wolf provides the best available information and management recommendations for this species.

Page 3-210, Gray (Alexander Archipelago) Wolf. Add the following after the second sentence of the fourth paragraph:

"The U.S. Fish and Wildlife Service's 12 month 'not warranted' finding was published in the Federal Register on February 23, 1995, pursuant to the Endangered Species Act. The December 1994, Interagency Memorandum of Understanding commits participating agencies to work together to achieve common conservation goals through protection and management of habitats, populations, and ecosystems in order to avoid the need for listing species."

"The U.S. Fish and Wildlife Service estimates that within the next 10-30 years given historic and on-going old-growth harvest on Federal, State, and Native corporation lands, significant localized reductions in the Alexander Archipelago wolf population would occur, especially when clear-cuts transform into second growth stands."

Bald Eagle

Page 3-211, Bald Eagle. This paragraph can be improved by making the following changes. Change the first sentence to read:

"North America's bald eagle population reaches its highest density in Southeast Alaska."

Change the third sentence to read:

"The most recent population estimate (1992) was over 13,000 adult birds; more than 8,000 nest sites have been identified to date (1996). Their nesting habitat is primarily old-growth trees along the coast and within riparian areas."

Change the last sentence of the paragraph to read:

"...nest trees are surrounded by a minimum 330 foot radius protective habitat management zone."

Brown Creeper

Page 3-212, Brown Creeper. The Service suggests that the FEIS include the statement that total acres of high volume old-growth in the Forest are not all brown creeper habitat since the brown creeper is an interior forest species. The RSDEIS states that optimum brown creeper habitat use occurs when patches of preferred habitat are greater than 15 acres, but a patch that small is all edge (S. Kim Nelson, Oregon State Univ, May 27,1993, Letter to Larry Edwards). Interior old-growth forests provide important winter habitat for brown creepers. They provide thermal protection from wind and precipitation (Della Sala *et al.* 1994) that forest edges do not. A patch that is all edge would not provide such protection. The Service doubts that 15 acres is large enough to provide brown creeper habitat, and suggests that the FEIS address this issue.

Marbled Murrelet

Page 3-241, paragraph 1. The RSDEIS states that the strength of the association between murrelet nesting habitat and highly productive old-growth forest has not been established, then it uses the fact that two of the four murrelet nests found in Southeast Alaska had been on the ground to substantiate that statement.

It is the Service's understanding that all four nests were in productive old-growth habitat and though two ground nests have been discovered in Southeast Alaska, the Service believes there is a strong association between several old growth forest attributes and marbled murrelet nesting, based on studies conducted

elsewhere. Hamer and Nelson (1995) summarized marbled murrelet habitat characteristics found in Alaska, British Columbia, Washington, Oregon, and California. All 61 tree nests found in North America have been found in old-growth and mature forests. Most nests found in Alaska were located in forests with significantly larger tree sizes (≥23 cm. d.b.h.) and higher volume classes (1,883-5,649 m^3/ha) than other forest types. The mean height of Alaska nest forest stands is 23 meters and the mean canopy closure is 62 percent. The nests used in this summary were usually located near or on a tree bole covered with moss. The Southeast Alaska nest found on the ground in 1993 was located on a platform of moss on a cliff at a height of 11 meters if approached from below. Just because nests were located on the ground does not invalidate their association with old-growth forest.

Page 3-241, second paragraph. The RSDEIS states the short-term risks to marbled murrelet viability are likely minor, considering the population estimate of 250,000 birds in Southeast Alaska. The Service remains concerned about the marbled murrelet populations in Southeast Alaska because of the 1.5 million acres of productive old-growth harvest proposed in some alternatives, coupled with harvests completed to date. Murrelet populations may not decline immediately following habitat perturbations due to the high adult survivorship and the low reproduction rate of this species (Piatt and Nasland 1995). Population numbers may not reveal the effects of an impact for years. Research conducted in the murrelet's Pacific Northwest range suggests that there are sufficient indicators to demonstrate a cause and effect relationship between loss of mature forest and a reduction of murrelet populations. As the forest is fragmented further, more forest edge is created, increasing the probability of nest predation (Nelson and Hamer 1995). A plan should be developed prior to each timber harvest that identifies threshold levels and management measures that would be taken if the murrelet population of foraging birds drops significantly below expected or existing numbers. However, murrelets in Southeast Alaska are known to fly considerable distances to forage (FWS unpublished data), thus local water use may not accurately reflect nearby upland use. The FEIS should analyze how cumulative and secondary impacts of timber harvests on FS and adjacent private lands would affect this species.

Goshawk

The revision process has not incorporated an adequate wildlife strategy for maintaining a well-distributed, viable population of goshawks over the next 100 years. Viability of such a long-lived species cannot be considered for only a 10-15 year period. This is not a biologically valid approach and is not supported by either the Conservation Assessment for Northern Goshawk or the panel of goshawk experts convened by the FS. The conclusion made in the Forest Supervisors' letter, that increased risks to wildlife populations are small under Alternative 3, may not be true for goshawks in the long-term. Information contained in the Northern Goshawk Conservation Assessment and Goshawk Assessment Panel suggests that the Preferred Alternative would not represent the cautious landscape management that the Service has advocated for several years. Also, given the history of the effort needed to complete forest plan revisions, it may be much longer than 10-15 years before adjustments are made in harvest outputs under the Preferred Alternative.

There is no evidence that the two-aged timber harvest and stand management system, which would leave 10-20 percent of trees within some timber units, would be sufficient to provide adequate foraging or nesting habitat for goshawks in those units. The assumption is that all timber units represent direct and permanent loss of habitat for goshawks in the revised plan. Surveys by the Service (Schempf 1995) suggest that there is not a reserve of goshawks outside of timber sale areas to be able to replace decreased goshawk productivity from habitat loss within timber sale areas.

The Supervisors' letter offered no explanation as to why the Preferred Alternative includes only a 100 year

rotation after the goshawk assessment panel rated other alternatives with such a short rotations as having a low likelihood of providing habitat to sustain well distributed, viable goshawk populations (Page 3-231 of the RSDEIS). The Service suggests that the FS adopt the recommendation made by several Viability Assessment Panels (Goshawk, Marten, Small Mammals, Old Growth) to extend the rotation period because 100 years substantially increases the risk of species non-viability. The Service's recommended management rotation is 300 years.

The Forest Supervisors' letter states that the Preferred Alternative would reduce old-growth on the forest from 91 to 73 percent. The old-growth is not stratified here, however. The actual loss of critical goshawk habitat could be much higher, especially if goshawk populations are clumped. If the proposed habitat reserves are not implemented in a timely or adequate manner, the risk for reducing goshawk numbers and distribution would increase. The RSDEIS does not adequately describe the proposed reserve strategy. The Service recommends that the FEIS describe the proposed reserve strategy in more detail, with maps included. (See comments on the Old-Growth section.)

Page 3-214, Queen Charlotte (Northern) Goshawk. The Service suggests adding the following after the third sentence of the second paragraph:

> "The 'not warranted' decision was based in part on expectations of the FS employing specific management strategies to ensure goshawk habitat conservation in the Revised Forest Plan."

The Service agrees that a viability concern exists for the northern goshawk in Southeast Alaska "due to its association with mature and old-growth forests and the decline of these habitats from timber harvesting." The Service suggests that the following be added after the second sentence in the second paragraph in this section:

> "Concern for this subspecies is heightened due to the limited area in which it occurs (coastal British Columbia and in Southeast Alaska), and the extensive loss of nesting habitat in British Columbia due to timber harvesting. These concerns increase the importance of wise habitat management for this species on the Tongass National Forest."

Page 3-228, Northern Goshawk. The RSDEIS stated that goshawks appear to prefer productive old-growth forest at low elevations and relatively gentle slopes, and that most timber harvest occurs in these conditions, causing elevated concerns among the panelists. Yet, the RSDEIS only discusses the importance of riparian, beach, and estuary features to quality goshawk habitat and asserts that these features enhance the confidence that an alternative would maintain suitable habitat to support well-distributed goshawk populations. The Service recommends that the FEIS clearly express the importance of maintaining or protecting productive old growth forest at low elevations and relatively gentle slopes, *i.e.*, preferred goshawk habitat. Important goshawk habitat occurs outside riparian, beach, and estuary areas as well.

The RSDEIS states that maintaining or regenerating conifer stands in mid- to late-seral stand structure from 100 to 200 years was believed to supply adequate habitat for prey production and goshawk foraging opportunities, but it did not state how many acres of mid- to late-seral stands should be maintained. This could be misunderstood to mean that the whole forest should be maintained in mid- to late-seral forest (justifying a 100 year rotation) to provide prey for goshawks. The FEIS should discuss how much acreage of mid- and late-seral stands should be maintained and what number of years was viewed as favorable for an extended rotation by the panelists.

Page 3-229, second paragraph. The RSDEIS states that alternatives featuring a 100 year rotation period were rated lower for providing well-distributed, viable goshawk populations than those with 200 year rotations. However, the panelists were not given the opportunity to consider an alternative with a 300 year rotation. The fact that the panelists rated a longer rotation higher implies that they agree with the April 12, 1996, Conservation Assessment for the Northern Goshawk in Southeast Alaska Review Draft for a longer rotation, which states:

> "Use of a 300 year rotation that maintains nearly two-thirds of the landscape in either understory reinitiation or old-growth forest development stages is consistent with the habitat use patterns exhibited by goshawks."

This discussion needs revision to explain why a 300 year rotation alternative was not added to the panelists' range of alternatives, and also why a 100 year rotation was selected, in light of the goshawk assessment and panel.

The Service concludes that management regimes with longer effective rotations would provide a higher probability of goshawk population persistence throughout the Tongass than shorter rotations. The Service suggests that the FEIS further explain why an alternative with a 300 year rotation was not considered further using the panel assessment conclusions.

Page 3-229, paragraph 3. The concept of reserves was thought by goshawk panelists to be of less importance than having a landscape design which incorporates an uneven-aged management prescription forest-wide. Yet, the Preferred Alternative incorporates a limited amount of uneven-aged (two-aged) management, with modified old-growth reserves. The Service suggests that the FS reconsider the alternatives presented using the science available and analyzed by "scientist specializing in the species or resources being evaluated" (page 3-2 of the RSDEIS). The FEIS should explain further why the panelists' opinions were not used. Despite the experts' opinions, the selected alternative includes a limited amount of uneven-aged silvicultural practices and does not include a 300 year rotation that would maintain a goshawk population.

Page 3-229, paragraph 4. The Service suggests that the term "management of the landscape matrix as a whole" be defined, as the FS frequently uses the term "managed stand" for a stand that has or will be harvested. This section could be inappropriately interpreted as the whole forest landscape should be harvested.

The Service suggests that the FEIS fully address what "large and medium habitat reserves as proposed" were considered too small to sustain more than one or two pairs of goshawks. The final document should clarify whether it is referring to the VPOP Committee-sized HCAs, or the reserves proposed in the RSDEIS.

Without knowing the size of the reserves considered in this section, it is difficult to assess how the panelists considered roads not an "adverse element" to goshawk habitat suitability, even though the April 12, 1996, goshawk Conservation Assessment (page 85) states, "environmental changes resulting directly from roads have an unknown, but likely negligible, effect on overall prey abundance owing to the relatively small percentage of old forest cut specifically for roads." The Service agrees that roads may have a negligible effect on forest habitat, depending on the size of the forest stands and the amount of road, and if they are not associated with large scale timber harvesting. However, the Service is concerned about the cumulative effects of goshawk prey species that depend on interior old-growth. The first paragraph under the title "Considerations and Assumptions" in the northern goshawk section supports this concern. "Low prey diversity compared to other goshawk populations across North America was considered a principal factor [of

apparent low relative density of nesting goshawks in Southeast Alaska], resulting in a higher sensitivity to habitat modifications which would reduce prey diversity and abundance." (The bracketed section was added for clarification).

The Service agrees that roads may not have an adverse effect on the overall forest habitat suitability for goshawks if road patterns remain a minor feature across the landscape, particularly when compared to the effects of timber harvest. Adverse effects of roading, however, may become a significant negative element for prey species at some point as the degree of roading increases. Roads alter the climate of the forest microenvironment (flora and fauna) that interior forest dependent species require (Wilcove 1987). Roads can have a great effect on the forest microclimate important to old-growth dependent goshawk prey species (*i.e.*, woodpecker sp., sharp-shinned hawk, varied thrush, marbled murrelet, and red squirrel). The draft Conservation Assessment for the Northern Goshawk in Southeast Alaska (1996) states, that forest roads can influence the abundance of principal goshawk prey species by removing vegetation, initiating secondary succession, and affecting vegetation in plant communities along roadways and adjacent stands. Studies have shown that roads and trails narrower than 10 meters adversely impact nesting bird communities in forested areas (Askins 1994). Edge-related predation may extend as far as 600 meters into the forest (Wilcove 1987). The FS has built an extensive road system into large tracts of old-growth forest blocks throughout the Tongass to harvest and transport logs to log transfer facilities. The Service suggests that the FEIS address this issue comprehensively.

Page 3-230, paragraph 1. The RSDEIS states, "because of the significant amount of legislatively reserved lands and the net amount of productive old-growth that will likely remain under even the most aggressive timber harvest alternatives, panelists believed there was little chance for total extirpation of the goshawk population from Southeast Alaska." This statement apparently refers to all proposed alternatives, including Alternative 9, which represents the current Forest Plan.

The Service believes that Alternative 9: 1) contradicts the Queen Charlotte Goshawk Assessment findings and 2) will continue to increase risk to the species and decrease probability of goshawk persistence over the next 60 years if previous management direction is not significantly modified.

In the 12 month finding not to list the goshawk as endangered (referred to on page 3-258 in the RSDEIS) the Service found "it is clear that without significant changes to the existing Tongass National Forest Land and Resource Management Plan, the long-term viability of the Queen Charlotte Goshawk may be seriously imperiled" (M. Beattie, May 17, 1995, letter to the USFS). The Service maintains that position, as the RSDEIS states on page 3-258, "current Tongass timber management practices and intensity (and by inference any similar alternatives), if continued into the long-term, are considered by the Service to present serious potential risk to goshawks."

Page 3-231, paragraph 2. The RSDEIS states that the 200 year silvicultural rotation featured in some alternatives is equal to a 300 year rotation the panelists found would provide the combination of forest edge classes needed to sustain viable goshawk populations. It states that nearly 40 percent of the productive old-growth used by goshawks is unsuitable for timber harvest. It does not state what type of unsuitable timber land this is (*i.e.*, wilderness, stream buffers, beach buffers, etc.). A management scheme of old-growth blocks retained in existing legislated reserves with a 200 year rotation in the matrix, to maintain viable old-growth dependent species well-distributed across the Tongass, would result in further old-growth fragmentation and would not meet the size, spatial, and connectivity criteria required, according to the VPOP Committee (Suring et al. 1993). The FEIS should state where this 40 percent unsuitable productive old-growth is located.

Many of the VPOP proposed HCAs are included in Alternative 3 in several different types of LUDs; semi-remote recreation, remote recreation, old-growth habitat, special interest area, research area, or LUD II. The Service is concerned that the purpose for reserving these areas for old-growth dependent species would be lost if included under LUDs that are not specifically described as wildlife habitat, and would be in danger of modification in the future if they are not at least recognized as having a joint purpose. The Service suggests that a map with HCAs meeting the VPOP Committee criteria (Suring et al. 1993), with the Pacific Northwest Peer Review recommended modifications (Kiester and Eckhardt 1994), and their importance as habitat for old-growth dependent species be included in the FEIS. The Service also suggests that any previously described HCA now located in a LUD not specifically described as wildlife habitat be given a joint purpose to recognize its importance as wildlife habitat that needs to retain old-growth characteristics.

Page 3-232, first paragraph. The Service agrees that protecting individual goshawk nests with an area of only 100 acres does not represent a comprehensive conservation strategy that would provide habitat required to maintain a well-distributed viable goshawk population. The RSDEIS stated that this limited protection is complementary to a "broader landscape strategy." However, this "strategy" is not included in the Standards and Guidelines, which leads us to believe that would depend on which alternative is selected. The Service is concerned that if an alternative is selected that does not include the management practices recommended in the goshawk conservation assessment, then the only protection afforded this species would be limited to nest-by-nest protection.

The Service remains highly concerned about the status of the Queen Charlotte goshawk in Southeast Alaska and encourages the FS to adopt a conservative comprehensive landscape strategy that would not further compromise the available habitat base by retaining existing large blocks of mature forest needed to assure a viable goshawk population across the Tongass National Forest.

Viability

The Service is concerned that the FS' obligation under the NFMA to ensure viability will not be met because of modification of the Forest's old-growth habitat. Statements on page 3-255 of the RSDEIS and information provided in the Old-Growth Assessment Panel Summary (February 20, 1996) support this concern. The Service suggests that the FS be conservative in their timber harvest activities while aspects of adaptive management (page 5-3 Proposed Revised Forest Plan) are incorporated, and time and resources are invested to carry out goals of the Monitoring and Evaluation Plan (pages 6-6, 6-14, 6-24, 6-28). The Service believes that the FS can implement a plan that can sustain a reasonable harvest level and yet be responsive to long-term fish, wildlife, and associated societal needs and requirements under an integrated ecosystem approach.

Waterfowl

The Southeast Alaska ecosystem continues to be altered primarily by timber harvest activities without the basic knowledge of how such alteration is affecting resident nesting, migratory, and wintering waterfowl. A basic inventory, research, and monitoring program needs to be planned, initiated, funded, and pursued to better understand what waterfowl resources are present throughout the year, what requirements are needed for them to maintain viability, and how they have been and continue to be impacted by changes in habitat conditions. This is important for forest-dependent species such as Vancouver Canada goose, a Management Indicator Species (page 3-207, Table 3-87), harlequin duck and marbled murrelet, the latter two being species with some viability concern (Table 3-47).

The Service supports the pursuit of a sound inventory, research, and monitoring program that will put the FS in a better position to properly manage the Southeast Alaska ecosystem for viability and sustainability of all species, including waterfowl.

Small Mammals

No Standards and Guidelines are available for this group of animals, considered most vulnerable in the panel assessment process. The Service suggests that small mammals Standards and Guidelines be developed by experts with local knowledge of small mammals on the Forest for the FEIS and implemented to provide for adequate conservation of these species.

Effects Analysis

The Service is concerned that the Preferred Alternative was not given the same level of analysis as the other alternatives for comparison. The Service believes that it has a risk level intermediate among Alternatives 3, 6 and 8. The National Environmental Policy Act (NEPA) (40 CFR. Section 1502.14) requires that the proposed action and alternatives be presented in a "comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public" and (Section 1502.14 (b)) "Devote substantial treatment to each alternative considered in detail...so that reviewers may evaluate their comparative merits." The Service believes that this was not adequately done. The Preferred Alternative was not given equal analysis and it was not presented in a manner that allowed reviewers effective comparison with the other alternatives. The Service suggests that the Preferred Alternative be given the same amount of scrutiny and impacts analysis as the other alternatives and that this information be presented in the FEIS.

The effects analysis section for wildlife is deficient in that the discussion on small mammals suggests that site-specific analysis would be necessary for adequate management of localized populations of endemic small mammals, but no alternative and no Standards and Guidelines provide for such analysis. The discussion on the Alexander Archipelago wolf states that their populations are sensitive to road access, yet no special consideration is given to the effects of roading in the analysis. These oversights should be addressed in the FEIS.

Inconsistencies exist between biological impact information provided in Chapter 3 and the Preferred Alternative. For example, the goshawk section indicates that the management of a beach and estuary fringe and coniferous forests are important for minimizing risks to the species' long-term persistence, yet the Preferred Alternative reduces the beach and estuary fringe habitat from 1,000 to 500 horizontal feet. The rationale for this decrease is unknown. The Service strongly recommends that the selected alternative be grounded on more scientific information than that provided in this revised document's Preferred Alternative.

Management Indicator Species analyses are used inconsistently throughout the planning document. In the wildlife chapter, recognition was given to recent criticisms of the Tongass National Forest Indicator Species, and other species were analyzed by a panel of experts. In the Management Prescriptions section, however, future planning activities are restricted to management indicator species. We cannot agree that future analyses should be limited to the named management indicator species. We reference the Pacific Northwest Station's Peer Review of VPOP for further information.

Management indicator species analyses may have potentially serious drawbacks, however, we believe that it is necessary for the FS to systematically evaluate the potential effects of its actions on all biota naturally

occurring on the Tongass National Forest. If the management indicator species concept is considered flawed, then we believe that some other, or combination of other, analytical tools should be implemented. The RSDEIS seems to haphazardly combine the 1991 management indicator analyses with panel evaluations of other species, without a satisfactory explanation on why these other species, and whether these species are supposed to represent the diversity of biota occurring on the Forest. We recognize that conducting such an evaluation is complex and may not provide certainty in results; however, given the rarity of the coastal temperate rainforest ecosystem, its insular setting and endemic biota, and the long-term consequences associated with continued large-scale timber harvest, we do not believe that such limited analyses are adequate for management of the public's trust resources.

Description of the Preferred Alternative is too vague to adequately assess its impacts. For example, the documentation states that concepts of the habitat conservation reserve strategy as recommended by the VPOP Committee are to be implemented, but there are no indications of the concepts to be used (size, composition, shape, location).

COMMUNITIES

Page 2-9, Socioeconomic Considerations. This section states that recreation, tourism, and subsistence are emphasized variously in Alternatives 1-6. However, summaries of the alternatives do not mention subsistence except in the Theme, so it is impossible to tell how much each emphasizes or influences subsistence. The Service suggests that the FEIS include a discussion of subsistence in each of the alternative summaries.

Pages 3-328 through 3-441, Communities. Much of the data on subsistence harvests comes from the Tongass Resource Use Cooperative Survey (TRUCS) conducted in 1987. Subsistence patterns in many Southeast Alaska communities have changed since those data were collected. Other information about the communities (e.g., demographic and employment characteristics) is based upon the 1990 census or the 1995 Alaska Economic Trends. Combination of harvest levels from 1987 with more recent socioeconomic data distorts the full picture of subsistence uses in communities. The Service suggests that this inconsistency be corrected in the FEIS.

Page 3-363, Hyder. The population is not given for this community.

Page 3-408, Port Protection. The numbers, from the Alaska Department of Community and Regional Affairs Database, 1995, do not appear to be accurate. For example, if 1.6 percent of 48 people in Port Protection are Native, that would be less than one person. One person of 48 would be 2.1 percent. There should be some explanation of how percentages were estimated.

Enclosure 3

Comments of the Department of the Interior For Use in Revising the Tongass Land Management Plan

This enclosure provides comments on the March, 1996, Tongass Proposed Revised Forest Plan to be considered for the Final Forest Plan.

GENERAL

Chapter 1 - Introduction

Page 1-8, Supply, d. The Forest Plan states "(a) maximum of 8.7 million acres of old-growth forest wildlife habitat retained after the first decade." This statement is misleading, because not all of this old-growth is the same quality of wildlife habitat. Some of these 8.7 million acres are suitable for old-growth dependent species, but some of it may not be suitable at all. The Department's U.S. Fish and Wildlife Service (Service) suggests that the Forest Plan qualify this statement by stratifying this figure by habitat values or changing it to, "A maximum of 8.7 million acres of old-growth forest retained after the first decade."

Chapter 3 - Management Prescriptions

Transportation

Page 3-87, Old-Growth Habitat, Transportation Operations. The wording in this section does not allow deferral of logging or road construction if the impacts to fish and wildlife are too great. It says that they only need to be considered. In some situations, building a road in a manner that would, in general, reduce adverse effects on fish and wildlife may still be harmful for local, sedentary populations. The Service suggests that the approved plan include a standard that allows the decision not to build a road and/or log a unit due to certain fish and wildlife considerations.

Page 3-186, Transportation and Utility System, Wildlife. The Service recommends that the phrase, "To the extent feasible," be deleted. The Service suggests that all management activities on the forest be conducted in a way that would reduce effects on fish and wildlife. The Service recommends that the timber harvested during road and utility right-of-way construction be charged to the ASQ.

Chapter 4 - Forest-wide Standards and Guidelines

Page 4-3, Beach and Estuary Fringe. The Service suggests implementation of a beach fringe land use designation with a precisely written, definitive, stringently monitored and enforced set of Standards and Guidelines. The Service supports the beach fringe 0-500 foot "no harvest" buffer without roads, strict adherence to Standards and Guidelines, including monitoring, and a 500-1000 foot buffer where uneven-aged management is acceptable. The 500-1000 foot buffer is a recommendation made by ADF&G for protection of marten habitat.

The Service understands that the forest-wide Standards and Guidelines management option allows more flexibility than the LUD. This is important, given that the need for site-specific project implementation exists in many circumstances. The Service believes the Standards and Guidelines as written in the November, 1995, draft Standards and Guidelines for beach and estuary fringe, offer well conceived direction for meeting the criteria of being definitive and able to be uniformly and rigorously enforced. Any deviations from this

approach fall short of the Service's expectations of sound, implementable, and enforceable forest-wide Standards and Guidelines.

Page 4-7, Biodiversity, number 7. The purpose of this Standard and Guideline is to provide interior forest habitat within a closed canopy forest at least 300 feet from the forest edge. The size of interior forest areas should be maintained to avoid creating areas where the size of the interior forest is too small to be utilized by old-growth dependent species. The Service has suggested that a buffer of 600 feet from the forest edge be considered around corridors and forest blocks (USFWS, N. Holmberg letter to the USFS, October 23, 1995). (See the comments above for pages 3-229 and 3-191.) The Service suggests that a 600 foot buffer be considered when analyzing the amount of old-growth forest habitat available for old-growth dependent species.

Page 4-12, I. Fish Habitat Inventory. The Service supports the development of the R10 Standardized Stream Survey Protocol and encourages the FS to develop and test this methodology and promote its use throughout the Southeast Alaska Ecosystem.

Page 4-16, VI.C. Bio-enhancement projects should also assess the genetic integrity of the affected and adjacent fish stocks.

Page 4-16, Fish Habitat Improvement I.C. While monitoring high interest/high investment projects "more intensely" may reflect reality, it is more important that projects of great biological significance, particularly those involving experimental or innovative techniques, also be so monitored.

Page 4-61. The FS should fully implement the recommendations in AFHA. This report represents the best available scientific information concerning the effects of past and current forest practices on anadromous fish spawning and rearing habitat. The Service suggests that the approved plan address the need for protection of AFHA Class IV streams, additional protection for high hazard soils in steep areas, and the need for watershed analysis across the forest.

Page 4-94, D. Although this section states that habitats of subsistence species should be managed "to minimize the likelihood of significant short-term and irreversible or long-term effects," it is unclear whether this includes marine and coastal subsistence resources, since they are not emphasized in the effects analysis. Marine and coastal subsistence resources should be fully addressed.

Page 4-94, I. The forest-wide standards state that in cooperation with the appropriate State and Federal agencies, [FS will] maintain a subsistence research program and data base. The lack of recent harvest survey data suggests that the subsistence research program is not adequately supported. This program should be elevated to a higher priority.

Page 4-95, 1. Threatened or Endangered Species. The Service suggests adding the following statement after number 4. (It augments the implementation of the December 20, 1994, Interagency Memorandum of Understanding.)

> "5. Provide habitat and population survey information of species of concern to the U.S. Fish and Wildlife Service to assist in the status investigations of those species required by the Endangered Species Act."

Page 4-100, Candidate Species and Species of Concern. The Service no longer uses the term "Category" to

define or differentiate among Candidate species. Candidate species are now defined as those species for which the Service has on file sufficient information on biological vulnerability and threats to support proposals as threatened or endangered (formerly Category 1 Candidate species) under the Endangered Species Act. Also, the Service no longer maintains lists of species being considered for listing, such as those formerly designated Category 2 candidate or Species of Concern.

The Service will continue to evaluate information from a variety of sources such as the Nature Conservancy's Biological and Conservation Data System, the Alaska Natural Heritage Program, State lists of rare and endangered species, and other sources to identify those species that are imperiled or otherwise warrant special attention. Elimination of the Category 2 or Species of Concern list does not signal any reduction in attention or emphasis on the part of the Service for those species whose status may be of concern. The Service will continue to work with the FS, other agencies and individuals to identify potential candidate species.

Page 4-102, Timber Resource Planning. The Service suggests that a Standard and Guideline be added to this section that directs project planners to inventory and maintain existing Volume Class 7 stands. (See the comments above for page 3-183, Proportionality in the RSDEIS.)

Page 4-115, Transportation. It is unclear how the potential impacts of fuel transport, storage, and handling would be considered and evaluated, particularly for the marine environment. These topics need to be fully addressed in all aspects of the Forest Plan. (See the comments above for page 3-191 and 3-229 in the RSDEIS, and page 4-7 in the Forest Plan.)

Page 4-119, III.3. The Service suggests that subsistence use areas also be avoided.

Page 4-126, V. Bald Eagle Habitat. This paragraph is very general and does not provide the specificity necessary to afford a level of uniform compliance needed to ensure that this essential habitat element is protected. The Service suggests that the 10 Standards and Guidelines contained in the November 6, 1995, Standards and Guidelines review draft be included in the Final Standards and Guidelines. Those 10 Standards and Guidelines apply throughout the forest, while allowing for protection of these areas as they are found and mapped. Compliance could be easily monitored. They would also minimize the Service's concern about discretionary interpretation of Standards and Guidelines while adding specific measures necessary to maintain the ecological integrity of bald eagle habitat.

Page 4-127, VII. Consideration should be given in the Final Forest Plan to the potential for adverse impacts to marine mammals and the marine environment due to fuel spills, storage, transport, and handling.

Page 4-127, VIII. Seabird Rookeries. A.1. The Service suggests that the last sentence in this section be changed by deleting the phrase "...on upland habitats."

Page 4-129, Alexander Archipelago Wolf, A.3. The phrase "(t)his is generally 13 deer/mile^2 should be deleted. The Service suggests this Standard and Guideline read: "Provide sufficient deer habitat capability to sustain a wolf/deer equilibrium and meet human deer harvest demands for sport and subsistence use, based on the most updated deer habitat capability model or sufficient, relevant local empirical information."

Page 4-129, Marbled Murrelet. The Service recommends that repetitive marbled murrelet inland surveys be performed in project areas for at least a two-year period.

Chapter 6 - Monitoring and Evaluation Plan

The proposed TLMP monitoring and evaluation program provides an excellent opportunity for improved interagency coordination. The National Park Service (NPS) recommends that a cooperative FS/NPS monitoring and evaluation program be established to facilitate the timely, interagency review of those activities that may affect the public use and resources of the National Park System. Such a cooperative program would benefit the NPS and the FS. The program would likely lead to improved interagency communications, provide an objective review of preliminary proposals, establish effective project monitoring and evaluation guidelines, and establish objective procedures that would provide for the timely mitigation and termination of unnecessary activities. We recommend that the respective Park Superintendents for Glacier Bay National Park and Preserve (Jim Brady, telephone (907) 697-2232), Klondike Gold Rush National Historical Park (Clay Alderson, telephone (907) 983-2921), Wrangell-St. Elias National Park and Preserve (Jon Jarvis, telephone (907) 822-5234) be contacted regarding the development and implementation of a cooperative monitoring and evaluation program. As a first step, we suggest that the FS schedule a meeting between the NPS and the FS resource managers to discuss issues of concern and develop a consensus on priorities for monitoring /evaluating those activities.

Page 6-29, Wildlife Habitat, 2.d.(7). The Service no longer maintains a Candidate Species Status list. The Service suggests that the list maintained by The Nature Conservancy and the Alaska Natural Heritage Program be considered. (See the comments above for page 4-100, Candidate Species and Species of Concern.)

Appendix G, Page G-6, Section S10. References to the "Memorandum of Understanding" regarding bald eagles should be changed to "Interagency Agreement." The 1990 Interagency Agreement supersedes the former Memorandum of Understanding.

LITERATURE CITED

Alaback, P.B. 1982. Dynamics of understory biomass in Sitka spruce-western hemlock forests of southeast Alaska. Ecol. 63:1932-1948.

_____. 1984. Plant succession following logging in the Sitka spruce-western hemlock forests of southeast Alaska: implications for management. USDA Forest Service General Technical Report PNW-173.

____, and G.P. Juday. 1989. Structure and composition of low elevation old-growth forest in research natural areas of southeast Alaska. Nat. Areas J. 9:27-39.

Archibald, W.R. 1983. Problem Analysis: Grizzly Bears and Coastal Development with Particular Reference to Intensive Forestry. B.C. Fish and Wildl. Branch, Victoria. Bull. No. B-26. 24pp.

Askins, R.A. 1994. Open corridors in a heavily forested landscape: impact on shrubland and forest-interior birds. Wildl. Soc. Bull. 22:339-347.

Blanchard, B. 1983. Grizzly Bear-Habitat Relationships in the Yellowstone Area. Int. Conf. Bear Res. and Manage. 5:118-123.

Brannon, R.D. 1985. Hematological Characteristics of Grizzly Bears (Ursus arctos) in Central and Northeastern Alaska. Can. J. Zool. 63(1):58-62.

Chasko, G.G., and J.E. Gates. 1982. Avian habitat suitability along a transmission-line corridor in an oak-hickory forest region. Wildl. Monogr. 82. 41pp.

Chechile, R.A., and S. Carlisle. 1991 ed. Environmental Decision Making: A Multidisciplinary Perspective. VanNostrand Reinhold Publish. N.Y., N.Y.

Craighead, J.J. 1980. A Proposed Delineation of Critical Grizzly Bear Habitat in the Yellowstone Region. Bear Biol. Assoc. Monogr. Ser. No.1. 20pp.

Della Sala, D.A., K.A. Engel, D.P. Volsen, R.L. Fairbanks, J.C. Hagar, W.C. McComb, and K.J. Raedeke. 1994. Effectiveness of silvicultural modifications of young-growth forests as enhancement for wildlife habitat on the Tongass National Forest, Southeast Alaska. U.S. Forest Service, Alaska Region, Juneau, Alaska.

Elgmark, K. 1978. Human Impact on a Brown Bear Population (Ursus arctos L.) Biol. Conserv. 13(2):81-103.

Ellis, R.J. 1970. Preliminary biological survey of log-rafting and dumping areas in southeastern Alaska. Mar. Fish. Rev. 35(5-6): 19-22.

_____. 1973. Preliminary reconnaissance of some log rafting and dumping areas in Southeast Alaska, and their relationship to marine fauna. Bureau of Commercial Fisheries, Auke Bay, Alaska.

Fahrig, L. And G. Merriam. 1985. Habitat patch connectivity and population survival. Ecology 66:1762-1768.

Ferris, C. R., 1979. Effects of Interstate 95 on breeding birds in northern Maine. J. Wildl. Manage. 43:421-427.

Foster Wheeler Environmental Corporation. 1996b. Swan Lake-Lake Tyee Intertie Draft Environmental Impact Statement. USDA Forest Service. Tongass National Forest.

Goodwin, P. and G. Wright. 1991 Decision Analysis for Management Judgement. J. Wiley and Sons. N.Y., N.Y.

Hamer, T.E. and S.K. Nelson. 1995. Characteristics of marbled murrelet nest trees and nesting stands. Pages 69-82 in Ralph, C. John; Hunt, George L.; Raphael, Martin G.; Piatt, John F., Technical Editors. 1995. Ecology and conservation of the marbled murrelet. Ge. Tech. Rep. PSW-GTR-152. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 420pp.

Halupka, K.C., Troyer J.K., Willson M.F., and Everest, F.H. 1996. Identification of Unique and Sensitive Salmonid Stocks of Southeast Alaska. Forestry Sciences Laboratory, Pacific Northwest Research Station, U.S. Department of Agriculture, 2770 Sherwood Lane, Suite 2A, Juneau, Alaska 99801-8545.

Hancock, D.R. 1981. Solid and suspended phase bioassay test results for sediment toxicity of "log pond bottom samples" to five species of estuarine organisms. Manuscript submitted to Alaska Pulp and Paper Inc., Sitka, Alaska. 10 pages plus appendices.

Hanley, T.A. 1992. Balancing economic development, biological conservation, and human culture: the Sitka black-tailed deer Odocoileus hemionus sitkensis as an ecological indicator. Biol. Conserv. 66:61-67.

Harris, A.S. and W.A. Farr. 1974. The forest Ecosystem of Southeast Alaska: 7. Forest ecology and timber management. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station. Gen. Tech. Rpt. PNW-25.

Hobbs, R.J. 1992. The role of corridors in conservation: solution or bandwagon? Trends in Ecol. and Evol. 7:389-392.

James, G.A. 1956. The Physical Effect of Logging on Salmon Streams of Southeast Alaska. Alaska Forest Research Center. Station Paper No. 5. 49pp.

Jonkel, C., T. Bumgarner and L.C. Lee. 1981. Grizzly Bears and the North Fork of the Flathead River Flood Plain. Border Grizzly Proj., Univ. Mont., Missoula. Spec. Rep. No.54. 48pp.

Kessler, W.B. 1982. Wildlife and Fisheries Habitat Management Notes: Wildlife and Second Growth Forests of Southeast Alaska: Problems and Potential for Management. USDA Forest Service, Alaska Region Administrative Document Number 110.

Kiester A.R. and C. Eckhardt. 1994. Review of Wildlife Management and Conservation Biology on the Tongass National Forest: A Synthesis with Recommendations. Pac. Northwest Res. Stn., Corvallis, Ore. 281pp.

Koski, K.V. and R.A. Walter. 1981. Forest Practices in Relation to Management of Alaska's Coastal Zone Resources: A Review with Management and Guideline Recommendations. Auke Bay Laboratory, USDC National Marine Fisheries Service, Auke Bay, Alaska. 187pp.

Kruse, J.A. and Muth, R.M. 1990. Subsistence use of renewable resources by rural residents of Southeast Alaska: A final report under the U.S. Forest Service/University of Alaska Cooperative Agreement PNW 88-553.

Lyon, L.J. 1984. Road Effects and Impacts on Wildlife and Fisheries. Pres. at Forest Transportation Symp., 11-13 Dec. 1984, Casper, Wyo. 20pp.

_____. and J.V. Basile. 1980. Influences of Timber Harvesting and Residue Management in Big Game. Proc. Environ. Consequences Timber Harvesting in Rocky Mt. Coniferous For. 1980:441-453.

Murphy, Michael L. 1995. Forestry Impacts on Freshwater Habitat of Anadromous Salmonids in the Pacific Northwest and Alaska--Requirements for Protection and Restoration. NOAA Coastal Ocean Program Decision Analysis Series No. 7. NOAA Coastal Ocean Office, Silver Spring, MD. 156pp.

Murphy, D.D. and B.R. Noon. 1992. Integrating scientific methods with habitat conservation planning: reserve design for northern spotted owls. Ecol. Appl. 2:3-17.

Nelson, S.K. and T.E. Hamer. 1995. Nest success and the effects of predation on Marbled Murrelets. *in* Ralph, C.J.; G.L. Hunt Jr.; M.G. Martin; J.F. Piatt, Technical Editors. Ecology and conservation of the marbled murrelet. Gen. Tech. Rep. PSW-GTR-152. Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; Albany, CA; Pages 89-97.

Noss, R.F. 1987. Corridors in real landscapes: a reply to Simberloff and Cox. Conserv. Biol. 1:159-164.

Nowacki, G. 1995. Natural Disturbance Regime Module for the Tongass Land Management Plan (TLMP) Revision. Unpubl. draft report. U.S. Forest Service, Region 10. Juneau, Alaska.

Orme, M.L., F.B. Samson, L.H. Suring. 1989. A Process for Addressing Biological Diversity Within a Forest of Islands, Southeast Alaska: A paper presented at the Society of American Foresters' National Convention, Spokane, 24-27 September 1989. 12 pp.

Ott, R.A. 1995. Small-Scale Natural Disturbance Regimes in Temperate Rainforests of Southeast Alaska. Unpubl. report synopsized by Gregory Nowacki. University of Alaska, Fairbanks, Alaska.

Piatt, J.F. and N.L. Nasland. 1995. Abundance, distribution, and population status of marbled murrelets in Alaska. Pages 285-294 *in* Ralph, C.J.; G.L. Hunt Jr.; M.G. Martin; J.F. Piatt, Technical Editors. Ecology and conservation of the marbled murrelet. Gen. Tech. Rep. PSW-GTR-152. Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture, Albany, CA.

Ruediger, W. and S. Mealey. 1978. Coordination Guidelines for Timber Harvesting in Grizzly Bear Habitat in Northwestern Montana. U.S.D.A., Forest Serv., Kootenai Natl. Forest, Mont. and Shoshone Natl. Forest, Wyo. 44 pp.

Russell, D. 1974. Grizzly Bear Mountain Goat Investigations in Knight Inlet, B.C., Summer 1974. Proj. Rep. B.C. Fish and Wildl. Branch, Victoria. 84 pp.

Samson, F.B. and F.L. Knopf. 1982. In Search of a Diversity Ethic for Wildlife Management. Trans. of the North American Wildlife and Natural Resources Conference 47:421-431.

Schallenberger, A. and C. Jonkel. 1980. Rocky Mountain East Front Grizzly Studies, 1979. Border Grizzly Proj., Univ. Mont., Missoula. Spec. Rep. No. 39. 207pp.

Schempf, P.F., K. Merg, L. Daniel, and M. Jacobson. 1995. Goshawk surveys in wilderness and roadless areas of southeast Alaska, 1995. Unpubl. Report. U.S. Fish and Wildlife Service. Juneau, Alaska.

Schoen, J.W. and M.D. Kirchhoff. 1988. Wildlife and old-growth forest in Southeast Alaska. Nat. Areas J. 8(3):138-145.

Sidle, W.B. 1985. Wildlife and fisheries habitat management notes: habitat management for forest birds in southeast Alaska. USDA Forest Service, Alaska Region Administrative Document Number 146.

Sigman, M.J. 1985. Impacts of Clearcut Logging on the Fish and Wildlife Resources of Southeast Alaska. Alaska Dept. Fish and Game, Habitat Division, Juneau. Tech. Rep. No. 85-3.

Sinnot, R. 1988. Salmonids in the Boreal and Coastal Western Hemlock - Sitka Spruce Forest Ecosystem. Alaska Department of Fish and Game.

Suring, L.H., Crocker-Bedford, D.C., Flynn, R.W., Hale, C.S., Iverson, G.C., Kirchhoff, M.D., Schenck, T.E., Shea, L.C., Titus, K. 1994. Response to the Peer Review of: A Proposed Strategy for Maintaining Well-Distributed, Viable Populations of Wildlife Associated with Old-Growth Forests in Southeast Alaska. Report of an interagency committee. Unpubl. Review draft report. Juneau, Alaska.

Suring, L.H., Crocker-Bedford, D.C., Flynn, R.W., Hale, C.S., Iverson, G.C., Kirchhoff, M.D., Schenck, T.E., Shea, L.C., Titus, K. 1993. A Proposed Strategy for Maintaining Well-distributed, Viable Populations of Wildlife Associated With Old-growth Forests in Southeast Alaska. Draft Report of an Interagency Committee. Unpubl. Report. Juneau, Alaska. 278 pp.

Thomas, J. W., E.D. Forsman, J.B. Lint, E.C. Meslow, B.R. Noon, and J. Varner. 1990. A conservation strategy for the northern spotted owl. U.S. Gov. Printing Off. 1990-791-171/20026. 427pp.

Tracy, D.M. 1977. Reactions of Wildlife to Human Activity Along Mount McKinley National Park Road. M.S. Thesis, Univ. Alaska, Fairbanks.
260pp.

USDA Forest Service. 1996a. King George Timber Sale Draft Environmental Impact Statement. Tongass National Forest. R10-MB-305.

USDA Forest Service. 1985a. Grizzly Management Situation Guidelines and Augmentation Discussion. Appendix 8. In: U.S.D.A., Forest Serv. Kootenai National Forest Proposed Plan. U.S.D.A., Forest Serv., Kootenai Natl. Forest, Libby, Mont.

USDA Forest Service. 1985b. Grizzly Bear. Pages 60-93 in: Threatened, Endangered and Sensitive Plants and Animal Species and their Habitats in the Bridger-Teton National Forest, U.S.D.A., Forest Serv., Jackson, Wyo.

F. Norbury
16377

Communities of Southeast Alaska

August 22, 1996

TO: USDA Forest Service TLMP Planning Team; Phil Janik, Regional Forester, and Jack Ward Thomas, Chief; and Hon. Dan Glickman, Secretary, U.S. Department of Agriculture

FROM: The Undersigned Mayors of Southeast Alaska

SUBJECT: Request to Correct and Reissue the TLMP Draft EIS

The U. S. Forest Service and State of Alaska recently acknowledged the TLMP revision overestimates harvestable timber by at least 10 to 23 percent. This is further evidence the Draft Plan and EIS are seriously flawed. The following irregularities must be addressed:

1. **The socio-economic analysis fails to meet National Forest Management Act (NFMA) requirements.** The impacts of the flawed timber harvest estimates must be corrected. The new assessment must be made in partnership with Southeast Alaska communities. (See Executive Order 12866.) The public must review the new analysis.

2. **The Plan cannot rely on outdated information.** Monitoring and evaluations required by TLMP, NFMA, and 36 CFR 219 must be updated. The 1984 monitoring report (USDA FS Admin Doc. 139) must be updated and available for public review.

3. **Process errors and procedural irregularities must be corrected.** The draft must be brought into compliance with the National Environmental Policy Act (NEPA), NFMA, and the Administrative Procedures Act prior to public review.

4. **The Plan must address community stability.** Enhancement of community stability has been a purpose of the Forest Service since its Organic Act. It remains the law today and must be a part of the Plan.

5. **The Plan must recognize the possibility of further native land grants.** The issue of "landless natives" is before Congress. This issue is clearly relevant and cannot be ignored.

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The undersigned Southeast Alaska Mayors request these deficiencies/irregularities in the TLMP Draft be corrected and presented for our and other public review.

Jim Carlton
Mayor Ketchikan Gateway Borough

Doug Roberts
Mayor - City of Wrangell

Pete Halloran
MAYOR - CITY + BOROUGH SITKA

Mayor City of Angoon

Jack F. Booth Sr.
Mayor, Metlakatla

Mayor of Petersburg

MAYOR, CITY & BOROUGH OF JUNEAU

pc: Alaska Congressional Delegation, Governor, and Alaska Legislature

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August 25, 1996

Tongass Forest Plan Revision Team
8465 Old Dairy Road
Juneau, AK 99801

The Tongass Land management Plan Revision process has been long and arduous. When the final TLMP is adopted, it will dictate the life of Southeast Alaskan's for years to come. The Forest Service has the responsibility to fully inform the public as to the consequences of each choice presented to them. In addition, the public must have information that is accurate and is in a form they can understand. In that respect, the Forest Service has failed. There are many problems with the process the Forest Service has followed and with the Draft itself.

I've included for the record a copy of Senate Joint Resolution 40, which was overwhelmingly passed 52-5 last session by the Alaska State Legislature. In addition to supporting a 15 year contract extension for the Ketchikan Pulp Company, the resolution requests the Forest Service make enough timber available in the Revised TLMP to provide enough yearly timber to maintain KPC's contract, to provide 100 million board feet for the SBA program, and to reopen the Wrangell facility and a by-product facility in Sitka. For this to occur, the Forest Service would have to supply 400-500 million board feet of timber per year. Your preferred alternative does not come close to this mark. Does the Forest Service agree with this assessment?

There are many problems with your preferred alternative and the Draft Revision in general:

- The TLMP Draft fails to provide an adequate community-by-community socioeconomic analysis of the effect of each alternatives, as required by 36 CFR 219.12 (g & h).

- The Forest Service should pull back its current Draft and should conduct such socioeconomic analysis, similar to the University of Idaho's report entitled; A Study of the Effects of Changing Federal Timber Policies on Rural Communities in Northcentral Idaho. After doing so, the public will be more able to coherently comment on the Draft TLMP and how it will affect them.

- Without proven scientific support and reason, the Draft applies Habitat Conservation Areas (HCA's) to the Tongass. This is wrong. None of your Wildlife Assessments predict a viability crisis for any Tongass species for at least the next 10 to 20 years, which is longer than the final TLMP is scheduled to be in affect. In fact, the four species sighted as the reason for HCA's, goshawks, martin, flying squirrels, and bear, are not totally old-growth dependent. The bear is legally hunted, the martin is an introduced species, the goshawk has been found in second growth, and the flying squirrel already has millions of acres of protected land in which to thrive.

- The change in the way the Allowable Sale Quantity (ASQ) is presented is misleading to the public and overstates the amount of timber which will be made available.

a) The new Timber Standard and Guideline changes the way the ASQ is calculated, from net sawlog volume to net sawlog volume PLUS utility. This is confusing and leads the public to believe their is around 15% more wood available in the alternatives than there really is. The original TLMP used net sawlog ASQ numbers as did each of its amendments. The same is true for the 1990 Draft Revision, the 1991 Supplemental Draft and the 1992 Draft Final that was not released. Why the change? Were you deliberately trying to mislead the public? It sure appears that way.

b) If you calculate the "new" ASQ the way it has been calculated in the past, your preferred alternative only provides 255 million board feet, not enough to meet your stated goal of supplying KPC's contract plus 100 MMBF for the independent program. How many more mills will go down and jobs be lost if your preferred alternative is implemented?

c) Taking into account the historical relationship between the amount of timber you release and the needs of industry, and considering the Forest Service controls the supply of timber on the Tongass, shouldn't you be held accountable for estimating how many mills and jobs can survive on the amount of timber you release?

d) There have been many reported problems with the models used to project the actual ASQ in each alternative. Doesn't the USFS have the responsibility to put out an accurate Draft for the public to comment on?

After looking over the documents provided in the Draft TLMP, and spending many hours trying to decipher what is contained therein, I support a modified alternative 9. I also support 500 foot beach and estuary fringes, including wild and scenic river designations for those rivers which are located in existing protected and roadless areas.

Concerning fish protections: We need to give the additional habitat protections of the Tongass Timber Reform Act time to work. Your recommendations for increased riparian buffers are premature. Currently, the Tongass has the most stringent habitat protections in the nation, and probably the world. The data used by the USFS as the basis for increased riparian buffers is old, is based on data from the lower 48, and does not reflect the current measures already in place on the Tongass. No TTRA data has been taken into account or used by the USFS in coming up with the new recommendations for additional stream protections. This does not make sense and is wrong. Before additional stream protections are considered, current Tongass practices need to be evaluated and considered.

Does the Forest Service believe the ecosystems and historical development of the lower 48 and SE Alaska are the same? Does the Forest Service believe the fish habitat improvements made by the TTRA do not need to be evaluated before recommending and implementing new fish habitat measures?

A large majority of my constituents are commercial fishermen and were out fishing and making a living during your comment period. Many were too busy to comment on the Draft but still have concerns about the Draft TLMP. Many fishermen who had time to review the sections of riparian and watershed management found a mixture of management options ranging from the current TTRA protections of habitat, 3 options related the 1994 AFHA report, and 2 options from the 1983 FHIP report chronicling high value streams on the Tongass. The myriad of options you presented are very confusing and need to be pared down. I would like to see the Forest Service simplify this process, as promised for all aspects of the Draft TLMP, to include concrete definitions of high value watersheds and one universal riparian and watershed management option.

In short, the Forest Service has not lived up to its responsibility to supply the public with accurate information and to fully inform the public of the ramifications of each alternative presented. Also, the comment period occured at the busiest time of the year for many Southeast residents. The Forest Service should pull back its current draft, correct it, and send it back out for public comment.

Sincerely,

(pk)

William K. Williams

Representative Williams K. Williams

L-528

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STATE OF ALASKA
THE LEGISLATURE

1996

Source
CSSJR 40(JUD) am H

Legislative Resolve No.
48

Relating to extension of the United States Forest Service timber sale contract with the Ketchikan Pulp Company.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS, for the last 40 years, the timber industry operating on national forest land in Southeast Alaska has been the largest private employer in Southeast Alaska; and

WHEREAS the United States Forest Service strategy for creating permanent year-round employment through a timber industry in Southeast Alaska has been to offer long-term contracts to attract pulp mills to use, and add value to, low-grade and by-product materials from timber harvesting; these pulp mills serve as a market for pulp logs and chips from the sawmills in Southeast Alaska; and

WHEREAS pulp mills assure full utilization and protect forest health by using that significant portion of the Tongass National Forest that consists of dead, dying, and over-mature timber; and

WHEREAS, since passage of the Tongass Timber Reform Act of 1990 (TTRA), a pulp mill and a major sawmill have closed, and more than 40 percent of the timber industry has been lost due, in part, to the failure of the United States Forest Service to make available the

approximately 420,000,000 board feet per year needed to meet the jobs protection promises made by those who sought passage of the TTRA, all of which has created severe social and economic harm to the timber industry, its workers, and timber-dependent communities in Southeast Alaska; and

WHEREAS another of the reasons for the closure of the Sitka pulp mill was the adverse economic impacts of unilateral changes to its long-term contract made by the TTRA, those unilateral changes also adversely impact the economics of the Ketchikan Pulp Company (KPC) contract; and

WHEREAS KPC, which obtained a long-term contract to help create year-round jobs in Southeast Alaska, is the sole remaining pulp mill in Alaska, a major employer in Southeast Alaska, and the market for pulp logs and chips from all the other sawmills in Southeast Alaska; and

WHEREAS the loss of the KPC pulp mill could lead to the loss of the entire industry now operating on the Tongass National Forest with devastating social and economic effects on families and communities throughout Southeast Alaska; and

WHEREAS the KPC pulp mill faces an uncertain future, not of its own making, as a result of the continuing log shortage created by the failure of the United States Forest Service to meet its volume requirements under KPC's contract and the TTRA, as a result of the adverse economic impacts to its long-term contract caused by the unilateral TTRA changes, and as a result of the requirement that more than $155,000,000 in capital expenditures be made over the next few years to meet new and ever changing federal environmental standards and operating needs; and

WHEREAS, as a matter of economic common sense, KPC cannot make all the necessary expenditures without the federal government extending its contract for a sufficient period to amortize those expenditures, without an adequate supply of timber, and without modifying those portions of the unilateral TTRA contract changes that have adversely impacted the contract's economics; and

WHEREAS the legislature finds that an additional 15 years is a minimum reasonable period to extend the KPC's timber sale contract to allow such amortization and to provide opportunities for value-added alternatives that maximize the number of jobs and assures environmentally sound operations; and

L-529

WHEREAS the legislature finds that sufficient timber must be made available to maintain the KPC contract, to provide 100,000,000 board feet for the contracts to small business, and to reopen the Wrangell facility and a by-product facility in Sitka;

BE IT RESOLVED that the Alaska State Legislature respectfully urges the Alaska delegation in Congress and the Governor to take all steps necessary, this year, to extend the Ketchikan Pulp Company long-term contract for an additional 15 years and modify those portions of the contract which the TTRA unilaterally impacted, because such an extension and modification are critical to the environmental, social, and economic well-being of the Tongass National Forest timber workers, their families, and timber-dependent communities in Southeast Alaska and because such an extension is in the public interest of the State of Alaska; and be it

FURTHER RESOLVED that the Tongass National Forest should be managed for a healthy and diversified economy for the benefit of all users, including value-added forest products, commercial and sport fishing, seafood processing, tourism, subsistence, sport hunting, and local businesses that provide goods and services; and be it

FURTHER RESOLVED that the Alaska State Legislature also respectfully urges the Alaska Congressional Delegation, the Governor, and the United States Forest Service to take action this year to assure that sufficient timber be made available as part of any revision of the Tongass Land-Use Management Plan to maintain the Ketchikan Pulp Company contract, to provide 100,000,000 board feet for small business contracts, and to reopen the Wrangell facility and a by-product facility in Sitka.

COPIES of this resolution shall be sent to the Honorable Bill Clinton, President of the United States; the Honorable Daniel R. Glickman, Secretary of the U.S. Department of Agriculture; the Honorable Bruce Babbitt, Secretary of the U.S. Department of the Interior; the Honorable Newt Gingrich, Speaker of the U.S. House of Representatives; the Honorable Strom Thurmond, President Pro Tempore of the U.S. Senate; and to the Honorable Ted Stevens and the Honorable Frank Murkowski, U.S. Senators, and the Honorable Don Young, U.S. Representative, members of the Alaska delegation in Congress.

UNITED STATES DEPARTMENT OF COMMERC
National Oceanic and Atmospheric Administratior
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

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RECEIVED
AUG 26 1996
REGIONAL FORESTER
FOREST SERVICE
JUNEAU, ALASKA

August 26, 1996

Mr. Phil Janik
Regional Forester
USDA Forest Service
Alaska Region
P.O. Box 21628
Juneau, AK 99802-1628

RE: Tongass National Forest
Land Management Plan
Revision, Comments

Dear Mr. Ja~~nik:~~ Phil:

The National Marine Fisheries Service (NMFS) has reviewed the Revised Supplement to the Draft Environmental Impact Statement (RSDEIS) Tongass National Forest Land Management Plan (TLMP) Revision. NMFS would like to provide the following comments for your consideration in formulating the Record of Decision (ROD).

We encourage you to more fully incorporate into TLMP the January 1995, Report to Congress Anadromous Fish Habitat Assessment (AFHA) recommendations. One of the conclusions of AFHA stated that "increased headwater protection from timber harvest, increased buffers on flood plains and alluvial channels, and completion of cumulative watershed effects analyses to evaluate natural and human disturbances, are very important protective measures that are needed." To provide a reasonable assurance of maintaining fish habitat over the long term on the Tongass we recommend the Forest Service choose Riparian Option 2 as part of your preferred alternative.

Any deviation reducing the buffers prescribed under Riparian Option 2 should have a well thought out analysis which would be documented. The basis of this analysis should be a watershed analysis, as recommended in AFHA. We would like to see a direct link between riparian buffers and watershed analysis. As a minimum level of watershed analysis, we recommend using the process outlined in "Ecosystem Analysis at the Watershed Scale, Federal Guide for Watershed Analysis, August 1995."

In addition to incorporating AFHA recommendations, Riparian Option 2, and watershed analysis we recommend the watershed restoration strategy be updated and implemented, and the Monitoring and Evaluation Plan be strengthened by including measurable objectives and more detail.

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We appreciated the opportunity of being part of the Policy Group for the TLMP Revision and this opportunity to comment on the RSDEIS. We look forward to continued coordination with you.

Sincerely,

Steve

Steven Pennoyer
Regional Administrator

cc: Bradley Powell, Forest Supervisor, USDA FS, Ketchikan Area
Abigail Kimbell, Forest Supervisor, USDA FS, Stikine Area
Gary Morrison, Forest Supervisor, USDA FS, Chatham Area
Beth Pendleton, Co-Team Leader, Forest Plan Revision Team
Doug Swanston, Co-Team Leader, Forest Plan Revision Team
EPA
USFWS

016392

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

AUG 26 1996

Reply To
Attn Of: ECO-088

Ref: 95-056-AFS

Mr. Phil Janik
Regional Forester
USDA Forest Service, Alaska Region
709 West 9th Street
Juneau, Alaska 99801

Dear Mr. Janik: Phil

We have reviewed the Revised Supplement to the Draft Environmental Impact Statement and the Proposed Revised Forest Plan (draft EIS/Plan) elements of the **Tongass Land Management Plan Revision** in accordance with our responsibilities under the National Environmental Policy Act and §309 of the Clean Air Act. The draft EIS/Plan presents and analyzes ten (10) alternatives currently under consideration by the Forest Service for managing the resources within the Tongass National Forest in Southeast Alaska.

To begin, I would like to commend the Forest Service for establishing an open and collaborative process for the development of the Tongass Land Management Plan (TLMP) revision. By inviting and encouraging other resource agencies (including EPA) to work with the Forest Service in developing the Plan, I believe that our opportunity to achieve the goal of balanced, multiple use of the Tongass has been greatly enhanced. I am confident that the final Plan will ultimately be a stronger Plan as a consequence of this collaborative effort and I believe that this process has also provided us with a good template for working together in the future. I look forward to the continuation and strengthening of this process as we proceed through the development of the final Plan and into the implementation phase of the Plan.

Based on our review, we have objections to the preferred alternative because it would not provide an adequate level of protection for fish habitat/water quality and have assigned a rating of EO (Environmental Objections) to the preferred alternative. We believe that these objections could be removed with the adoption of Riparian Option 2 as a Forest-wide standard and watershed analysis as a Forest-wide guideline. We also feel that additional information is needed to fully understand 1) the goals and objectives of the proposed Plan, 2) the manner in which the Forest-wide standards and guidelines would be implemented, and 3) the means by which the monitoring plan would be integrated into the adaptive management strategy being undertaken by the Forest Service. Consequently, we have assigned a rating of 2 (Insufficient Information) to the draft EIS/Plan. An overall rating of EO-2 (Environmental Objections - Insufficient Information) will be published in the *Federal Register*, along with a summary of our comments. A copy of the

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rating system used in our review of the draft EIS/Plan is enclosed for your reference.

As we stated in our meeting with the Forest Service on August 13, 1996 and reiterated in our August 15, 1996 letter to you, we do not believe that the riparian option contained in the preferred alternative (a combination of Riparian Options 2 and 3) would provide sufficient short-term or long-term protection of fish habitat and water quality. It is our opinion that the findings and recommendations contained in the *Anadromous Fish Habitat Assessment* (AFHA) report (conducted by the Forest Service at the direction of Congress to determine if additional protection of anadromous fish habitat was needed) represent the best available information related to current fish habitat conditions and additional fish habitat protection needs on the Tongass. A key finding presented in AFHA is that procedures currently used on the Tongass are not effective in precluding increased risk to anadromous fish stocks over the long term. We believe that the application of Riparian Option 2, in conjunction with watershed analysis, would ensure that riparian buffers would be established in a manner consistent with AFHA recommendations and is the minimum level of protection that should be applied on the Tongass. Consequently, we strongly recommend that the selected alternative adopted in the Record of Decision (ROD) contain Riparian Option 2 as a Forest-wide standard and watershed analysis as a Forest-wide guideline.

Additionally, we are very concerned with the lack of clearly stated management direction for the Tongass in the various elements of the draft Plan. We find that the lack of clearly defined goals and objectives in the draft Plan makes it very difficult to determine the context for the various proposed management practices and how they relate to one another. We are also extremely concerned that the Plan, as currently drafted, does not clearly distinguish between standards (signifying mandatory application) and guidelines (signifying discretionary application) and it contains language which provides a high degree of flexibility during implementation with no apparent accounting system for tracking the outcomes. We are also concerned with the scientific integrity and lack of specificity in the proposed Monitoring and Evaluation Plan (Chapter 6 of the draft Plan). Considered collectively, we believe that the present lack of clarity in these elements of the draft Plan leaves too much uncertainty as to how Tongass resources would be managed on the ground.

Enclosure 1 contains our detailed comments, which elaborate further on these issues as well as other areas of concern we believe need to be addressed in the final EIS. We have also included a comparison of the AFHA recommendations, proposed Plan direction, and EPA's recommendations in Enclosure 2.

I trust that we will be able to draw upon the strong working relationship our agencies have established through the development of the draft EIS/Plan to successfully resolve the issues we have identified before the final EIS and ROD are issued. To that end, I am making my staff in both our Juneau and Seattle offices available to work closely with you and your staff in the development of the final EIS/Plan. I am also interested in beginning a dialogue on how we might initiate the development of a multi-agency monitoring strategy for the Tongass, as was initially

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discussed during our August 13, 1996 meeting. We believe that an effective, comprehensive monitoring effort is an essential element to a successful adaptive management strategy and are very interested in working with the Forest Service and other agencies to optimize the use of available resources for conducting monitoring on the Tongass.

I will be contacting you in the near future to determine how we might best use our available staff resources to develop a Plan that would allow the Forest Service to manage the Tongass in a manner consistent with its mission while protecting the valuable environmental and ecological resources of the Forest. At that time, I would also like to discuss how we might initiate the development of a collaborative, multi-agency monitoring effort on the Tongass.

Should you have any questions about our comments on the draft EIS/Plan, please feel free to contact me at (206) 553-1793. Your staff should direct any questions to Bill Ryan at (206) 553-8561.

Sincerely,

Charles E. Findley
Deputy Regional Administrator

Enclosures (3)

cc: Gary Morrison-Chatham Area
Abigail Kimbell-Stikine Area
Bradley Powell-Ketchikan Area
Beth Pendleton-TLMP Co-Team Leader
Nevin Holmberg - USFWS
Jeffrey Towner - COE
Don Collinsworth - NMFS
Diane Mayer - Alaska DGC

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Enclosure 1

EPA Region 10
Detailed Comments on the Tongass Land Management Plan (TLMP) Revision

EPA fully supports the interagency and interdisciplinary planning process that the Forest Service has used to develop the Revised Supplement to the Draft Environmental Impact Statement (draft EIS). We look forward to continuing our interagency consultation and cooperation as the planning process progresses. We also applaud the Forest Service for using the best available science to inform the public and the decision maker of the likely consequences of this important decision.

Comments on the Proposed Revised Forest Plan

EPA strongly advocates an Aquatic Protection Strategy that includes the Anadromous Fish Habitat Assessment (AFHA) recommendations for protecting fish habitat and additional mitigation measures to maintain or restore other aquatic ecosystem functions and values and other beneficial uses of water. Our comments and recommendations tend to focus on aquatic resources and are based on our statutory responsibilities and related program experience with respect to the Clean Water Act and the Safe Drinking Water Act.

Our comments address the following topics:

- Riparian buffers and watershed analysis
- Goals and objectives
- Standards vs. guidelines
- Monitoring and evaluation
- Municipal watersheds
- Wetlands
- Watershed restoration
- Estuaries
- Log Transfer Facilities

Our comments on the proposed Plan are organized by topic area and are presented as a recommendation, followed by our rationale for the recommendation(s), and, where applicable, followed by page-specific (or line-specific) comments and/or recommendations.

Riparian Buffers and Watershed Analysis

Recommendation:

Adopt Riparian Option 2 as a Forest-wide standard and watershed analysis as a guideline.

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We also recommend that any deviations from the Riparian Option 2 standard shall be based on watershed analysis using "*Ecosystem Analysis at the Watershed Scale: Federal Guide for Watershed Analysis*" (August 1995 or subsequent versions) as the analytical framework. Finally, we recommend adding an implementation schedule for watershed analysis (or ecosystem analysis) to Chapter 2 of the revised Plan.

Rationale:

Riparian Option 1 generally provides wider buffers than recommended in AFHA, Riparian Option 2 is generally consistent with the AFHA recommendations for riparian buffers, and Riparian Option 3 provides substantially less protection than recommended in AFHA. This is the main reason we recommended Alternative 3 in our letter of March 1, 1996. Alternative 3 is the only alternative that is consistent with AFHA. Option 3 is based on Alternative P in the 1992 supplemental draft EIS, which was developed two years before the AFHA Report to Congress. Thus, it is substantially non-responsive to the concerns raised in AFHA.

Adopting watershed analysis as a guideline allows the responsible line officer the flexibility to decide when and where to conduct watershed analysis (or not). If the line officer chooses to do a watershed analysis prior to a major land-disturbing project, he or she shall prescribe windfirm riparian buffers (and other appropriate mitigation measures) *designed specifically for that watershed* based on watershed analysis. If the line officer chooses not to do a watershed analysis before a major ground-disturbing project, then the Riparian Option 2 standard provides a reasonable assurance that riparian habitat will be protected over the long term.

We recommend using the *Federal Guide for Watershed Analysis* because it is the best available guidance document on watershed analysis. Conversely, we think that not adopting any guidance document for watershed analysis is unacceptable in light of the fact that AFHA determined current practices are inadequate to protect fish habitat in the long term. We were initially pleased to see the *Federal Guide* incorporated by reference in the proposed Plan, though we are now concerned that the Forest Supervisors are considering deleting it without incorporating an alternative guidance document. If the Alaska Region of the Forest Service rejects the *Federal Guide*, then we think it is incumbent upon the Alaska Region to develop a Tongass-specific guide for watershed analysis and incorporate it by reference in the revised Plan.

An implementation schedule for watershed analysis (or ecosystem analysis) will give the reader a general idea of what to expect and when to expect it.

Goals and Objectives

Recommendation:

Revise the proposed Plan to clearly identify the management goals and objectives for the Tongass and identify how the direction presented in the Plan will achieve the goals and objectives specified in the Plan.

Rationale:

The proposed Plan could be improved immensely by including more clearly defined goals and objectives. We see the goals and objectives (as defined in the Forest planning regulations, 40 CFR 219.3) as the "glue" binding the various elements of the Plan together. Unfortunately, we find that the proposed Plan is inconsistent in its identification of goals and objectives, particularly in Chapter 4 (Forest-wide Standards and Guidelines), making it difficult to determine the context for various elements of the proposed management practices and how they relate to one another. Also, with various "goals" and "objectives" distributed throughout different sections of the Plan, it is difficult to get a comprehensive view of the what the proposed Plan is ultimately trying to accomplish.

We agree with placing all goals and objectives in Section 2 of the proposed Plan. These would include those identified in the various sections of the proposed Plan as well as the April 5, 1996 letter outlining the preferred alternative (and any others that may potentially still need to be developed). Once the goals and objectives have been consolidated into a single section of the proposed Plan, direction presented in Sections 3, 4, 5, and 6 could be cross-referenced to the applicable goals and objectives in Section 2. This would facilitate an understanding of how specific direction is intended to meet Plan goals and objectives and also provides a mechanism for understanding how different elements of the proposed Plan relate to one another with the goals and objectives as the link (which they logically should be).

Standards and Guidelines

Recommendation:

We strongly recommend that the proposed Plan be revised to clearly distinguish between a standard and a guideline.

Rationale:

The proposed Plan does not, in most cases, distinguish between a standard (signifying mandatory application) and a guideline (signifying discretionary application). Because the Plan is

intended to provide clear direction on how activities on the Forest are to be conducted, we believe that it is critical that the plan clearly indicate all direction presented in the Plan as being either a standard or a guideline (using the definitions presented in Chapter 7). Without clearly differentiating between a standard and a guideline, those charged with implementing the Plan (and those trying to understand how the Plan has been implemented) have no way of knowing which elements of the Plan are mandatory (i.e., standards) and which are discretionary (i.e., guidelines). We believe that this could be easily remedied by following each element of each standard and guideline with statements such as "this is a standard" or "this is a guideline" (or something similar).

We view the Standards and Guidelines contained in Chapter 4 of the proposed Plan as the mitigation measures for the potential impacts of the proposed action and find that the lack of clearly defined standards and guidelines makes it exceedingly difficult to determine the potential environmental consequences of each Plan alternative. For example, it is difficult to determine if the environmental "consequences" presented in the draft EIS reflect the implementation of all standards and guidelines or a subset of them, given that many are presented as being desirable, yet optional. If the impacts presented in the draft EIS assume that all proposed standards and guidelines would be implemented, we are concerned that the draft EIS presents an overly optimistic characterization of outcomes associated with the implementation of the preferred alternative (or any other alternative). We are concerned because the present wording and unclear direction of the proposed Plan suggest that it is likely that all standards and guidelines would not be implemented as written. This reiterates the need for presenting clearly defined standards and guidelines in the Plan.

In general, we are concerned with the wording of many of the standards and guidelines contained in the Plan in that they provide a high degree of flexibility during implementation with no apparent accounting system to track the outcomes (expected or otherwise). While we understand that S&Gs need to be able to accommodate unique situations where a standardized approach is not applicable or ultimately unworkable, we also believe that S&Gs need to provide sufficient structure and direction to ensure that deviations are more the exception than the norm. With the liberal use of terms such as "to the extent feasible ....minimize ....consider the need ....where needed ....where feasible," we are concerned that Forest resources could ultimately be managed in a manner that is much different than the direction indicated in the S&Gs if the "flexibility" built into them remains so loosely structured.

We believe that the Plan should include criteria which aids the user in judging when deviation from an identified guideline (defined as a preferred or advisable course of action or level of attainment) is appropriate or acceptable. Without such criteria, the decision to apply any guideline (being merely an advisory action) seems to be an individual judgement that would result in inconsistent application of that guideline across the Forest. Additionally, we believe that the Plan should specify the type of pre- and/or post-implementation analyses/monitoring required to both justify deviation from a preferred course of action and to ensure that intended goals are being

achieved through the implementation of alternative management practices. Given that one of the purposes of the Plan is to achieve specified goals throughout the Tongass through the implementation of a set of generally consistent practices, we believe that the Plan should provide clearer direction as to how guidelines are to be implemented.

Specific Comments:

FIRE S&Gs
We recommend that a provision be added to these S&Gs that ensures that any prescribed burning, should it be undertaken, would be conducted in a manner consistent with applicable rules and regulations of the Alaska Department of Environmental Conservation (ADEC). These S&Gs should clearly reference the AIR S&Gs, which indicate that permits would need to be obtained from ADEC for prescribed burning projects.

FISH S&Gs
These S&Gs fail to address the need to comply with Alaska State Water Quality Standards (18 AAC 70), which are applicable to waters located on the Tongass. These S&Gs need to be modified to 1) identify the elements of Alaska Water Quality Standards (WQS) applicable to waters on the Tongass 2) indicate that they must be complied with and 3) indicate how compliance with the WQSs would be demonstrated.

FISH111, Section II.B. - We recommend that the design and implementation of the fish habitat monitoring program be coordinated with the appropriate federal, state, and local resource agencies as well as the Pacific Northwest Research Station.

FISH112, Section IV.B. - It is not clear that the defined baseline fish habitat objectives (pool area, large woody debris, width-to-depth ratio) are really objectives. They appear to be indicators of fish habitat. If the values derived are target levels to be maintained or exceeded, then they could be viewed as objectives or goals. Unfortunately, these S&Gs do not provide any information as to how these values are to be determined or what should be done with these values once they are determined. Are values presented in Table 1C of Appendix C.1 of the AFHA report to be achieved/maintained? If so, the values should be explicitly identified in these S&Gs. If not, the S&Gs should indicate how the "objectives" would be derived. We recommend this section be revised to read:

> Develop and maintain a set of Forest-wide baseline fish habitat objectives (with associated ratings such as poor, below average, good/above average, excellent/outstanding) as a reference to quantitatively evaluate the relative health or condition of riparian and fish habitat. Use the baseline fish habitat objectives listed below (see AFHA 1995, Appendix C.1) as initial indicators for characterizing the natural range of habitat conditions by channel types and process groups. Revise/expand this list as additional information becomes available. Until this work is completed, use the values presented in Table 1C of the AFHA report as interim Forest-wide fish habitat objectives.

FISH112, Section IV.D.1. - This S&G directs one to "use biological and physical characteristics to determine size classes and distribution of LWD (large woody debris)." We interpret these biological and physical characteristics to be the habitat objectives identified/defined in FISH112, Section IV.B. Consequently, we suggest that the last sentence of this section be replaced with something similar to:

> Ensure large woody debris (LWD) levels associated with streams assigned specific habitat ratings (poor, below average, good/above average, excellent/outstanding) are maintained at levels that would not result in a downgrading of the habitat rating (e.g., a stream system rated as "good" in its undisturbed state should retain its "good" rating upon completion of management activities). For stream systems with "below average" or "poor" ratings, identify opportunities to improve habitat consistent with FISH22. As an interim goal, ensure that LWD levels related to all anadromous fish-bearing streams are maintained in a manner consistent with the LWD percentile values presented in Table 1C of the AFHA report.

FISH112, Section IV. E. and F. - These S&Gs should be modified to explicitly identify the sediment and temperature WQSs applicable to streams on the Tongass.

Add the following section to FISH112

FISH112, Section IV.E.3. Maintain bankfull channel width-to-depth ratios and pool areas to ensure that fish habitat will not be degraded as a consequence of management activities. As an interim goal, ensure that width-to-depth ratios and pool areas related to all anadromous fish-bearing stream systems are maintained in a manner consistent with the percentile values presented in Table 1C of the AFHA report.

FISH22 - We believe that all monitoring of all projects (in this case, fish habitat improvement projects) is a fundamental part of any project undertaken. The understanding of whether the project ultimately succeeds or fails is essential for successful planning of future projects. Consequently, we recommend that the language in FISH22, Section I.C. be modified to read:

> During project planning, develop a written plan that defines the goals of the project to be undertaken and defines the monitoring approach to be used to determine if those goals are ultimately accomplished. The project plan shall identify the means by which monitoring results will be reported to facilitate use in future planning activities. The monitoring effort shall be governed by the type of project, with high interest/high investment projects being monitored more intensely.

<u>RIPARIAN S&Gs</u>

The riparian protection options to be applied are stratified by a classification scheme developed by the Alaska Department of Fish and Game (ADFG) related to the quality of watersheds for sport and/or commercial fish production as part of the Forest Habitat Integrity Plan (FHIP). If this

classification scheme is to be used as the basis for defining levels of riparian protection, the S&Gs should explicitly identify those watersheds identified as "high value watersheds" (FHIP1 watersheds) to ensure that the proper riparian options are applied to the appropriate watersheds.

RIP1 - Replace the phrase "seek to maintain" used throughout these S&Gs with "maintain."

RIP1, Section I.A.5. - Revise to read:

> Ensure beneficial uses of riparian areas by maintaining water quality standards (Consult Alaska State Water Quality Standards [18 AAC 70], Best Management Practices, Chapter 10 of Soil & Water Conservation Handbook [FSH 2509.22], and Appendix C of this document).

RIP3, Section II. F.3. - Clarify how personal use woodcutting within 100 feet of Class I and Class II streams would be discouraged. Through the use of a public information campaign? An enforcement strategy? Without an identified means of discouraging personal use cutting, this standard or guideline (whatever it is intended to be) has little to no meaning "on the ground."

RIP3, Section II.G.4.a. - Revise to read:

> Trees or products yarded across or along stream courses shall be fully suspended when crossing the stream course or yarded the full length of the stream or drainage unless alternatives are developed in the operating plan or timber sale contract which meet the objectives for riparian areas. Use of such alternative practices shall be supported by analyses demonstrating that objectives for riparian areas will be met and these alternatives shall be approved by the responsible line officer before being implemented.

RIP3, Section II.G.4.b. - Eliminate the phrase "(u)nless agreed otherwise in the operating plan or timber sale contract, and consistent with safe practices" from the first sentence of this section.

RIP3, Section II.G.4.c. - Eliminate the phrase "(a)t the time agreed in the operating plan or timber sale contract" from the first sentence. Eliminate the phrase " as agreed in the operating plan or timber sale contract" from the last sentence.

RIP3, Section II.G.4.d. - Eliminate the phrase "whenever feasible."

RIP3, Section IV.D.,second asterisk - In the discussion of management direction for areas with "no programmed timber harvest," this section states that such harvest "would have to meet objectives for the riparian area as determined by an analysis of site-specific conditions with an understanding of watershed functions and stream channel processes." We interpret this language to mean that a watershed analysis should be conducted prior to harvesting in areas where direction states that no programmed harvest would be scheduled. Consequently, this section should cite the parts of the Soil & Water S&Gs (S&W112, Section II) applicable to watershed analysis and cumulative watershed effects.

SOIL AND WATER S&Gs
These S&Gs do not identify objectives to be achieved with their use. We recommend that they be revised to identify the objectives/goals that they are intended to achieve.

S&W112, Section II.A.1. - Revise to read:

> Conduct watershed analyses, consistent with framework set out in *Ecosystem Analysis at the Watershed Scale: Federal Guide for Watershed Analysis* (August 1995 or subsequent versions), for projects in which deviation from the Riparian Option Standard is judged to be desirable or necessary. This analysis shall be conducted to ensure that appropriate protections of water quality are achieved upon completion of the project.

S&W2, Section I.A. - delete the phrase "as funding allows."

TRANSPORTATION S&Gs
We are extremely pleased to see that the Alaska Timber Task Force Log Transfer Facility Guidelines are explicitly included in the proposed Plan (by reference in the S&Gs and in Appendix G). One of EPA's major concerns with the 1991 draft revised Tongass Forest Plan was that it did not include these Guidelines (which we use when issuing 402 permits for LTFs).

We find it a bit puzzling that direction related to LTFs is contained in TRAN214 (Road and Bridge Preconstruction). While not changing the intent or content of the direction contained in TRAN214, Section V, we believe that direction related to LTFs would be more easily located in these S&Gs with the establishment of a separate, stand-alone LTF section.

WETLANDS S&Gs
WET, Section III.A. - Revise this section to read:

> The discharge of dredged or fill material onto wetlands is regulated under Section 404 of the Clean Water Act (CWA) which is administered by the Corps of Engineers (COE) and the Environmental Protection Agency (EPA). However, certain forestry activities are exempt from permit requirements under Section 404(f) of the CWA, including certain normal forestry activities such as harvesting, seeding, cultivation, and minor drainage; maintenance of drainage ditches; and the construction or maintenance of forest roads (see 40 CFR 232). Other forestry activities in waters of the U.S. may be permitted under Nationwide or Regional general permits (see 33 CFR 330). In all cases, consult with the COE District Office with regard to applicability of the exemptions or general permits to proposed activities in wetlands.

Monitoring and Evaluation

Recommendation:

We recommend strengthening the Monitoring and Evaluation Plan in Chapter 6 of the

proposed Plan to improve its effectiveness in 1) determining the degree to which the management direction presented in the Plan is implemented on the ground, 2) determining the effectiveness of the management strategy in achieving the desired/anticipated results, and 3) identifying necessary corrective actions when elements of the Plan are shown to be ineffective or in need of improvement.

Rationale:

We view the Monitoring and Evaluation Plan in Chapter 6 to be a critically important element of the proposed Plan, especially with the Forest Services' application of an adaptive management strategy to forest planning activities on the Tongass. A monitoring and evaluation program designed to provide the necessary feedback on the successes (and failures) of management practices specified in the Plan and implemented on-the-ground is the cornerstone of a successful adaptive management strategy. We have concerns that the proposed Monitoring and Evaluation Plan does not provide sufficient detail or direction to ensure consistent and useful feedback with respect to the management direction presented in the Plan. Our major concerns with the proposed monitoring plan are highlighted below.

1. It is not clear how the proposed monitoring strategy relates to the intended overall goals and objectives of the Plan. This is largely attributable to the lack of clearly defined goals and objectives in the Plan. We believe that the development of a set of simply stated goals and objectives, and cross-referencing proposed monitoring activities to them, will provide the necessary link between proposed on-the-ground activities and stated goals and objectives of the Plan.

2. The monitoring plan identifies, in very general terms, the type of information that would be gathered with no indication of what would be done with that information. We believe it is essential that the monitoring plan not only identify the type of information to be collected, but also indicate what actions would be taken with the information gathered (How will data/information be analyzed? What actions might follow such analyses?). Without specifying how collected data/information will be used, we are concerned that the proposed monitoring activities would not be effectively integrated into the adaptive management strategy being proposed by the Forest Service.

3. We believe that the monitoring plan does not contain the following fundamental "details" that we see as being essential for it to be an effective tool in the implementation of an adaptive management strategy.
   a. Many of the monitoring items indicate that sampling will be done annually for 10 to 20 percent of harvest units and roads accepted. How will the 10 to 20 percent be selected? How are they to be distributed throughout the Forest? We believe that for the monitoring plan to be effective, it should either present the methodology to be used to determine the harvest units and roads to

sample/monitor, or indicate to the users of the Plan where such direction can be found.

b. What monitoring methods will be used? In general, the monitoring methodologies we are most familiar with are implemented using Standard Operating Procedures (SOPs) which outline how things are to be done in a consistent, repeatable manner. Without SOPs, monitoring approaches could be applied haphazardly across the Tongass with the concomitant inconsistent reporting of the findings from that monitoring. Does the Forest Service have SOPs for the various monitoring activities identified in the proposed Plan? If so, the monitoring plan should identify them explicitly by citation. If not, we believe they should be developed and either be included in the Plan, or identified as being available by reference.

c. How will results be reported? While the proposed Plan identifies general time-frames that results would be reported and by whom, we believe that the Plan should also identify the intended recipients of any monitoring reports and how the reports would relate to evaluating the relative successes and failures of Plan implementation.

Specific Comments:

Fish Habitat

B.1. and B.2. - The monitoring plan provides no indication that harvest units are the best level on the landscape to be evaluating fish habitat protection. While they are easy to define, it is not clear that monitoring at this level would ultimately yield useful information. We recommend that the Forest Service carefully consider the appropriate level on the landscape to be evaluating fish habitat protection (perhaps it's at the watershed scale) and integrate it into the monitoring strategy. We strongly recommend that the rationale for the scale of analysis selected be identified in the monitoring plan.

B.2. It is not clear how "effectiveness" will be determined with the measurement of the habitat "objectives." See our general comments above.

Minerals

It is not clear how the proposed monitoring activity demonstrates that mineral development is consistent with stated goals. See our general comments above.

Timber

I.1. We believe that this monitoring effort should also look at compliance with buffers specified in the Riparian S&Gs.

I.2. We recommend that the phrase "at least on a qualitative level" be dropped from this section as it is inconsistent with the Fish S&Gs, which contain quantitative measures/objectives. We recommend that criteria should be developed for conducting consistent "qualitative/visual" checks

(where appropriate) and identify when a quantitative effects analysis is warranted.

Transportation

J.1.d. This section contains the statement that "....specific monitoring tasks listed elsewhere in the monitoring and evaluation plan." Unfortunately, we were unable locate these tasks in the Plan. If they are contained elsewhere in the Plan, we recommend that this monitoring activity explicitly identify where these tasks are located within the Plan. We also believe that this monitoring effort should include an evaluation of the implementation of the Alaska Timber Task Force (ATTF) Guidelines for the siting, construction, operation and monitoring/reporting of Log Transfer Facilities (LTFs).

J.6. This activity suggests that effectiveness monitoring of standards and guidelines applicable to LTFs would be conducted, but proposed "monitoring" does not address the effectiveness of the implementation of the ATTF Guidelines. Because these guidelines provide that basis for the siting and operation of LTFs and are contained in the Transportation S&Gs, we believe that it is essential that the plan include an effectiveness monitoring element designed to determine if the Guidelines adequately mitigate adverse impacts to water quality, fish habitat, wildlife, and the marine environment.

J.6.d. We recommend that the phrase "at least on a qualitative level" be dropped from this section as it is inconsistent with the Fish S&Gs, which contain quantitative measures/objectives. We also recommend that criteria be developed for conducting consistent "qualitative/visual" checks (where appropriate) and identify the criteria which would signify the need for a quantitative effects analysis.

Water

K.2. This monitoring strategy places an extremely high reliance on qualitative evaluation without defining the parameters/criteria that should be included in such evaluations. Without such criteria, qualitative evaluations would be conducted and reported in an inconsistent manner. We also believe that the "qualitative" approach to evaluating protection to beneficial uses of water is inconsistent with the Fish S&Gs and Alaska State Water Quality Standards, which contain quantitative measures/objectives. We believe that a balance of both qualitative and quantitative monitoring is necessary to truly evaluate the effectiveness of Best Management Practices (BMPs) in protecting water quality and beneficial uses. We are concerned that the presently proposed strategy places too much reliance on qualitative "checks" to provide a meaningful approach for evaluating BMP effectiveness.

Municipal Watersheds

Recommendation:

We request that the restrictions and requirements in the proposed "Enacted Municipal

Watershed" land use designation (LUD) be incorporated in the forest plan in such a way that these same restrictions and requirements apply to all municipal watersheds on the Tongass, not just the three enacted municipal watersheds. We also recommend revising the Water S&G for non-municipal water supplies to ensure consistency with the source water protection provisions of the newly reauthorized Safe Drinking Water Act.

Rationale:

An essential goal of our aquatic protection strategy is to prevent public drinking water sources from becoming polluted by physical contaminants (sediment and turbidity), chemical contaminants (organic and inorganic compounds), and microbiological contaminants (bacteria, viruses and parasites). Although Forest Service regulations allow the Regional Forester the discretion to enter into written agreements with municipalities to assure protection of water supplies, 36 CFR 251.9(b) states, in part:

> "When deemed appropriate by the Regional Forester, requested restrictions and/or requirements shall be incorporated in the forest plan without written agreements."

We think that our request is appropriate in this case because it is the most efficient and effective way to assure protection of municipal water supplies across the Tongass. Specifically, this will help municipalities 1) protect public health, 2) avoid increased capital and operating expenditures, and 3) comply with state drinking water regulations. We are very pleased that the Forest Supervisors and their staff have thus far been most responsive to our concerns on this matter.

As you may know, President Clinton recently signed into law amendments to the Safe Drinking Water Act. Included in these amendments are provisions related to source water protection. We will continue to cooperate with the Forest Service to provide leadership that will ensure the safety of both municipal and non-municipal source water supplies.

Wetlands

Recommendation:

We recommend that the proposed Wetlands S&G be revised to ensure consistency with the statutory and regulatory requirements of Section 404 of the Clean Water Act (subject to limitations on changing the area's use and impairing the flow or reducing the reach of waters).

Rationale:

EPA and the Corps of Engineers are authorized to carry out certain provisions of Section 404 of the Clean Water Act, including exemptions under Section 404(f). However, the U.S. Attorney General issued an opinion on September 5, 1979, that EPA rather than the Corps has ultimate administrative authority to construe Section 404(f) of the Act. With respect to TLMP, EPA generally concurs with the Corps' June 14 letter on the applicability of the 404(f) exemptions.

As the agency ultimately responsible for determining the scope of jurisdiction under the Clean Water Act, EPA would like to maintain Federal government consistency in representing the requirements of Section 404. We have been working closely with the Corps and the Forest Service for several months to address issues related to Section 404 on the Tongass, including issues related to the applicability of the exemption to roads proposed in TLMP revision. We commend the Regional Forester for communicating these issues to the Forest Supervisors. However, we are concerned that the Forest Service may be considering retaining or adding management direction in the Wetlands S&G that is inconsistent with Section 404(f). Therefore, we suggest that the Forest Service, the Corps and EPA continue to work together to resolve this issue cooperatively.

Watershed Restoration

Recommendation:

We recommend deleting "as funding allows" from the Watershed Restoration S&G (S&W2, Section I.A.) and adding the following:

> "Consult and coordinate with other agencies and landowners when implementing and updating the Alaska Regional Watershed Restoration Strategy."

We also recommend adding an implementation schedule for watershed restoration projects to Chapter 2 of the revised Plan.

Rationale:

The phrase "as funding allows" does not provide a clear sense of the priority being given to watershed restoration and suggests that watershed restoration may be a very low priority and lacks management support. We think watershed restoration should be a high priority. Regardless of resource, we think this sort of direction (the use of the phrase "as funding allows") suggests a lack of commitment to follow through with the commitment. With the proper characterization of this type of work as being important and needing to be done, we believe that appropriate funding would be secured..

The Alaska Regional Strategy is a good first step towards restoring the integrity of aquatic ecosystems that have been degraded due to past management practices. However, we think that involving other interested agencies and landowners will improve implementation and future updates to the strategy.

An implementation schedule for watershed restoration projects will give the reader a general idea of what to expect and when to expect it.

Estuary Fringe

Recommendation:

We recommend using the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) maps to identify estuaries. Specifically, we recommend applying the Estuary Fringe S&G to all NWI map units classified and field-verified as Estuarine (system), Intertidal (subsystem).

Alternatively, we recommend using the Alaska Region Channel Type Classification System per the Channel Type User Guide (USDA, April 1992) to identify estuaries. Specifically, we recommend applying the Estuary Fringe S&G to all stream channels classified and field-verified as one of the five channel types within the Estuarine Process Group (i.e., channel mapping symbols ES1, ES2, ES3, ES4 and ES8).

We also recommend retaining the standard to locate facilities more than 1000 feet from Class I streams or beds of aquatic vegetation.

Rationale:

We suggest a standardized mapping protocol for estuaries to ensure consistent implementation of the Estuary Fringe S&G across the Tongass. EPA assisted the Forest Service in researching various scientific and legal definitions of "estuary" that may be suitable to use in the Estuary Fringe S&G. At the time, we considered but ruled out the NWI definition of an "estuarine system" because it did not appear to fit the intended purpose of the Estuary Fringe S&G. However, upon further investigation, it became clear that the NWI definition did not fit because the "estuarine system" consists of two subsystems (intertidal and subtidal). Since the underlying purpose of the Estuary Fringe S&G is to protect intertidal flats, it seems appropriate to use the NWI estuarine intertidal subsystem definition. Furthermore, the U.S. Fish and Wildlife Service has already mapped and digitized almost all wetlands (including estuaries) for the Tongass National Forest. We believe that either of the above options will greatly improve the scientific credibility of the Estuary Fringe S&G.

EPA strongly supports the Estuary Fringe S&G, especially the objective to maintain a

1000 feet buffer of old growth forest, the 1000 feet no commercial timber harvest standard, and the standard to locate facilities more than 1000 feet from Class I streams or beds of aquatic vegetation. We believe the objective is clearly defined, and that the above standards are necessary to achieve the stated objective. The facilities location standard is logically consistent with the objective, whereas the facilities location guideline as stated in the Transportation S&G on page 4-119 ("generally a minimum of 300 feet") is inconsistent with the objective.

Log Transfer Facilities

Recommendation:

We recommend including the Alaska Timber Task Force (ATTF) *Log Transfer Facility Siting, Construction, Operation and Monitoring/Reporting Guidelines* in the revised Forest Plan.

Rationale:

We are very pleased to see the direct incorporation of the ATTF *Guidelines* in Appendix G of the proposed Plan. Because these *Guidelines* provide the basic framework used by EPA in the development and issuance of Section 402 permits for Log Transfer Facilities (LTFs), it is critical that they be followed in all planning activities prior to the application for permits. Their use in project planning on the Tongass should facilitate a more efficient permitting process, with fewer issues to resolve during permit development. We also encourage the Forest Service to actively pursue the development of 402 permits concurrently with the NEPA planning process to ensure consistency with the implementing regulations for NEPA [40 CFR 1500.2(c)].

Specific Comments:

Appendix G, C6., Page G-8, first line - modify the statement to read "...accumulation level is described as 100 percent coverage exceeding both 1 acre in size and a thickness greater than 10 cm (3.9 inches) at any point" (emphasis added). This change results in language that is identical to that contained in the ATTF *Guidelines*.

Page G-8, paragraphs 3 and 4 under Discussion of C6. - These paragraphs are no longer relevant. Paragraph 3 refers to a study that was never completed due to a lack of funding. Paragraph 4 refers to the completion of other studies that did not materialize.

Page G-9, paragraph 4 under Discussion of C7. - The last sentence refers to a study which did, in fact, confirm that 3 feet/second was an achievable entry speed for certain types of LTFs, and that log bundle entry speed into the water was significantly correlated with bark loss.

Comments on the Draft EIS

General Comments

It is extremely difficult to evaluate the potential environmental consequences of each Plan alternative because the draft EIS does not contain sufficient information to understand the degree to which the S&Gs (which we view as mitigation measures) would be applied for each alternative. If the analyses reflected in the EIS assume that all S&Gs would be applied, we are concerned that such an assumption is not supported by the language contained in the many of the S&Gs (which suggest that most actions are desirable, but optional). We were unable to find a discussion in the body of the draft EIS or the appendices that clearly identifies the assumed level of implementation of the proposed S&Gs. At a minimum, the final EIS should provide a clear discussion of how the direction provided in the S&Gs relates to the "impacts" presented throughout the EIS for each alternative.

We were unable to find any evaluation of the impacts of the proposed Plan relative to the direction given in Executive Order (EO) 12962. This order, dated June 7, 1995, directs all Federal agencies to conserve, restore, and enhance aquatic systems to provide for increased recreational fishing opportunities nationwide. Because of the large amount of recreational fishing on the Tongass, we believe that EO 12962 is particularly relevant to this current planning effort and the effects of implementing the proposed Plan alternatives should be evaluated relative to the purpose of that order. This evaluation should be presented in the final EIS and/or Record of Decision.

Alternatives

Page 2-10 of the draft EIS indicates that additional alternatives were provided by the Southeast Alaska Conservation Council and the Sierra Club Legal Defense Fund that were "too late to consider at this time." The draft EIS provides no further elaboration on why these alternatives have not been considered in the current draft Plan/EIS or if they would be considered in the development of the final Plan/EIS. We are concerned with the lack of disclosure and discussion of these alternatives, particularly with the brief mention of their existence in a section entitled *Alternatives Eliminated from Detailed Study*. The basis for the "elimination" of these alternatives has not been presented as required by the implementing regulations for NEPA [40 CFR 1502.14(a)].

Preferred Alternative

We recommend that additional clarifying information be included in the final EIS.

1. We believe that the final EIS should provide a more complete discussion of the

preferred/selected alternative, particularly if it is composed of elements of the various alternatives not selected, but which have undergone evaluation. The 14 page letter disclosing the preferred alternative states that this alternative is not significantly different from Alternative 3 (the alternative we identified as EPA's preferred alternative in our letter to Gary Morrison dated March 1, 1996). Unfortunately, little information is provided to support such a characterization. From our perspective, the preferred alternative represents a significant departure from Alternative 3 in that it contains significantly reduced protections for riparian areas.

2. We believe that the final EIS needs to provide a more comprehensive (and comprehensible) discussion/characterization of the consequences of the preferred/selected alternative than is presently contained in the draft EIS and supplemental information. While the issuance of supplemental tables presenting the necessary side-by-side "impacts" of the preferred alternative and the 9 alternatives presented in the draft EIS addressed some of our initial procedural concerns, we found them of limited utility for conducting our review without explanatory text. We view each alternative as more than the sum of it's individual parts and have been unable to fully understand the collective or synergistic effects associated with the preferred alternative.

3. The final EIS needs to provide more information relating the elements of the preferred/selected alternative to those subjected to the panel evaluations to facilitate the disclosure of the "impacts" of the preferred/selected alternative in a comparable, though not identical, context. Panel evaluations, performed in lieu of quantitative impact evaluations, were not conducted for the preferred alternative. Therefore, it could be argued that impact evaluations of key elements of the preferred alternative have not been performed.

Regional Economy and Communities

General Comments:

In general, we found the discussion of the economic impacts on the salmon fisheries to be confusing. This is primarily due to numerous references to distinctly different fisheries or economic sectors (Southeast Alaska salmon fisheries, Alaskan state salmon fisheries, Southeast Alaska seafood fisheries, seafood processors, commercial fisheries, seafood industry) without making a clear distinction between their differences or discussing their relevance to the topic being discussed. To aid the reader, we recommend that this section be revised to present a clearer, less ambiguous, characterization of the impacts of the proposed Plan relative to the different fisheries referred to in the EIS.

We were unable to find a discussion of the economics of the salmon fishery as it relates to sport fishing sector and the subsistence sector, and how the commercial, sport and subsistence

salmon fisheries relate to the overall salmon fisheries in Southeast Alaska. We recommend such a discussion be included in the final EIS.

We were unable to find a discussion of how the economic issues of the salmon fisheries (commercial, sport and subsistence) relate to individual or major communities within Southeast Alaska. We recommend that such a discussion be included in the final EIS.

We were unable to locate an economic discussion with respect to the various species of salmon located in the Southeast Alaska waters, and how these species relate back to the various fishing activities, i.e. commercial, sport and subsistence - and communities. We recommend that such a discussion be included in the final EIS.

Enclosure 2. Comparison of AFHA recommendations and TLMP preferred alternative, and EPA's recommendations for modifying the preferred alternative to be responsive to and consistent with AFHA recommendations.

Component	AFHA Recommendations	TLMP Preferred Alternative	EPA Recommendations
Riparian Buffers	Establish site-specific buffers on floodplains and confined alluvial channels based on watershed analysis and subsequent project design. The purpose is to protect small off-channel streams associated with floodplain streams, and to provide for long-term sources of woody debris (pp. 11-12). Include high mass movement hazard soils and wetland fens in the riparian management area. Before completing watershed and project analyses, adopt no harvest buffers for the entire floodplain for Class I and II streams, no harvest buffers of one tree height for confined alluvial channels on Class I and II streams, and limited harvest buffers of 100 feet for Class III streams. Watershed analysis will recommend site-specific riparian management areas that will modify those described in the Tongass Plan Revision process (p. 16).	Riparian Option 2 in high value watersheds generally includes no harvest: in the entire floodplain of unconfined Class I and II streams; within one tree height of confined Class I and II streams; and within the V-notch of Class III streams. Riparian Option 3 in other watersheds generally includes no harvest within: 200 feet of floodplain channels; 100 feet of other unconfined Class I and II streams; 100 feet of confined Class I and II streams; and the V-notch in about 30% of Class III streams (TLMP, pp. 4-66--4-79). Modification of these guidelines must: be based on site-specific analysis; meet riparian objectives; and be approved by line officer (TLMP, p.4-65). Watershed analysis is not required.	EPA recommends selecting Riparian Option 2 as a standard in all watersheds because Option 2 is consistent with the AFHA recommendations for riparian buffers. We object to Riparian Option 3 because it is substantially inconsistent with the AFHA recommendations for riparian buffers. We recommended Alternative 3 in our March 1, 1996 letter in large part because Alternative 3 is the only alternative that is consistent with AFHA.
Riparian management objectives	Establish quantitative objectives for fish habitat capability (p. 12). Further develop the process for setting quantitative objectives for fish habitat (p. 13). Establish fish habitat objectives for large woody debris, width-to-depth ratio, and pool frequency based on undisturbed conditions. Conduct more analysis and inventory to establish other fish habitat objectives (p. 16).	"Maintain and restore the natural range and frequency of aquatic habitat conditions across the Tongass to sustain the diversity and production of fish and other freshwater organisms. Use baseline fish habitat objectives as a reference to evaluate the relative health or condition of riparian and aquatic habitat. Use baseline fish habitat objectives listed below to characterize the natural range of habitat conditions by channel types and process groups: 1) pool area...2) large woody debris...3) width-to-depth ratio..." (TLMP p. 4-13)	EPA supports establishing quantitative riparian management and fish habitat objectives, but it is not clear how these objectives will be used during project planning or monitoring and evaluation. Please clarify how they will be used in the planning and evaluation process.

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(Enclosure 2 continued)

Component	AFHA Recommendations	TLMP Preferred Alternative	EPA Recommendations
Key watersheds	No change from current management procedures is recommended.	It is not clear whether the preferred alternative includes watershed reserves for Lake Eva and Wright Lake as proposed by Kessler et al (in press). Table 2-1 on p. 2-15 of the RSDEIS suggests it doesn't, whereas p. 3-58 of the RSDEIS suggests that it does.	EPA recommends including the Lake Eva and Wright Lake watershed reserves in the selected alternative for the reasons stated by Kessler et al.
Wetlands	Emphasize the value of wetland fens by including fens in the Riparian Management Area.	Riparian Option 2 includes riparian fens in the riparian management area for the following channel types: Moderate Gradient/Mixed Control, Floodplain/Glacial Outwash, and Palustrine. Riparian Option 3 includes riparian fens in the riparian management area for Moderate Gradient/Mixed Control and Palustrine channel types, but not for Floodplain/Glacial Outwash channel types.	EPA recommends including wetland fens (and other riparian wetlands) within the riparian management area, regardless of which Riparian Option is selected in the revised TLMP.
Stream class	Classify streams draining intermittent and ephemeral channels (p. 13). Add a set of physical criteria to Class II and III streams (p. 17). Add a new Class IV stream category requiring special consideration during timber harvest but typically no buffer strip (p. 16).	Class II definition includes one physical criterion: "...generally steep (6-15%) gradient (can also include streams from 0-6% gradient)..." Class III definition includes intermittent channels and one physical criterion: "...bankfull widths greater than 5 feet..." Class IV definition includes intermittent and ephemeral channels (TLMP, p. 4-13). "Stream Class IV will be treated as part of the hillside under slope stability standards and guidelines...Apply BMPs." (TLMP, p. 4-65)	EPA recommends adding a physical criterion to Class III and Class IV as follows: Class III: "...bankfull widths greater than 5 feet and are moderately to deeply incised (5 or more meters) into the surrounding hillslope." Class IV: "...shallowly incised (less than 5 meters) into the surrounding hillslope." This will make the stream class definitions more consistent with the Channel Type User's Guide. We also recommend adding a standard to field verify stream class and channel type determinations. The significance of making these determinations underscores the need for both watershed analysis and site-specific analysis.

(Enclosure 2 continued)

Component	AFHA Recommendations	TLMP Preferred Alternative	EPA Recommendations
Upslope stability	Develop Forest-wide definitions, inventory standards, and interpretation of mass movement hazard areas, and conduct full inventory and analysis of high hazard and very high hazard soils (p. 13). Remove areas of very high mass movement hazard from the timber base. Reassess the rating systems for mass movement hazard--consistent across the Forest--and no clearcut harvest on high mass movement hazard areas before this reassessment (p. 17).	"At the forest plan level, slope gradients of 72% or more are removed from the tentatively suitable timber base due to high risk of soil mass movement. At the project planning level, the Forest Supervisor or District Ranger may approve timber harvest on slopes of 72 % or more on a case-by-case basis..." (TLMP, p. 4-90). TLMP reassessed the mass movement hazard rating systems for consistency across the Tongass (Swanston, in press), but other than the above 72% slope gradient, the preferred alternative does not include Forest-wide definitions and inventory standards for mass movement hazard areas.	EPA recommends incorporating a standard method for mass movement hazard indexing, such as that proposed by Swanston. This will minimize some of the inconsistencies between administrative units (as identified in AFHA) and allow for Forest-wide analyses and comparisons.
Sensitive stocks	Conduct research on stock identification, assessment, and viability.	The preferred alternative does not include this research in the list of priority research needs in Appendix B.	EPA recommends adding this research item to the list of priority research needs in Appendix B and allocating adequate resources to continue this critical research.
Restoration	Develop a Forest-wide restoration strategy for degraded watersheds (p. 12). Watershed analysis guides restoration activities (p. 18).	"Implement the Alaska Regional Watershed Restoration Strategy (October 1995 version and subsequent updates) as funding allows." (TLMP, p. 4-92).	EPA recommends the following: 1) Delete "...as funding allows."; 2) Add "Integrate watershed analysis and long-term effectiveness monitoring into major watershed restoration projects; 3) Add "Give highest priority to at risk fish stocks and impaired water bodies listed on Alaska's Clean Water Act Section 303(d) list"; 4) Add "Cooperate with other agencies and landowners on watershed restoration projects. Consult with other agencies and landowners on subsequent updates to the watershed restoration strategy or the watershed restoration implementation schedule."; and 5) Add a watershed restoration implementation schedule to Chapter 2 or 5 of TLMP.

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(Enclosure 2 continued)

Component	AFHA Recommendations	TLMP Preferred Alternative	EPA Recommendations
Watershed analysis	Begin implementing watershed analysis similar to that used in PACFISH. This will move the Forest an important step toward the agency goal of ecosystem management and long term sustainability of all forest resources by helping managers make better decisions (p. 12). Watershed analysis is recommended before timber harvest and other major land-disturbing activities (p. 18).	"Adapt *Ecosystem Analysis at the Watershed Scale: Federal Guide for Watershed Analysis* (August 1995) as a framework for conducting watershed analysis...Select watersheds for analysis based on the following criteria: FHIP 1 or FHIP 2 watersheds; threatened, endangered or sensitive species, recommended or designated Wild, Scenic or Recreational Rivers; municipal watersheds; and waters listed on the State of Alaska's 305(b) and 303(d) lists." (TLMP, p. 4-91).	EPA agrees with adopting watershed analysis as a guideline *provided* that Riparian Option 2 (or Option 1) is adopted as a standard. This allows the line officer the flexibility to decide when and where to do watershed analysis (or not). If not, then Riparian Option 2 provides a reasonable assurance of maintaining fish habitat over the long term. EPA recommends using the *Federal Guide* because it is the best available guidance for watershed analysis. We also recommend adding a watershed analysis implementation schedule to Chapter 2 or 5 of TLMP.
Monitoring	Increase monitoring on implementation and effectiveness of procedures for anadromous fish habitat protection. Watersheds subject to pilot watershed analysis for this assessment are high priority for long-term monitoring (p.13). Accelerate acquisition of research information. At least one long-term watershed study...should be performed on the Tongass to assess the long-term cumulative effects of timber management on anadromous fish stocks and their habitat (p. 14). Most monitoring recommendations fall under the priority items in the Regional Forester's April 1994 effectiveness monitoring strategy for the Tongass. Additional recommendations include an annual program of monitoring culverts and a monitoring program for fish habitat objectives (p. 18).	The preferred alternative generally includes implementation and/or effectiveness monitoring for fish, riparian, soil, water, and transportation standards and guidelines. It specifically includes effectiveness monitoring for fish habitat objectives (p. 6-7) and culverts (p. 6-22). It does not specifically include long-term monitoring for watersheds subject to pilot watershed analysis or any long-term watershed studies.	EPA recommends the following: 1) Effectiveness monitoring for fish habitat objectives should be based on long-term monitoring of several representative watersheds rather than short-term "...field inspections on a sample of 10 to 20% of the harvest units and their associated roads accepted during the previous year..."; 2) Effectiveness monitoring for culverts should be based on representative samples of all existing major and minor culverts rather than "...a sample of 10 to 20% of the harvest units and their associated roads accepted during the previous year..." Culvert monitoring should include fish passage for Class I and II streams and culvert failure on Class III and IV streams; and 3) Include a long-term monitoring project or a long-term watershed study in one of the watersheds subject to pilot watershed analysis per AFHA.

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 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

The 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

The 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

The 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 reasonaby 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.

EPB-TLMP

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August 26, 1996

Mr. Phil Janik
Regional Forester
U.S. Forest Service
P.O. Box 21628
Juneau, AK 99802

Dear Mr. Janik,

I am pleased to submit the State of Alaska comments to the Revised Supplemental Draft Tongass Land Management Plan.

The Tongass is a national treasure and the heart of Southeast Alaska. Regional population growth and demands of economic diversification heighten the challenge of Tongass management. The State continues its commitment to work with you, and all Alaskans, to bring balance to the competing interests in forest resources and to maintain a healthy, stable regional economy. This plan review is one step in our collective responsibility to sustain the Tongass as it supports us.

Please contact me, or any Cabinet members, if you have questions regarding the enclosed recommendations. The State looks forward to an expeditious completion of this important update of the Tongass Management Plan.

Sincerely,

Diane Mayer

Diane Mayer
Director

cc: Commissioner Frank Rue, Fish and Game
Commissioner Michelle Brown, Environmental Conservation
Commissioner John Shively, Natural Resources
Commissioner Willy Hensley, Commerce and Economic Development
Commissioner Mike Irwin, Community and Regional Affairs
Commissioner Joe Perkins, Transportation and Public Facilities
Marilyn Heiman, Special Assistant, Governor's Office

L-558

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TONGASS LAND MANAGEMENT PLAN
STATE OF ALASKA - COMMENTS

Thank you for the opportunity to comment on the Tongass Land Management Plan. The Forest Service has the responsibility to complete the Tongass land management planning process and we urge the Forest Service to do it in an expeditious manner.

The well-being of the people of Southeast Alaska is inextricably linked to the management of the Tongass National Forest. The State of Alaska's objective is to ensure that the management decisions made by the U.S. Forest Service meet the current and future needs of Southeast Alaskans, their jobs and their families. This objective can best be met if all parties work together, maintaining mutual respect for community differences, lifestyles, and cultural heritage. Our common mission is to build a stable, diversified, sustainable economy that includes a predictable, reliable timber industry in Southeast Alaska. Success in our mission will provide for an improved standard of living with quality employment and development opportunities for Southeast Alaskans through prudent use of the national forest's resources.

The Tongass Land Management Plan (TLMP) will drive the long-term management decisions for the Tongass National Forest. The plan must reflect not only national mandates, but also the concerns and needs of Alaska communities. The focus must be on Alaskan jobs and families and must use the planning process to find a sustainable balance between all the uses of the forest, including commercial and sport fishing, fish processing, hunting, timber, mining, tourism, subsistence, recreation, and personal use. Another important component to meeting the needs of Alaskans is conservation of forest resources, including fish, wildlife, habitat, water, air, trees, and other resources. We have the responsibility to manage for the conservation of fish and wildlife habitat, provide for community uses, and minimize impacts to viewsheds while providing for a predictable timber industry. The management direction in the plan must provide a mechanism for harvesting and processing trees responsibly, sustainably, predictably, and with a goal of maximum utilization of harvested timber to provide stable, long-term employment opportunities for Alaskans.

The Tongass Land Management Plan is essentially a zoning and rule-making tool similar to local zoning and municipal ordinances. Inevitably, one plan that tries to address a region as large as some states is going to be controversial. Imagine if communities in West Virginia (the approximate size of the Tongass) had to operate under one set of zoning laws and municipal ordinances. Southeast Alaska is a very diverse region. From Ketchikan, that depends mainly on timber production, to Gustavus, that relies on fishing, subsistence, and tourism, the Tongass is a factor in how each community thrives. How the forest should be managed to meet all the diverse needs is a question that has challenged the region for decades.

Beginning in 1910, the Forest Service sought to establish pulp mills to utilize Tongass timber and to provide stable, year-round employment in Southeast Alaska. The Forest Service entered into two fifty-year contracts that provided for a specified timber supply in exchange for pulp mill construction and operations in Southeast Alaska. The Ketchikan Pulp Company (KPC) began pulp mill operations in 1954. The Alaska Lumber and Pulp Corporation (APC) began operations in 1961.

In 1979, a ten-year Tongass Land Management Plan (TLMP) was adopted as required by the National Forest Management Act. In 1980, Congress enacted the Alaska National Interest Land Conservation Act (ANILCA) which largely followed the 1979 TLMP proposed action. ANILCA mandated an annual permanent appropriation of at least $40,000,000 or as much as necessary to maintain the timber supply from the Tongass at a rate of 4.5 billion board feet per decade. In 1990, the Tongass Timber Reform Act (TTRA) was passed by Congress. Among other things, the Act eliminated the requirement for the Forest Service to make available 4.5 billion board feet of Tongass timber per decade and the $40 million annual appropriation.

Every decision made on the Tongass was made only after considerable debate between residents, politicians, industry representatives, and environmentalists. The debates were often emotional, sometimes confrontational, and always frustrating for those involved. Each decision represented negotiation and compromise. The situation today is no different.

Today, the 1979 ten-year Tongass Land Management Plan is 17 years old. The KPC contract is in its 42nd year. The APC pulp mill in Sitka and the sawmill in Wrangell are closed. The future of the pulp mill in Ketchikan is uncertain. The planning process, with the involvement of scientists, communities and the general public, is essential to the long term economic viability of the region. Only through the planning process can we provide a predictable, reliable supply of timber, specify areas that should be harvested, and provide a three to five-year pipeline of timber.

Southeast residents from many walks of life have concerns about timber harvest. The uncertainty about the future of the region's remaining pulp mill and Tongass timber supply has residents who depend on a stable forest products industry in fear of losing their jobs and homes. Those who rely on Alaska's healthy fishery resources also feel threats to their livelihood. Decades of timber harvesting combined with other residential and industrial development in the Pacific Northwest and British Columbia has resulted in habitat loss, declines in the fishery resources, and endangered species listings. Restoration of these areas will come at a high cost.

As population and demands on resources increase, the conflicts becomes more pronounced. The population of Southeast Alaska has increased from 28,000 in 1950 to approximately 75,000 today. When the long-term contracts were entered into almost fifty years ago, there were limited opportunities for year-round employment in Southeast and no industrial base to enable communities to grow. The long-term contracts and the pulp industry provided that base. Communities have grown and the economy has diversified. The challenge now is to

retain that economic diversification, maintain a viable timber industry, and accommodate all uses of the forest. Currently, our salmon stocks are strong, wildlife populations are high enough to meet most subsistence and hunting needs, and tourism is a booming industry. Being able to sustain this situation, and to avoid the severe problems faced in the Pacific Northwest, is contingent upon our "doing things right," now and into the future.

Inevitably, there must be trade-offs to meet the current and future needs of all Southeast Alaska. As decisions on the trade-offs are made, it is important to minimize the risks to both Alaskan jobs and resources, and to consider the values and diverse lifestyles of Southeast Alaskans. To aid the Forest Service in making these decisions, the State offers the following recommendations.

1. Timber Values

Like all Alaskans, Southeast residents who depend on the timber industry for their livelihood value the forest and its resources. As timber resources decline, it is important to bring some stability and predictability to the timber supply relied on by the forest products industry. In order to do this, the timber industry must include a high value-added component to maximize the number of jobs per board foot cut. The idea is to provide for a predictable timber industry in Southeast Alaska while reducing the number of acres impacted by harvest on the Tongass. To maintain its competitiveness, the timber industry must adapt and invest in improved technology. In considering land management decisions for the Tongass, the Forest Service should do its part to bring stability to the current industry and cooperatively plan for long-term adjustments. To that end, we have continued to encourage the Forest Service to offer small five to ten-year timber sale contracts. Smaller sale volumes (1 - 10 MMBF annually) would help meet the needs of several industry participants and would likely be less controversial than larger sales. Providing economic incentives for local use of cedar for value-added production is another way to help increase the number of processing jobs from timber harvested in the region.

The State will do all it can to identify and schedule timber volume from State lands to contribute to a stable, value-added, timber industry in Southeast Alaska. The State introduced and is now implementing legislation that will provide incentives for small, locally owned operators to increase high-valued added processing of timber on state lands. The Alaska Industrial Development and Export Authority and the Science and Technology Foundation are available to provide assistance to companies who want to invest in higher value-added wood processing. The in-state processing of our raw materials, with a focus on adding value locally is a means to improve economic benefits and provide a predictable, diverse, sustainable industry for the region.

The State recommends and supports the establishment of an "intensive management" fund for the Tongass. Additional funds will provide:

(a) access to economically marginal stands which may be less controversial and could maximize the long-term productivity of remaining commercial timber lands;

(b) thinning, pruning, and/or other silvicultural techniques on regenerated stands to maximize the quality of future timber yields;

(c) watershed restoration in areas where past timber harvest activities were not conducted in a manner consistent with current riparian management standards, helping to reduce risks to the fisheries resource; and

(d) assistance for temporary roads, culverts, and other access requirements.

Another means of increasing the timber availability would be to limit two-aged silviculture to an experimental program rather than applying it across the forest. Two-aged management may have few silvicultural benefits in Southeast Alaska. Allowing clearcuts in areas zoned for timber harvest would improve the economics of Tongass timber and concentrate harvesting in fewer areas. Other ways to reduce the risks to the timber industry and improve the economics of timber harvest include intensifying the second-growth management program

and limiting the protective measures for caves and karst to what is required by federal law. Finally, the economics of individual timber sales could be improved, and their impacts reduced, by construction and subsequent closure of temporary roads unless a community indicates a strong desire for a permanent road in the area.

2. Fisheries and Water Quality Values

All Southeast residents value our important fisheries and clean water. Commercial, subsistence, and recreational harvest of fish contribute significantly to every community in Southeast Alaska. Additionally, the State has made a commitment both nationally and internationally to rebuilding and restoring wild salmon populations and protecting salmon habitat. The Governors of Alaska, Washington and Oregon recently signed principles for salmon conservation at the Sitka Salmon Summit to address the economic and social consequences of past impacts to salmon habitat, primarily in the Pacific Northwest.

Application of Riparian Options 1 and 2 will help the State meet its commitments to Alaskans and others. The State recommends Riparian Option 1 be the minimum prescription applied to the 50% highest value watersheds for fish production. The remaining watersheds would get Riparian Option 2 unless a site specific analysis indicates otherwise. The State recommends that the prescriptions for High Gradient Contained (HC) streams, those found in the upper part of the watershed, be changed. Our proposed modification to Riparian Options 1 and 2 will offer more timber for harvest while maximizing the benefit of stream buffers (see enclosed Standard & Guideline recommendation, Enclosure II, page 22).

3. Community Use, Fish, and Wildlife Values

Communities that do not directly benefit from the timber industry are often opposed to harvesting in their use areas. Even communities that directly benefit from timber harvest have their favorite locations they want protected. This often results in individual sales being delayed or deferred or substantially modified due to appeals and litigation. Timber planned for harvest under TLMP will be of little use in providing timber industry jobs if individual

sales remain mired in controversy and litigation based on community concerns for fish, wildlife, recreation, and subsistence uses.

While the existing Forest Service reserve system responds to the national mandate to protect fish and wildlife viability, it does not fully address the need for community use of fish and wildlife. The State has identified numerous fish and wildlife use areas important for one or more Southeast Alaska communities that are available for timber harvest under the preferred alternative. Data on resource values (i.e., coho and pink salmon production, recreational fishing effort, subsistence use, urban deer harvest, and bear harvest) were compiled, analyzed, and ranked. Areas were identified based on the following: highest ranked resource values or combinations of highest values; extent of past timber harvest in each community's core use area (indicator of degree of risk to sustained yields of fish and wildlife for community); and local knowledge of habitat quality and community use patterns. The areas identified collectively contain the most important 20% of the community subsistence areas, approximately 20% of the brown bear harvest and urban deer harvest, 40% of the black bear harvest, and 30% of the coho and pink salmon production and sport fish harvest.

The list of high value community use areas is enclosed for both the Forest Service and the public's information (see Enclosure I). We request the Forest Service work with the Department of Fish and Game and Southeast communities to determine which of these areas should have appropriate management prescriptions that protect community use, and fish and wildlife values. Avoiding or minimizing timber harvest in areas of high community use will increase the predictability and reliability of the timber supply and ensure the viability of all forest dependent industries.

4. Other Suggestions

In the review of the Tongass Land Management Plan, the State developed the following additional suggestions to help the Forest Service meet the values of Southeast Alaskans:

- Intensify the second-growth management program to hasten the second rotation and increase timber production from the commercial timber base.

- Develop monitoring plans that document and foster compliance with TLMP standards and guidelines. The plans should document the short-term and long-term effectiveness of the plan in meeting the objectives set forth in TLMP for renewable forest resources and uses. An adaptive management strategy should reflect interrelated levels of monitoring strategies for evaluating (a) effectiveness of standards and guidelines and Best Management Practices, and (b) trends in species abundance and distribution, changes in habitat quality, and changes in harvest levels and patterns.

- Provide for restoration, rehabilitation and monitoring which would include developing a Habitat Restoration Program to implement stream restoration in watersheds that have been degraded, prioritizing the highest value watersheds. State/Federal monitoring teams could assess habitat damage and conduct research on experimental enhancement of wildlife habitats in second-growth forests where public demand for species most exceeds supply.

- Adopt the extended beach fringe zone standard that is applied to some alternatives in the DEIS. The standard provides a zone 500 - 1000 feet from the beach where single tree or group selection logging is allowed. The extended beach fringe allows harvested areas to better attain old-growth forest characteristics of species abundance, composition, and structure before they are harvested again. The selective harvest zone would reduce blow down in the no-harvest beach fringe, increase the functional value of coastal old-growth corridors connecting Old-Growth Habitat LUDs, help provide for sustained yields of wildlife, and protect anchorages from winds.

- Change the definition of beach and estuary fringe to ensure this important area is maintained. Change the definitions from 500 or 1000 feet slope distance inland from mean high tide to 500 or 1000 feet horizontal distance inland from the landward limit of salt tolerant vegetation (the State's Forest Practices Act requires all measurements be horizontal distance rather than slope distance).

- Improve standards and guidelines for road construction, maintenance and closure by adopting the construction, maintenance, and closure standards in the Alaska Forest Resources and Practices Act. Implement road management plans to reduce impacts to brown bear, wolves, marten, goats, and other species vulnerable to increased human access.

- Rename the "Enacted Municipal Watershed" prescription "Municipal Watershed" and include all municipal watersheds in the prescription. Protecting municipal watersheds under this management prescription could decrease the cost to municipalities for drinking water treatment and would protect public health.

The future decisions for the Tongass National Forest should not be based on the demands of any one group such as timber industry advocates, environmentalists, corporations or Congress. All forest management decisions must consider the people who live here. While the Tongass belongs to all Americans, it is the current and future generations of Southeast Alaskans that are most affected by federal land management decisions. It is very important that Southeast Alaskans are heard and their needs reflected in the final federal decision on the Tongass Land Management Plan. It is critical to bring all stakeholders to the table as the Forest Service implements the plan.

From the State's perspective, a strong, diversified economy is essential to the long-term well-being of Alaska's families. The future of the Southeast economy is tied to continued vitality in the fishing, tourism, timber, and mining industries, as well as to the subsistence economy. The Tongass is the primary land base for the majority of Southeast Alaska communities and must be managed accordingly. It must be managed with a goal of providing maximum opportunities for Alaskan families while not foreclosing or denying benefits and opportunities to future Alaskan generations.

We appreciate the opportunity to comment on the Tongass Land Management Plan. We urge the Forest Service to give due consideration to these comments. We also urge you to discuss the enclosed recommended changes to standards and guidelines with the Alaska Departments of Fish and Game and Department of Environmental Conservation. Finally, we request the Forest Service review, with affected communities, important high-use community areas.

ENCLOSURE I

HIGHEST VALUE COMMUNITY USE AREAS

VCU* areas identified as having the highest values for community use of fish and wildlife. These areas represent the most important 20% of community subsistence use areas in the region, approximately 20% of the brown bear harvest and urban deer harvest, 40% of the black bear harvest and 30% of the pink production, coho capability and sport fishing use areas. VCU areas are grouped into three categories within these "highest value" areas.

The Department of Fish and Game has on file the specific data that supports each of these value ratings and helps identify the most productive areas within each VCU listed. The department will work with the Forest Service to integrate this information into final management strategies for these areas.

VCUs with highest community fish and wildlife values

230 240 550 840 1200 2010 2020 2030 2040 2150 2170 2180 2220 2230 2240 2250 2260 2280 2290 2390 2440 2790 2970 2990 3000 3010 3020 3030 3090 3100 3120 3130 3980 3990 4000 4020 4200 4210 4250 4260 4290 4320 4330 4340 4350 4360 4470 4500 4510 4520 4540 5020 5140 5270 5290 5320 5440 5460 5542 5710 5730 5740 5750 5760 5770 5780 5871 5880 5890 5920 5930 5971 6210 6240 6320 6740 6750 6790 6920 7150 7160 7180 7190 7220 7530 8060

VCUs with next highest community fish and wildlife values

790 1960 2100 2430 2450 2460 2800 2810 4160 4570 4580 4680 4890 5380 5490 5610 5830 6180 6310 6340 7470

VCUs with next highest community fish and wildlife values

2360 2920 2940 4670 5810 5910 5960 6200 6250 7200 4240 5940 5950 6220 7390 2400 7130 7140

*Value Comparison Unit - land-based units into which the Forest Service divides the Tongass National Forest. Resource data is frequently analyzed by VCU.

ENCLOSURE II

Alaska Department of Fish and Game
TLMP DEIS Comments
STANDARDS AND GUIDELINES RECOMMENDATIONS

Prepared by the Alaska Department of Fish and Game with Technical Support from the Alaska Department of Environmental Conservation

(Note: Recommendations follow the outline and format of the Forest Service's Preferred Alternative in the DEIS)

August 26, 1996

L-570

RECOMMENDED CHANGES TO DEIS STANDARDS AND GUIDELINES FOR INDIVIDUAL MANAGEMENT PRESCRIPTIONS (LUDs)

OLD-GROWTH HABITAT LUD—STANDARDS AND GUIDELINES

- FS Standard and Guideline TIM112 C: DELETE "is limited to locally determined areas" to read:

  Timber Resource Planning

  C. Personal use wood is incompatible with this Land Use Designation and should be allowed in these areas only if alternative locations are not available. Salvage of bridge stringer logs is permitted when consistent with maintaining minimum adverse effects on fish and wildlife.

  Discussion

  1. Personal use harvest of wood in high-value fish and wildlife areas has altered the composition and structure of certain forest locales;
  2. Tenakee near 10-mile Creek and Game Creek are examples where personal use has highly noticeable effects; and
  3. this recommendation cross-references recommendations in Beach and Estuary Fringe section and Riparian section of standards and guidelines.

- FS Standards and Guidelines FISH 112: ADD subsection "B" to cross-reference Restoration Program for fish, to read:

  Fish Habitat Planning

  B. Establish a Restoration Program which researches and applies treatments for restoring harvested riparian areas to characteristics within the natural range of variation for large woody debris, pool depth ratios, etc., of fish-bearing streams.

- FS Standards and Guidelines WILD 22: ADD subsection "B" to cross-reference with Wildlife section, to read:

  B. Wildlife Habitat Restoration

  Establish a Restoration Program which includes a research component to investigate and apply restoration treatments to accelerate regrowth toward old-growth habitat characteristics such as structure and species composition and diversity. Prioritize restoration efforts in areas where public demand for wildlife species dependent on old growth exceeds supply.

- FS Standard and Guideline TRAN 1A: REWRITE language to address replacement values, and ADD "A2" to address road closure to read:

  Transportation Operations

  A. Roads are not compatible with this Land Use Designation; however, when no feasible alternative is available, temporary road corridors may be designated to provide access

for logging transportation or mineral exploration and development transportation in this or adjacent Land Use Designation, if replacement is made of lost wildlife values within the same biophysical province.

A.2. Roads will be (a) used for the specific management activity for which they were built, (b) closed to motorized vehicle access for all other uses, and (c) obliterated and closed after original specified purpose is terminated.

Discussion

1. The purpose of old-growth reserves is to maintain habitat for old-growth associated fish and wildlife and create habitat patches which support a diversity of species with varied habitat needs (e.g., large, small, sedentary, wide-ranging, generalists, specialists, etc.);
2. fragmented old-growth resources are declining generally in Southeast, and the highest volume forests are at risk in specific regions;
3. roads are inconsistent with the intent of the Land Use Designation and present problems, including threat due to increased road access to bears, wolves, and marten, and exceptions should be approved with caution;
4. according to FS (letter from Abigail Kimball on Shamrock timber sale), FPA "closure" is equivalent to FS definition of "obliteration"; FS closure implies an inactive status and includes allowing alder growth which may interfere with road drainage maintenance critical to maintenance of stream quality; and
5. ADF&G recommends these roads be closed and put to bed.

RECOMMENDED CHANGES TO DEIS FOREST-WIDE STANDARDS AND GUIDELINES

BEACH AND ESTUARY FRINGE—STANDARDS AND GUIDELINES

- FS Standard and Guideline BEACH1 IB1a and IB2a: DELETE "from mean high tide" and REPLACE with "from the landward limit of salt tolerant vegetation" to read:

B. Beach fringe identification:

1a. Primary beach fringe:
Maintain a primary beach fringe of essentially unmodified landscapes of old-growth forest that is not less than 500 feet horizontal distance inland from the landward limit of salt tolerant vegetation around all coastline.

2a. Extended beach fringe:
Maintain an extended beach fringe of essentially unmodified old-growth forest that begins at 500 feet from, and extends to not less than 1000 feet horizontal distance from, the upper limit of salt tolerant vegetation around all coastline.

Discussion

1. Buffers need to include the mouths of streams which do not have estuarine characteristics, such as those without a salt-grass marsh (e.g., Broad River and many other Class I streams) to improve riparian buffer integrity at stream mouth;

2. significant pink and chum spawning and coho rearing occurs in the mouths of 'non'estuarine streams;
3. beach fringe buffers help control sedimentation and maintain quality of nearshore migration areas used by anadromous fish for juvenile rearing; and
4. important wildlife habitat is provided in beach fringe (e.g., furbearers, bald eagle, deer, bears).

- FS Standard and Guideline BEACH1 IC1: DELETE "mean high tide" and REPLACE "from inland edge of salt tolerant vegetation" to read:

C. Estuary fringe identification:

1. Maintain an estuary fringe of essentially unmodified forest that is not less than 1000 feet horizontal distance inland from the landward edge of salt tolerant vegetation around all identified estuaries. Estuaries are defined as areas at the mouth of Class I streams where fresh and salt water mix; the landward extent of an estuary is the upper limit of salt-tolerant vegetation, and the seaward extent is a stream's delta at mean lower low water.

Discussion

1. Mud Bay is an example of a large estuary system which would not have an adequate old-growth buffer if measured from mean high tide, given the pools and tributary streams to the main channels that occur off the main channel; these are important spawning and rearing habitat;
2. most rearing of overwinter populations of fish are found in the lower reaches of drainages (e.g., Mud Bay);
3. "landward limit of salt tolerant vegetation" as the old-growth estuary buffer line of demarcation is consistent with Forest Practices Act definition of estuarine; and
4. recommended change in guideline language would decrease risks to riparian buffer integrity in the lowest reaches of drainages.

- FS Standard and Guideline BEACH2 IIF: ADD "except within 100 feet of Class I streams or Class II streams that feed into Class I streams," and REPLACE "Personal use of firewood..." with "Use of firewood..." for clarity, to read:

II. Management

F. Where there is a road system in place to provide a community's residents with alternative access to timber, subsistence or personal use of timber will not be allowed within the beach and estuary fringe. Where no alternatives exist, then permit personal use timber in designated areas determined to have the lowest value habitat within the accessible beach/estuary fringe and beyond 100 feet of Class I streams or Class II streams that feed into Class I streams.

ADD new section "F2" to address personal use of timber and ASQ to read:

II. Management

F2. Personal/subsistence use of timber contributes to Allowable Sale Quantity for commercial harvest.

Discussion

1. Harvest of house logs is having a cumulative adverse effect on old growth along beach fringe and led to total or near total absence of that structural component of the beach fringe in localized areas such as Tenakee Springs to 10-Mile Creek;
2. beach and estuary fringes are prime wildlife areas;
3. in 1993, 596,000 BF of timber were assigned for harvest (no monitoring of actual personal use harvest) under personal use permits in the Hoonah Ranger District on North Chichagof Island with much of it taken to mills and exchanged for half of the volume; and
4. personal wood cutting in riparian areas is restrained, similarly, by S&G (RIP3 IIF3) in recognition of the effects on important fish and wildlife habitat.

- FS Standard and Guideline BEACH2 IIJ: DELETE "salvage will be limited" to read:

II. Management

J. There will be no commercial salvage of dead and/or down material or standing green timber within the beach and estuary fringe.

Discussion

1. In Hammer Bay, there is no cedar left because it has been selectively salvaged for use as piling material;
2. national policy for salvage does not promote monitoring as one aspect of overall forest management, so it is difficult to assess impacts to fish and wildlife habitat as a result of locally intense and selective removal of timber;
3. Tongass is unique in the extent of its beach fringe, and, significance of impacts to fish and wildlife in beach and estuary habitats has not adequately received national policy direction to meet Tongass Forest needs;
4. downed trees along the beach provide important erosion control and a substrate for vegetative growth and regrowth;
5. there are detrimental effects on beach and estuary fringe habitats when certain features are removed, such as nurse logs, nest and perch trees, downed wood (nutrient source), travel corridors, and perch trees (replacement); and
6. salvage of standing dead and down material causes residual logging damage to remaining trees.

- FS Standard and Guideline BEACH2 II: ADD new section "O" to include language for salt chuck protection to read:

B. Management

O. Maintain and protect the biological, physical, and chemical characteristics of salt chucks. Avoid activities within 1000' buffer zone from landward edge of salt-tolerant vegetation. Use other protective measures, as appropriate.

Discussion

1. Salt chucks have a very high abundance and diversity of species, apparently due to high rates of decomposition, bathymetry, tidal flushing, and nitrogen-fixing algae; and
2. ADF&G has inventoried salt chucks in Southeast Alaska and there are relatively few of these highly productive areas.

BIODIVERSITY—STANDARDS AND GUIDELINES

- FS Standard and Guideline BIO IA: ADD new subsection "A15" to cross-reference reserves, ADD new subsection "A16" to address inventory and monitoring needs, and ADD new section "II" to address issues of conservation biology to read:

  I. **Planning and Managing Biodiversity**

  A.15. Manage the system of Old-Growth Habitat LUDs to maintain the diversity of species and important habitats within a biophysical province and to contribute to sustained yields of fish and wildlife to maintain lifestyles, businesses, and activities dependent on those resources.

  A.16. Actively support an inventory, monitoring, and research program to systematically inventory species abundance and distribution, track population, habitat quality, and distribution trends, and study population dynamics, habitat requirements, and life history.

  II. Biodiversity Conservation

  A. Conduct a field inventory and GAP analysis to validate and enhance, if necessary, the old-growth reserve system. Use criteria which include species and habitat composition representative of each bioregion. Where Old-Growth Habitat LUDs and other natural landscape LUDs will not sufficiently preserve future options to maintain businesses and lifestyles dependent on fish and wildlife resources and avoid significant impacts to biodiversity, then amend the forest plan to modify the spacing or boundaries of natural setting LUDs to improve the habitat value of reserves at higher risk.

FISH—STANDARDS AND GUIDELINES

- FS Standards and Guidelines FISH 111 II: INSERT "within each bioregion" to section IIA, ADD language to specific monitoring program criteria to section IIB, and ADD new section, "IIC," to address sampling methodology to read:

  II. Fish Habitat Monitoring

  A. Conduct a monitoring program in a representative number of watersheds within each bioregion to determine changes in the range and frequency of fish habitat attributes.

  B. Coordinate, design, analyze, and implement a monitoring program with the Pacific Northwest Research Station. The monitoring program will identify criteria for determining thresholds of change and specify remedial actions when thresholds are exceeded, in consultation with ADEC and ADF&G.

  C. Trend monitoring must follow standard methods and reflect the range of management intensities and prescriptions. Monitoring of the same watershed before and after harvesting and road building activities is desirable, but comparisons between watersheds (e.g., paired watershed approach) are also encouraged where, for each managed watershed, there exists a closely matched control watershed.

  Discussion

1. Stream characteristics vary from watershed to watershed, and it is important to collect, interpret, and apply data at the scale of bioregion or subregion rather than across Southeast Alaska to successfully determine changes in quality of fish habitat;
2. to be meaningful, the sampling design must lead to comparison and data analysis against a scientific control within the same watershed units;
3. it is important to monitor not only fish population changes, as in "maintain estimates of fish production for all Class I streams," but to monitor changes in fish habitat quality;
4. with due deference to ADEC, the FPA requires activities on state land to conduct monitoring of water quality, turbidity, etc.;
5. the Statewide Aquatic Restoration Working Group provides a forum for defining and standardizing the methods of a monitoring program; and
6. the Forest-Fisheries Working Group may be another forum to be involved.

- FS Standard and Guideline FISH112 IA3: MODIFY and ADD language to specify watershed analysis to read:

I. Fish Habitat and Channel Processes Database

A.3. Perform field-based and GIS-assisted watershed analysis on subset of Tongass watersheds that reflect both fish value and sensitivity to logging (refer RIP3 IV1A and S&G 112II). Watershed analysis is also appropriate to identify restoration needs for watersheds that are impaired with respect to fish habitat and productivity.

Discussion

1. Baseline data are necessary to develop appropriate planning objectives to minimize impacts and adequately preserve fish habitat, consistent with FPA; and
2. data collection and analysis provides the foundation for monitoring and the ability to detect long-term shifts or trends in fish habitat integrity.

- FS Standard and Guideline FISH112 IIIB1 and B2: REWORD to clarify "high value" resident fish streams for consistency with FPA to read:

III. Fish Stream Value Classification

B.1. Class I: Streams and lakes with anadromous or adfluvial fish habitat or with high value resident fish populations, or with habitat above fish migration bar-riers known to be reasonable enhancement opportunities for anadromous fish. Anadromous water bodies are defined as (1) catalogued under AS 16.05.870 or (2) not catalogued, but determined by ADF&G to contain or show evidence of anadromous fish. High value resident fish include those species used for recreational, personal, commercial, or subsistence use (including, but not limited to, those listed in Appendix 68.1, Region 10 Aquatic Habitat Management Handbook (FSH 2609.24), June 1986.

B.2. Class II: Streams and lakes with resident fish populations. These populations are not used for recreational, personal, commercial, or subsistence uses and, generally, occur upstream of migration barriers or are steep gradient (6-15%) streams with other habitat features which preclude use by anadromous fish.

Discussion

1. The FPA defines "high value resident fish" as those populations that are used for recreational, personal, commercial, or subsistence purposes; and
2. FS Class II definition of fish stream value, which includes "limited sport fisheries values," is wrong and misleading because sport fishing values are already subsumed in Class I definition, leaving Class II fish-bearing streams as those defined as without human use.

- FS Standard and Guideline FISH112 IVB: ADD language to address need for Restoration Program, to read:

IV. Objectives/Guidelines for Management Affecting Fish Habitat

B. Establish a Restoration Program. Use baseline fish habitat objectives for stream channel types, or process groups if channel type objectives are not available. Where past harvesting and road construction has occurred, resulting in a large amount of fish habitat in a watershed falling below the range of natural variation defined by the fish habitat objectives, implement an effective restoration. Watersheds in the Old-Growth LUDs have the highest priority for restoration; within these areas, further prioritize based on public demand for the fish resource, the probability of successful restoration, fish production potential, and the maintenance of genetic diversity across the Tongass.

Discussion

It is important that the Forest Plan provide a "trigger point" for the conduct of watershed restoration, and basic guidance on prioritization of watersheds for restoration.

- FS Standard and Guideline FISH112 IVC: ADD subsection "C4"to address restoration techniques, to read:

IV. Objectives/Guidelines for Management Affecting Fish Habitat

C.4. For riparian areas adjacent to fish habitat that have been clearcut, consider riparian thinning and planting to stabilize stream banks and provide future sources of LWD.

Discussion

The Forest Plan should provide some indication of how the objectives listed in points 1 through 3 can be achieved.

- FS Standard and Guideline FISH112 IVD: ADD subsection "D4"to read:

IV. Objectives/Guidelines for Management Affecting Fish Habitat

D.4. Consider placement of LWD and permanent in-stream structures, where they are likely to persist and provide fish habitat over the long term. Riparian thinning of second growth and planting may be an appropriate method for encouraging LWD recruitment over time, particularly where in-stream structures have a high cost and/or low probability of success.

Discussion

The Forest Plan should provide some indication of how the objectives listed in points 1 through 3 can be achieved.

- FS Standard and Guideline FISH112 IVE2: ADD BMP distribution language, and ADD new subsection "E2*" to read:

IV. Objectives/Guidelines for Management Affecting Fish Habitat

E.2. Implement applicable Best Management Practices (Appendix C). Distribute BMPs to all appropriate state agencies as they become updated and fully cite BMPs in NEPA and layout-level unit and road cards for complete timber sale documentation.

E.2.* Forest Supervisors will provide opportunity for the state to comment on proposed changes to BMPs and will refer to best available data and state-of-the-art scientific techniques when proposing changes.

Discussion

1. The dynamic nature of the BMPs often preclude a reasonable assessment of future impacts by ADF&G staff during timber sale review; and
2. BMP documentation and updates by the FS will forewarn ADF&G staff of changes, provide a professional explanation for changes, and give ADF&G information to help understand the implications of activities affecting fish habitat.

- FS Standard and Guideline FISH112 IVC: ADD subsection "E3" to address watershed analysis requirements, to read:

IV. Objectives/Guidelines for Management Affecting Fish Habitat

E.3. As a part of watershed restoration projects, identify sources of sediment from past ground-disturbing activities (e.g., roads and slides) and stabilize them to prevent the introduction of sediment into streams.

Discussion

The Forest Plan should discuss all of the components of watershed restoration (in addition to in-stream components).

- FS Standard and Guideline FISH112 IVF1: ADD language to address "winter temperatures" of fish streams to read:

IV. Objectives/Guidelines for Management Affecting Fish Habitat

F.1. Class I and Class II streams that flow directly into Class I streams. Maintain or restore optimum salmonid summer temperatures between 50 and 68 °F. or at natural temperature levels. Maintain optimum salmonid winter temperatures by providing thermal cover and adequate buffering and prevent disturbance to normal flow patterns (e.g., improperly sized installed culverts, road interception) which lead to premature or extended seasonal freezing of the stream.

Discussion

1. Winter temperatures of stream water are affected by alterations to flow patterns, as are summer temperatures; and
2. the FPA intent for riparian areas includes maintenance of water temperatures to adequately protect fish habitat.

- FS Standard and Guideline FISH IVF2: DELETE "to extent feasible" language to read:

  F.2. Other Stream Class II: Maintain water temperatures below 68 °F., or at natural levels, to maintain or restore habitat capability for resident fish populations. Manage watersheds and riparian streamsides to maintain temperature standards and guidelines for downstream Class I streams.

  Discussion

  As currently written with qualifying "if feasible" language, the guideline is not consistent with Alaska State Water Quality Standards (18 AAC 70).

- FS Standard and Guideline FISH112 IVG1a: DELETE. See TRAN214IG

- FS Standard and Guideline FISH112 IVG1b: DELETE. See TRAN214IG.

- FS Standard and Guideline FISH112 VI: ADD new subsection "A2" and REPLACE "A1" with "A2" to address fish passage inventory to read:

  VI. Projects

  A.1. Conduct inventory of fish passage conditions in roaded and logged areas to identify deteriorated fish habitat, water quality problems, and fish passage problems (e.g., slides, slumping, etc.). Set priorities for remedial action.

- FS Standard and Guideline FISH22 II: ADD new section "IIC" to address mitigative measures to read:

  Fish Habitat Improvement

  II. Construction Coordination

  C. If a project damages or causes deteriorating fish habitat conditions as a result of unplanned action, then mitigate through replacement of structures or modification of site reclamation.

RIPARIAN—STANDARDS AND GUIDELINES

- FS Standard and Guideline RIP1 IA6: INSERT language to strengthen management commitment to read:

  Riparian Area

I. Objectives

A.6. Riparian areas will be managed consistent with the habitat needs of terrestrial and aquatic resources, including use of up-to-date information on the effects of terrestrial and aquatic processes on those resources.

Discussion

1. On state land, harvest of timber may not be taken within 100 feet immediately adjacent to an anadromous or high value resident fish water body or between 100 and 300 feet from the water body unless timber harvest is consistent with the maintenance of "important fish and wildlife habitat";
2. Yakataga Area Plan, for state lands, recognizes 300-foot no timber harvest zones adjacent to anadromous or high value fish streams, including areas of importance/concern for bear, moose, mountain goat, bald eagle, trumpeter swans, beaver, and land otter.

- FS Standards and Guidelines RIP1 IA8: ADD language to reference an updated version of completed Aquatic Habitat Management Handbook to read:

I. Objectives

8. Coordinate road management activities to emphasize the needs of fish and wildlife and maintain fish passage requirements. (Consult the Aquatic Habitat Management Handbook, FSH 2609.24).

Discussion

1. FS shall avoid use of economic reasons to block fish passage;
2. Aquatic Habitat Management Handbook needs to be completed prior to the final Tongass Land Management Plan Revision, including deletion of that portion which mandates an economic analysis prior to providing fish passage, and the updated version needs to be referenced in the S&G;
3. many examples of fish blockage problems, including Kennel Creek Rd. (East Point) with nine culverts blocking fish passage and Spasski Creek Road improvement blocking eight culverts; and
4. culverts are now commonly used to replace log stringer bridges in spawning areas where bridge or open-bottom culverts are essential to protection of fish habitat.

- FS Standards and Guidelines RIP3 IB: ADD "consultation with ADF&G" to read:

I. Project Planning

B. On those projects and activities that are in riparian areas or influence riparian areas, assure interdisciplinary involvement and consultation with ADF&G in consideration of riparian resources during the project planning stage and environmental analysis process.

Discussion

1. Language should promote ADF&G involvement early and often during the planning process; and
2. it is our desire that planning process involvement will increase mutual confidence and commitment to cooperation and use of ADF&G professional expertise by FS.

- FS Standards and Guidelines RIP3 ID: ADD "use state-of-the-art techniques for minimizing windthrow" to read:

  I. Project Planning

  D. Evaluate riparian area windthrow risk when locating and designing adjacent harvest units and roads using state-of-the-art techniques for minimizing windthrow. Minimize accelerated windthrow to the extent feasible. Consult BMP 12.6a of the Soil and Water Conservation Handbook.

  Discussion

  Anadromous Fish Habitat Assessment report recommends several techniques: (a) buffer width minimum of 1 site potential tree, (b) uneven-aged management beyond riparian buffer, and (c) leave blown down trees to break up energy of wind as it approaches trees of buffer.

- FS Standards and Guidelines RIP3 IIE1b: ADD language which cites specific BMPs to read:

  E. Watershed Resource Planning

  1.b. Apply Best Management Practices to minimize the effects of land disturbing activities on the beneficial uses of water. BMP examples include but are not limited to (a) construct roads and bridges and install culverts during periods of low water, (b) avoid construction during fish egg incubation periods in streams with spawning areas, and (c) compact road base with proper moisture, sur-facing, and grading.

  Discussion

  1. Anadromous Fish Habitat Assessment report (FS 1995); and
  2. reference DEC and EPA "beneficial uses of water."

- FS Standards and Guidelines RIP3 IIF1a: REDEFINE 'Class I streams' to include Class II streams within a Class I drainage, DELETE "without an intervening Class III segment. Mandatory minimum 100-foot buffers will not apply to: (a) a Class II stream that flows directly into the ocean or that joins a Class I stream only at lower than mean high tide; and (b) a Class II tributary stream segment that flows into an identifiable Class III stream that in turn flows into a Class I stream." These two instances clearly do not "...flow directly into...a Class I stream..."; REWRITE paragraph to read:

  F. Timber Resource Planning

  1.a. Included in the definition of Class II streams flowing into a Class I stream are all Class II tributaries of a Class II stream that flow into a Class I stream.

  Discussion

  Original language is not clear for use in the field and would require that all Class II streams within Class I drainage be surveyed at different periods of the year (to assure detection of resident fish which seasonally use the channel) to provide a sound means to "identify" a Class III stream segment.

- FS Standard and Guideline RIP3 IIF3: REWRITE to qualify personal use woodcutting within riparian areas to read:

  F. Timber Resource Planning

3. **No personal use of timber is allowed 100 feet from Class I streams or Class II leading to Class I streams. Where there is a road system in place to provide alternative access to timber, no personal use of timber will be allowed within the 100-300-foot riparian buffer. If not, personal use of timber in the 100-300-foot zone will be limited to designated management areas with lowest fish and wildlife values. Avoid other riparian areas outside the 300-foot riparian zone when other suitable locations are available. Personal use of timber is deducted from Allowable Sale Quantity to ensure sustained yield management of timber.**

Discussion

1. Personal use of wood is causing localized problems associated with habitat modification within riparian zones;
2. in 1993, 596,000 BF of timber was assigned for personal use harvest (no monitoring of actual personal use harvest) in the Hoonah Ranger District on northern Chichagof Island, of which some was harvested in the riparian areas; and
3. personal use timber has been taken to mills and bartered for half of volume in trade for milling.

■ FS Standards and Guidelines RIP3 IIG2: DELETE "as needed..." and ADD language to regard seasonal events of fish and wildlife to read:

G. Timber Sale Preparation

2. To the extent practicable, apply seasonal restrictions on timber harvest activities to minimize the adverse impacts of timber harvest on species during particularly sensitive periods in their life cycle, such as staging, prime feeding periods, nesting, molting, etc. by fish or wildlife species.

Discussion

1. Timing of fish and wildlife life history events needs language inserted as standards;
2. increased FS consultation with ADF&G needs to take place on issues of seasonality of events; and
3. many examples of disturbance; Iris Creek, Starrigavan, Salt Chuck Creek have experienced disturbance during critical seasonal events.

■ FS Standard and Guideline RIP3 IIG: REWRITE "2a" to address important habitats, ADD "2b" to define "important fish and wildlife habitat," and ADD "2c" to address information needs, to read:

G. Timber Sale Preparation

2.a. Between 100 and 300 feet of anadromous or high value water bodies, timber harvest may occur but must be consistent with maintenance of important fish and wildlife habitat. See WILD112II for definition of "important wildlife habitat."

Discussion

1. Riparian areas are important wildlife habitat for feeding, nesting, molting, travel, and denning, as well as routes for maintaining connectivity among the upper reaches of watersheds;
2. other species (e.g., king fishers, mergansers) use the riparian areas in winter; wolves use the lower elevation passes with no or minimal snow for intra-island travel corridors; bears use high volume old-growth forests to forage on devils club berries and skunk cabbage;
3. the Yakataga Area Plan recognizes 300-foot no-cut areas as Special Management zones for helping maintain most of the above listed important fish and wildlife habitats;

4. protection of corridors as an important wildlife habitat, in combination with beach and estuary protection, will minimize loss of sustained yields of both wildlife and fish (improve 100-foot buffer integrity) in areas zoned for commercial timber harvest;
5. lack of connectivity was a general concern among participants of the Risk Assessment Panels as a high risk to population viability; marten were estimated to withstand only 10–15% cut to old-growth riparian corridors before there would be threats to population viability; and
6. in parts of southern Southeast Alaska, there may be as much as 80–90% loss of riparian areas due to logging and, subsequently, there may be a high risk to maintenance of the full diversity of fish and wildlife habitat.

- FS Standards and Guidelines RIP3 IIG4b: ADD reference to ADF&G consultation, DELETE "otherwise in the operating plan or timber sale contract," DELETE "shall," ADD "will," and ADD reference to accidental felling of trees, to read:

G. Timber Sale Preparation

4.b. Unless in consultation with federal fisheries biologists and ADF&G, trees identified for harvest will be felled so they do not fall within a "no commercial timber harvest" area in the riparian buffer or into a streamcourse, consistent with safe practices. Trees may be wedged, jacked, lined, or otherwise pulled when necessary. Trees accidentally felled into streamcourses or windfallen trees shall be removed only following approval of the Sale Officer, and only in a manner consistent with the protection of the streamcourse and riparian areas. Accidentally felled trees will be bucked and yarded consistent with the ACMP enforceable standards.

Discussion

1. If a tree is felled into a fish-bearing stream, bucking regulations require removal of limbs and debris within 48 hours and removal of the bole as soon as possible; and
2. cable yarding requires suspension above or yarding away from surface waters of anadromous fish streams, unless with prior written approval by ADF&G.

- FS Standards and Guidelines RIP3 IIG4e: DELETE "soil, watershed, and other resource information" and ADD specific criteria to read:

G. Timber Sale Preparation

4.e. Interdisciplinary review of sale unit layout during planning should evaluate potential consequences of alternatives for cutting or leaving trees in v-notches. Factors contributing to the production and transport of sediment and woody debris should be assessed. Among factors which should be considered are:

1. **stream gradient**
2. **stream incision depth**
3. **sideslope angle**
4. **sideslope and adjacent vegetation**
5. **substrate and soil composition**
6. **sediment and woody debris transport capability**
7. **distance to nearest fish habitat**
8. **distance to nearest road below the site**
9. **blowdown potential**

10. yarding capability
11. evidence of recent erosion or channel scour.

Discussion

Blowdown potential and yarding capability were included in the original language, but to be an effective guideline, specific language related to soils and watershed analysis (or hydrologic factors) is needed.

- FS Standards and Guidelines RIP3 IIG4f: DELETE "normally" there will be no salvage harvest in 100' of Class I, to read:

G. Timber Sale Preparation

4.f. Allow salvage of material if objectives for the riparian area can be met. Where salvage is allowed in the riparian buffer, there will be no salvage within 100-foot width on each side of Class I streams or on the Class II streams which flow directly into Class I streams and which meet the FPA definition of high quality resident fish stream. Salvage of wood contributes to the Allowable Sale Quantity.

Discussion

1. Salvage operations within the 100' riparian buffer are inconsistent with FPA;
2. Yakataga Area Plan allowed no harvest within 100' of streams; and
3. no-harvest zone originated from a study showing that 99% recruitment of logs came from within 100' of bank.

- FS Standard and Guideline RIP3 IIG: ADD new section, "G5," to address AFHA Report recommendations, to read:

G. Timber Sale Preparation

5. Apply recommendations of the Anadromous Fish Habitat Assessment (January 1995), including, but not limited to, the following:

1. Implement watershed analysis to provide better management direction based on disturbance ecology (refer S&W 112II);
2. collect baseline data on stream morphology and fish habitats/communities to monitor trends on condition of and impacts to fish habitat;
3. use standard definitions, inventory and monitoring methods, and data analysis techniques;
4. ensure adequate monitoring of implementation and effectiveness of fish stream protection measures is conducted;
5. apply consistent management direction on watershed analysis and management throughout the Tongass National Forest;
6. classify and evaluate intermittent and ephemeral streams as important sources for routing nutrients and debris to downstream anadromous waters;
7. monitor effectiveness of Best Management Practices and improve as needed to maintain productivity of all fish habitat;
8. assure that resource specialists have access to and apply current research data; and
9. standardize definitions of and inventory techniques for soil mass movement risk.

Discussion

1. The AFHA Report states important recommendations to improve fish habitat and riparian management on the Tongass Forest;
2. these and other issues have been raised by the TLMP Risk Assessment Panels;
3. the AFHA Report completed at the request of Senator Stevens to study the effectiveness of FS protection of salmon and steelhead on the Tongass National Forest and to determine if additional protective measures were needed; and
4. the assessment is a well-respected treatment jointly completed by the Alaska Region of the FS and the Pacific Northwest Research Station of the FS.

- FS Standards and Guidelines RIP3 IVA: ADD language for consistent management application across Region, ADD "standard" language for Option 1, ADD "with additional ACMP review" in regard to modifying process group guidelines, and ADD language to require watershed analysis and encourage greater use of research findings, to read:

IV. Stream Process Group Specific Standards and Guidelines for Timber Harvest.

A. Ensure that management direction for habitat protection is consistently applied among Areas and Districts. Management direction for Riparian Option 1 streams is a standard. Riparian Option 2 are guidelines which may be modified (see IV.F.1. for no commercial harvest standard) following watershed and site-specific analysis of pertinent issues and documentation of the findings. Documentation of a proposed modification must be included in the ACMP consistency determination for the timber sale activity.

Watershed analysis will include review of the most up-to-date, relevant monitoring and research information in consultation with ADF&G biologists and ADEC water quality experts. Site-specific field analysis should be conducted to gain a sound understanding of the physical and biological processes occurring within the watershed (refer S&W 112II).

Discussion

1. Changes to process group guidelines constitute a plan modification and need ADF&G oversight;
2. due deference to ADF&G is provided in FPA for any activity in riparian areas affecting fish and wildlife habitats on state lands;
3. ADEC/FS Memorandum of Agreement mandates cooperation on these issues; and
4. recommendations are consistent with Anadromous Fish Habitat Assessment Report.

- FS Standard and Guideline RIP3 IVD*: DELETE entire paragraph which states that "no programmed commercial harvest" is a guideline that could be modified, and that timber harvest would be allowed in riparian areas for salvage sale, insect and disease abatement, specialty wood timber harvest, and "other reasons."

Discussion

1. The ADF&G has consistently argued against unprogrammed harvesting in important fish and wildlife areas;
2. the definition of unprogrammed harvest includes salvage sales, insect and disease abatement, and wood specialty timber harvest;

3. the Timber Production standards "encourage timber stand improvement, sanitation, and salvage," all of which fall under the category of unprogrammed harvest;
4. there is great interest in directing state and federal incentives to stimulate wood specialty timber harvest, which falls under the category of unprogrammed harvest; and
5. harvest in the riparian zone is inconsistent with the FPA.

■ FS Standard and Guideline RIP3 IVD*: ADD definitions for the following terms:

- **'design for windfirmness'**
- **'slope break'**
- **'sideslope break'**
- **'borrow pit'**

Discussion

Definitions of terms need to be quantified and/or described for technical and general reviewers and consistent implementation by field staff.

■ FS Standard and Guideline RIP3 IVD1: DELETE language which allows "site-specific" modification to guidelines and REWRITE consistent with maximum protection policy, ADD new subsections "D2" to address watershed sensitivity, and ADD "D3" to address ADF&G new analysis, to read:

IV. Stream Process Group Specific Standards and Guidelines for Timber Harvest

D.1. Whether Riparian management standards under Option 1 or Option 2 are required within a specific watershed will be determined using (1) a GIS-based analysis of the physical sensitivity of each watershed to management activity and (2) the ADF&G analysis of fish values by VCU. If the VCU has qualified for Option I protection, implementation of Option I during timber sale planning can be refined to only those watersheds within the VCU which are the basis for the high VCU rating, in consultation with ADF&G. (Note: This process may reduce the impact of this fishery protection standard on the timber supply by 40%.)

D.2. Watershed sensitivity rating should include, but not be limited to the following criteria:

1) **Index of watershed energy (e.g., slope-based) to evaluate fish habitat at risk for sediment deposition;**
2) **Index of watershed efficiency (e.g., drainage density) to evaluate sediment transport capability from the upper watershed to fish habitat;**
3) **Amount of high MMI soils in the watershed, to evaluate the potential for sediment production; and**
4) **Extent and impacts of past management activities.**

D.3. Quantitative data analysis used to rank VCUs was based on coho salmon capability, pink salmon escapement, and sport fish use [see Attachment I]. The following criteria will direct riparian management:

- **Riparian Option 1 – High-ranked watersheds based on highest production or human use of fish [see Attachment II for list of VCUs], and watersheds with lower fishery value but high sensitivity of watershed to roading or logging.**

Riparian Option 1 represents the minimum level of management protection needed to minimize the risk of reducing long-term stream function and fish productivity. For watersheds impacted by past management activities, watershed restoration may be included as an integral part of watershed protection measures (e.g., in addition to Option 1 riparian protections).

- **Riparian Option 2 – Following a GIS-based watershed analysis of physical sensitivity (see D.2. above), remaining watersheds with lower production, lower human use and moderate or low sensitivity may be managed under Riparian Option 2. Modification of the Option 2 guidelines is allowed following a field-level watershed analysis (refer IV.A. above, FISH112 IA3, and Soil & Water 112 II).**

Discussion

1. The ADF&G will not be able to concur that the riparian standards are consistent with ACMP/FPA if they can be modified as stated by guideline RIP3 IVA, "The guidelines which follow may be modified... on a site-specific basis following an analysis of pertinent issues," and we recommend deletion of this guideline;
2. FS modification of riparian guidelines for timber harvest based on an "analysis of pertinent issues" is not a watershed analysis and leaves interpretation open to great variation among Areas and Districts (this is also inconsistent with the FS's AFHA Report recommendations for "consistent habitat protection"); we recommend a watershed analysis based on AFHA recommendations;
3. AFHA Report recommends conservative and consistent management, not case-by-case determinations;
4. FS "guideline modifications" also may be confusing; for example, it is not clear at what point in the NEPA process the site-specific analysis would occur;
5. Riparian Option 3 is inadequate in meeting or exceeding state riparian standards under ACMP/ FPA or AFHA recommendations; it also offers little improvement over status quo which AFHA found inadequate to fully protect salmon and steelhead; it is also not likely to be consistent with the State's anti-degradation policy on protection of beneficial uses of water, particularly with respect to growth and propagation of fish, shellfish, other aquatic life, and wildlife.
6. the criteria for applying Riparian Option 1 or Riparian Option 2 are based primarily on fish stream (a) coho capability, (b) pink escapement, and (c) sport fishing effort; and
7. Riparian Option 1/Riparian Option 2 provide minimum riparian measures to protect fish from the effects of logging, such as (a) altered sedimentation rates, nutrient delivery, temperatures, and dissolved oxygen, (b) altered soil structure due to exposure, compaction, and drainage, (c) elimination of root structures reducing soil strength and causing surface erosion and mass wasting, (d) increased amplitude of high and low flow cycles causing flash floods, bedload overturn and scouring, (e) altered/reduced vegetation needed for stabilizing banks and channels, filtering upland sources of sedimentation, providing cover and food, moderating temperatures, stabilizing runoff, and providing downed trees needed for pool formation, and (f) damage to spawning gravels and entombment and smothering of alevins by sediments.

■ FS Standard and Guideline RIP3 IV D1: REWRITE guidelines for Process Group for High Gradient Contained, Class III, to read:

D1. Process Groups

Class III/Timber Harvest, Riparian Options 1 and 2:

- **HC 2, 3, 4, 6, 7, 8, 9: No commercial timber harvest within the v-notch plus either: (1) manage an additional 120 feet (one site potential tree) beyond the v-notch for windfirmness of the v-notch, or (2) no commercial timber harvest within an additional 60-120 feet (one half to one site potential tree) beyond the v-notch; manage an additional 60-120 feet (one half to one site potential tree) for windfirmness of the v-notch. The exact prescription will be based on a watershed and site-specific assessment.**
- **HC1 and 5 : (1) Allow harvest to stream banks while retaining small, non-merchantable, non-hazard trees to the extent possible, and while meeting BMP and soil disturbance objectives, or (2) no commercial timber harvest within the v-notch plus manage an additional 120 feet (one site potential tree) beyond the v-notch for windfirmness of the v-notch. The exact prescription will be based on a watershed and site-specific assessment, and will consider the factors listed in RIP3 IIG4e.**

Class IV/Timber Harvest, Riparian Options 1 and 2:

- Same as for Class III, HC1 and 5.

Discussion

At the project level, management of Class III streams is likely to be similar for Riparian Option 1 and Riparian Option 2. Smaller, less incised streams do not usually require the same level of protection as do larger, more deeply incised streams. A watershed and site-specific assessment, combined with management flexibility, is required to prescribe the most appropriate type of protection for non-fish-bearing streams. Currently, Class IV streams are not recognized in the Standards and Guidelines.

SOIL AND WATER—STANDARDS AND GUIDELINES

- FS Standards and Guidelines S&W 112II A1: DELETE "FHIP 1 and FHIP 2," ADD reference to lower level of watershed analysis, and REWRITE to address ADF&G analysis and watershed sensitivity analysis, to read:

II. Watershed Analysis and Cumulative Watershed Effects

A.1. Collect and analyze research information, GIS, database and field data, and monitoring information on watershed function and channel processes. Acquire information on soil erosion and mass movement processes, hydrology, vegetation, water quality, fish habitat, human uses, and fish species composition, abundance, and distribution. Analyze these data and apply the analysis to area-wide and project planning in a manner that is consistent among Areas and Districts. Assess the cumulative effects of proposed actions, per BMP 12.1. Document results of watershed and cumulative effects analysis in the appropriate NEPA documents.

2. Select watersheds for field-level analysis based on the following criteria:
- **watersheds proposed for Riparian Option 2 management protection (refer RIP3 IVD2);**
- **watersheds important to threatened, endangered or sensitive species associated with riparian areas;**

- **watersheds recommended or designated as Wild, Scenic, or Recreational Rivers, municipal watershed, and waters listed on State of Alaska 305(b) and 303(d) lists; and**
- **high gradient contained streams.**

Discussion

In order to implement the recommendations of the Riparian Standards and Guidelines, more specific direction is needed for watershed-level analysis.

SUBSISTENCE—STANDARDS AND GUIDELINES

■ FS Standard and Guideline SUB 1C through 1K: ADD to SUB 1C "Schedule, locate, and manage," and "site-specific and cumulative" impacts, REWRITE SUB 1C.4 to address reference "substantive" requirements and DELETE "mitigation" language, ADD to SUB 1D and 1K a reference to ANILCA, and DELETE from SUB 1K "Seek to" maintain and ADD "sustained yields of fish and wildlife"; to read:

I. Subsistence

C. Schedule, locate, and manage forest management activities consistent with ANILCA Title VIII and by considering site-specific and cumulative impacts upon rural residents who depend upon subsistence uses of the resources of National Forest lands. In compliance with ANILCA, Title VIII, § 810(a), and the Region 10 Subsistence Handbook, the Forest Service shall:

C.4. In addition to complying with the procedural and substantive requirements of § 810 of ANILCA and other applicable law, the responsible Forest Service official will manage or dispose of public lands under their primary jurisdiction for any of those uses or purposes authorized by ANILCA or other law to minimize adverse impacts to subsistence uses of forest resources. Implementation of appropriate measures to mitigate impacts to subsistence uses will be an integral part of forest management or disposal of forest lands. Management to accommodate identified subsistence uses and minimize adverse impacts to these uses could include: (a) Implementing the planned project; (b) canceling all or part of the planned project; or (c) substituting another site for the project and preparing another environmental analysis or impact statement if the change is significant.

D. Manage habitats of subsistence species in a manner which minimizes the likelihood of significant short-term and irreversible or long-term adverse effects upon such populations and species in accordance with ANILCA.

J. Maintain reasonable access to subsistence resources as required by ANILCA, § 810. Address subsistence concerns when scheduling, locating, and managing road management objectives (RMO) for forest roads.

K. Minimize adverse impacts on abundance and distribution of subsistence resources and sustained yields of fish and wildlife necessary to meet subsistence user needs in accordance with ANILCA.

Discussion

1. FS findings show that there are many examples of timber sales where logging activities will have a significant possibility of a significant restriction on subsistence uses, including Lab Bay and 8-Fathom timber sales;
2. public issues are escalating at Hoonah and on Prince of Wales Island concerning risks to subsistence lifestyle; and
3. recommended language change ensures consistency with ANILCA.

- FS Standard and Guideline SUB IF: DELETE "regulations" and REPLACE with "proposed management actions," ADD "and present to... the Alaska Board of Game/Fish," and DELETE "two" and REPLACE with "three," to read:

I. Subsistence

F. Make recommendations for proposed subsistence management actions and present to the Southeast Regional Advisory Council, the Federal Subsistence Board, and the Alaska Board of Game/Fish. Provide technical support to these three bodies for analyzing the effects of the proposed regulations on Federal Public Lands under Forest Service jurisdiction.

Discussion

Subsistence users need to be forewarned of potential impacts of forest management practices, including those that can be addressed through state response.

THREATENED, ENDANGERED, CANDIDATE, AND SENSITIVE SPECIES—STANDARDS AND GUIDELINES

- FS Standard and Guideline TE&S IIA: INSERT language to address need for inventory and monitoring program to read:

II. Sensitive Species

A. Implement national and regional FS policy and direction for the conservation and management of sensitive species and subspecies of animals and plants (including unique fish stocks and plant varieties). Actively support an Inventory and Monitoring Program to systematically inventory and monitor species and habitats to describe abundance and distribution of new and existing sensitive species and to track population trends, degradation of habitat quality, and changes in distribution patterns. Consideration will be given to the State's list of Species of Concern in establishing inventory and monitoring priorities. Federal sensitive species are those tax identified by the Regional Forester for which a viability concern has been identified due to:

Discussion

1. The FPA requires, to the maximum extent possible, all applicable data and information shall be updated and used in making decisions relative to the management of forest resources on state forest land; and
2. State of Alaska Species of Concern list includes species or subspecies of fish or wildlife native to Alaska that have entered a long-term decline in abundance or are vulnerable to a significant decline due to low numbers, restricted distribution, dependence on limited habitat resources, or sensitive to

environmental disturbance (e.g., northern goshawk, Steller sea lion, harbor seal, chinook salmon–fall stock Snake River).

TIMBER—STANDARDS AND GUIDELINES

- FS Standard and Guideline TIM111-2 II: ADD new section "B" to address blowdown to read:

  II. Cutting Methods
  B. To minimize blowdown, apply the most up-to-date techniques to timber sale design and harvest, such as irregular boundaries and feathering (refer to BMPs).

  Discussion

  1. Blowdown is the greatest single natural disturbance factor in coastal Alaska;
  2. timber harvesting creates a forest edge which has otherwise developed in an environment buffered by surrounding trees, and sudden removal of that protective wind screen leaves acres of trees highly vulnerable; and
  3. anti-windthrow techniques are critical for preserving buffers, corridors, retention areas and should be required in planning and implementation.

- FS Standard and Guideline TIM114XII: RENAME section title to read:

  Unit Cards and Sale Area Maps

- FS Standard and Guideline TIM114XIIA: ADD language to A, and ADD a new section "B," to read:

  A. Unit cards document mitigation and protection measures displayed and documented in NEPA documents, and identified during layout. Unit cards should include, at a minimum, the following water quality protection information:

  1. Measures to reduce windthrow into surface waters within and at the boundary of units;
  2. location of and prescriptions for all Class I, II, III, and IV streams; and
  3. location of and prescriptions for all high MMI hazard soils.

  B. Sale area maps must display unit-specific soils, riparian, and water quality protection measures identified in the NEPA and layout process. Final sale area maps should be reviewed by resource specialists prior to the release of the offering.

  Discussion

  1. The information contained in unit cards varies greatly across the Areas and Districts of the Tongass, but must display these specific items in order to adequately communicate, track, and implement water quality protection measures and BMPs; and
  2. for independent timber sales, sale administrators and operators often see only a small-scale sale area map, which displays all of the units on one map, rather than individual unit cards. In the past, this practice has resulted in an insufficient display of riparian and other protection measures that had been prescribed, resulting in non-implementation of NEPA and/or layout-level recommendations.

TRANSPORTATION—STANDARDS AND GUIDELINES

- FS Standard and Guideline TRAN111 IA: DELETE "major" to re-emphasize complete culvert inventory, and ADD new sections "IB" and "IC" to address road closure, to read:

  I. Inventory Updating and Maintenance

  A. Maintain an inventory of all forest development transportation facilities, including roads, bridges, culverts, log transfer facilities, and airfields (Consult FSM 7710).

  1. Use the Transportation Management System (TMS), or subsequently developed and approved system, as the data management system for the forest road, bridge, and culvert inventory.

  2. Update changes...

  B. Inactive roads must be maintained consistent with the ACMP road management standards. Closed roads must be obliterated consistently with the ACMP road closure standards.

  C. Incorporate consideration of the effects of off-highway vehicle travel or road closures for long-term maintenance of fish populations and habitat, in coopera-tion with ADEC and ADF&G and consistent with the FPA.

  Discussion

  1. All culverts require monitoring to determine changes to fish habitat and impacts to fish populations;
  2. consistent with protecting riparian areas from significant adverse affects, road closures will include removal of bridge, culvert, or fill material from streambed within range of ordinary high water, except where action would have adverse effects to water quality or fish habitat;
  3. stream crossing structures which do not meet state standards for fish passage and aquatic habitats are degrading water and stream channel quality; and
  4. for the Ushk Bay timber sale, DEC recommended the FS meet the intent of FS BMP 12.24 (Road Obliteration) on all roads.

- FS Standard and Guideline TRAN212 ID: ADD new subsection "D1" to address resource concerns to read:

  I. Planning

  D.1. To the maximum extent practicable, locate roads outside important habitat for fish and wildlife and plan for road closures and obliteration after logging, where necessary, as part of an overall conservation strategy for an area.

  Discussion

  1. Development of roads without adequate maintenance or closure has resulted in erosion, fish passage blockage, and wildlife conflicts as exemplified by 1994 inspection of the North Revilla timber project area;
  2. roads are known or suspected to threaten population integrity for marten, brown bear, and wolves because of easy access and increased success of hunters and trappers; and

3. according to the FS (Abigail Kimball letter on Shamrock timber sale), the FPA definition of "closure" equals the FS definition of obliteration.

- FS Standard and Guideline TRAN212 IIA: ADD language to address road management objectives, to read:

II. Road Management Objectives

A. Based on Forest Plan direction and project interdisciplinary analysis, develop road management objectives for all Forest Development Roads to facilitate future activities and protect water quality (Consult FSM 7710).

Discussion

Water quality is a crucial consideration in deciding how roads will be managed, particularly as regards the maintenance vs. closure decision and, for roads proposed for closure, the method chosen for road closure.

- FS Standard and Guideline TRAN214 I: ADD new section "G" to insert general measures for activities in fish streams, to read:

I. Road Standards

G. The following are minimal standards for road stream crossings:

1. **The structure shall be designed, installed, and maintained to accommodate the efficient passage and movement of fish, both upstream and downstream, at all flows up to and including a mean annual flood discharge with a 2-day duration. Accommodate juvenile cutthroat trout, dolly Varden, and coho as design species for upstream fish migration and passage in all fish streams through joint design of structures with ADF&G.**
2. **Alteration of steam banks shall be minimized and restricted to that necessary for the stream crossing. Disturbed streambanks shall be immediately stabilized to prevent erosion and sedimentation of the stream.**
3. **Authorized activities shall avoid sensitive fish life stages, recognizing possible restrictions or prohibitions on activities during vulnerable time periods as determined by ADF&G.**
4. **Installation, replacement, or modification of stream crossings shall be conducted in a manner that maintains fish and wildlife and their habitats.**
5. **If structures cross a freshwater body, it shall not be constructed of wood treated with preservative containing creosote or pentachlorophenol.**
6. **Use open bottom structures in spawning habitat. When not in spawning habitat, bridges and open-bottom structures are preferred, and, bottom of inverts will be depressed below grade. When bridges or open-bottom structures are not feasible, then culverts may be selected for stream crossing when jointly designed with ADF&G.**
7. **Engineers will follow established guidelines in consultation with fish biologists and hydrologists prior to installation, replacement, modification or main-tenance of stream crossing structures, including culverts and bridges.**

8. Incorporate consideration of the effects of off-highway vehicle travel or road closures and obliteration for long-term maintenance of water quality and fish populations and their habitat, in cooperation with ADEC and ADF&G.

Discussion

1. Roads are the biggest single problem affecting fish habitat once the riparian buffers are in place;
2. there will be approximately 9,500 miles of road on the Tongass under the preferred alternative, many of which will be in valley bottoms and will not be put to bed;
3. the number of roads is increasing while maintenance funds for slides, slumps, deteriorating drainage, and structural repairs do not proportionally increase—one approach is to introduce conservative design measures (e.g., road fabric, culvert size) during installation to reduce maintenance needs;
4. the cumulative effect of increased roading was a topic of concern in many of the TLMP Risk Assessment Panels;
5. fish passage design criteria for each species should be in accordance with operation manuals (e.g., BMPs, DOT/PF manual, FS manual);
6. ADF&G and FS need to jointly design in-stream projects to provide fish passage and maintain or enhance fish habitat;
7. where data for culvert design are deficient, cooperative work should take place with ADOT/PF and FS to improve data and design criteria;
8. economic justification has been used to justify blockage of some Class 1 and many Class 2 streams as allowed by Section 64.13 of the FS Aquatic Habitat Management Handbook;
9. economic justification is inconsistent with AS 16.05.840, which requires "durable and efficient fishways" on all fish streams unless a permit to block passage is obtained from ADF&G;
10. poorly designed road crossings (e.g., culverts, bridges) reduce fish populations by blocking fish passage due to elevated outfalls, lack of resting pools below culverts, excessive water velocity, or insufficient water depth within culverts;
11. ACMP general concurrence GC-7 states the structure shall be designed, installed, and maintained to accommodate the efficient passage and movement of fish, both upstream and downstream, at all flows up to and including a mean annual flood design discharge with a 2-day duration.
12. FPA standards require that significant adverse effects of soil erosion and mass wasting on water quality and fish habitat shall be prevented or minimized;
13. no significant impairment to productivity of the water is allowed under the PFA; and
14. in the CPOW Letter of Agreement, the FS agreed to provide necessary information for ADF&G review of activities in anadromous waters before commencement of activities.

■ FS Standard and Guideline TRAN214 II10: INSERT language to address use of native plants to read:

II. Location and Design

10. Revegetate roads and disturbed sites with native plants in consultation with DNR Plant Material Center. Seeds and plants used in erosion control, fire rehabilitation, riparian restoration, and other vegetation projects shall originate from genetically local sources of natives species.

Discussion

Use of native plants is a safeguard against introduction of weedy or hardy plant exotics which may outcompete and displace native species important as a source of food or cover to wildlife.

- FS Standard and Guideline TRAN214 IIIA3: At second *, DELETE "Locate far enough from tideflats..." and REPLACE with language referencing tideflats to make consistent with Beach and Estuary section of the standards and guidelines, to read:

III. Wetlands, Floodplains, Estuaries, Tidal Meadows

A.3. Use the following criteria...

*** Locate 1000 feet from the mouths of anadromous fish streams and/or tideflats or subtidal beds of aquatic vegetation to avoid significant impairment or interference.**

Discussion

This recommendation makes the Transportation Section standard consistent with Beach and Estuary standard which states "Locate facilities more than 1000 feet from the mouths of intertidal channels of known Class I anadromous fish streams or tidal or subtidal beds of aquatic vegetation to avoid significant impairment."

- FS Standard and Guideline TRAN22 IIA1: ADD new subsections "*" to address culvert maintenance and fish passage to read:

II. Reconstruction

A.1. Limit reconstruction activities to:

*** Maintenance or replacement of culverts only during periods which do not interfere with the passage of fish.**

*** Replacement of stringer bridges with culverts only when there is no impairment to fish or fish habitat and in consultation with ADF&G.**

Discussion

1. Timing of fish passage is of critical significance during certain life stages;
2. while culverts are a less expensive stream crossing structure, there are greater associated risks to fish passage over time; and
3. though road construction is mentioned in NEPA documents, replacement of log stringer bridges with culverts (an increasingly common practice) is not mentioned nor does it receive review.

- FS Standard and Guideline TRAN23 IA2: REWORD to address survey guidelines, to read:

I. Maintenance Levels, Conditions and Inspections

A.2. Perform Road and Stream Crossing Condition Surveys in accordance with criteria set forth in the Soil and Water Conservation Handbook, using techniques and forms developed by Area and District engineering and resources staff. The intensity of the survey will be commensurate with the sensitivity of the watershed (soils, relief, etc.), the quantity of road constructed, and the risk of road prism or stream crossing failure. Itemize current deficiencies needing correction and present recommenda-tions for corrective action.

Discussion

1. The Soil and Water Conservation Handbook, while discussing Condition Surveys, does not provide guidance on techniques for conducting the surveys or choosing the roads to survey; forms have been

developed, and are occasionally updated and improved, for both road and stream crossing Condition Surveys, by Area and District staffs; and

2. the prioritization of roads for surveying should reflect the range of possible factors that could potentially cause water quality degradation and restrictions to access.

- FS Standard and Guideline TRAN23 I: ADD new section "IB" to address culvert monitoring to read:

Road Maintenance

I. Maintenance levels, conditions, and inspections

B. Conduct an annual program of monitoring culverts to maintain fish passage through stream crossings and avoid significant adverse effects (AFHA Report).

Discussion

1. The AFHA Report recommended an increased emphasis on monitoring, including an annual program for monitoring culverts and success of meeting fish habitat objectives;
2. stronger guidelines are needed which are consistent across the Tongass Forest; and
3. Stikine and Wrangell Ranger Districts have established good culvert monitoring databases, but culvert monitoring is not mentioned in 1994 forest-wide monitoring plan for Prince of Wales Island districts.

WILDLIFE—STANDARDS AND GUIDELINES

- FS Standard and Guideline WILD112 I: ADD implementation language to A1; DELETE "seek to" and ADD "Actively maintain" to A2; ADD new subsection "A3" addressing implementation of cooperative work; and ADD "incorporation into forest management" to D, to read:

I. Coordination/cooperation with other Agencies, Institutions, and Partners

A.1. Each administrative area should meet at least annually with state and Federal wildlife agencies to review resource activities, schedule cooperative work, and present progress reports on implementation of past cooperative work.

A.2. Actively maintain memoranda of understanding with appropriate state, federal, and local agencies and associations.

A.3. Implement the proposed activities of cooperative work plans and agreements in a manner which meets the needs of ACMP/FPA review, such as conduct inventories, exchange information, and manage and review data.

D. Coordinate with the ADF&G in development of state strategic plans and population goals and objectives for wildlife species and to incorporate wildlife goals and objectives into forest management.

- FS Standard and Guideline WILD112 I: ADD new section "F" to address capability models to read:

Wildlife Habitat Planning

F. The interagency Habitat Capability Models will be updated regularly as new information and data are available. Modifications to model design will only take place by authorized scientists through interagency agreement to modifications.

- FS Standard and Guideline WILD112 IID: REWRITE D, and ADD new subsections "D1" and "D2" to address information needs, to read:

II. General Habitat Planning/Coordination

D. Maintain a comprehensive wildlife inventory, monitoring, and research program which establishes wildlife habitat and population baseline and is directed to meeting anticipated management needs of assessing and minimizing impacts to forest ecosystems and wildlife populations.

1. Improve the system of data gathering, data management, and information dissemination, including (a) systematic field inventories using standardized methods of data collection, (b) compatible data management systems, and (c) user-accessible data storage.

2. Promote full utilization and timely dissemination of upcoming and existing data and information from inventories, research, and monitoring in project planning and implementation.

Discussion

1. Lack of information, poor information, and information not available in a timely manner has seriously compromised the effectiveness of NEPA and ACMP reviews; and
2. cross-reference with recommendations for Scenic Viewshed section and Biodiversity section of standards and guidelines.

- FS Standard and Guideline WILD112 IIF: ADD language on models and field updating to read:

II. General Habitat Planning/Coordination

F. Develop habitat capability models for the above listed management indicators to systematically assess the impacts of proposed projects for project level analysis. Periodically review and update... Field evaluation of models will include the data layers in GIS upon which accuracy of the models depends. The models will be used to guide decisions on harvest unit and road locations and to analyze the effects of management. Model update shall be completed by appropriate experts from state and federal agencies.

Discussion

1. Models being used for timber sale planning were designed for the regional zoning decisions of the TLMP 8 years ago; and
2. out-of-date models should be systematically improved for site-specific application.

- FS Standard and Guideline WILD112 II: ADD new section "I" to define "important fish and wildlife habitat" to read:

II. General Habitat Planning/Coordination

I. The definition of "important wildlife habitat" includes four criteria: (1) concentration areas and areas of special use by wildlife, including but not limited to the following:

- **wolf denning and spring pupping areas**
- **marten movement corridors**
- **bear concentration areas**
- **moose winter feeding concentration areas**
- **bald eagle feeding concentrations**
- **bald eagle nest sites**
- **trumpeter swan nesting and molting**
- **beaver colony areas**
- **high quality land otter habitat**
- **Canada goose concentration areas**
- **areas occupied or used by Sensitive Species**
- **high-value deer winter range**
- **goat winter habitat**

(2) functional travel corridors, (3) riparian old growth in Management Areas which have less than 15% of the riparian old-growth forest remaining (V-pop report), and (4) areas occupied/used by species which are known or suspected to be in significant decline based on low numbers, restricted distribution, dependence on limited habitat resources, or sensitive to environmental disturbance.

Discussion

1. The FPA standards which apply to state and municipal forests state allowance shall be made for important fish and wildlife habitat; and
2. consistent with the Yakataga Area Plan, we have proposed a clear definition of "important" that is operational in the field, dependent on careful reconnaissance.

SITKA BLACK-TAILED DEER

■ FS Standard and Guideline WILD112 IVB3 (first IV): DELETE "Seek to;" and ADD "may not be... unless there is evidence by a wildlife biologist in consultation with ADF&G which suggests," to read:

IV. Sitka Black-tailed Deer Habitat

B3. Whenever average deer harvest in a WAA exceeds 10% of long-term deer habitat capability (i.e., supply), then maintain the most productive 25% of remaining deer habitat in the WAA, based upon the most recent version of the interagency deer habitat capability model. Alternate acres may not be substituted unless there is evidence supplied by a wildlife biologist in consultation with ADF&G which indicates those acres provide better winter habitat for deer.

Discussion

1. The deer habitat capability model estimates the relative value of habitats in supporting deer in SE Alaska; it is based on an evaluation of winter range and predation;
2. deer in SE Alaska are at or approaching the northern extension of the range and are limited by deep, and persistent snow; snow depth is one of the most important factors affecting deer;
3. loss of old-growth forest cover by clear-cutting has a high potential to adversely affect deer in this area (Wallmo and Schoen 1980); winter snow depths are higher in clearcuts than adjacent uncut areas because of interception of snow;

4. harvestable populations of deer is a very high priority for ADF&G because residents harvested around 14,000 deer/year between 1989 and 1994; 800,000 pounds are harvested annually for subsistence, not including Ketchikan and Juneau; and
5. this guideline will result in a reduced quality of hunting because ADF&G has been managing deer harvest at a rate of 10% of deer habitat capability in all WAAs, with increased hunter effort required per deer; the department expects that this standard will also result in a reduced harvest of deer in watersheds zoned for commercial timber.

BEAR

- FS Standard and Guideline WILD112 VI: ADD subsection "A" to address more effective management strategy, CHANGE original "A" to "B," and DELETE "Seeking to locate seasonal and permanent camps..." to read:

VI. Brown Bear Habitat Management

A. The bear management strategy will be a multiple watershed approach with the objective of providing sustained yields of huntable populations, using means such as an expansion of old-growth designations in areas important for brown bear hunting and an integrated road management with restricted motorized public access. The bear management strategy shall be adopted via an inter-agency access management plan.

B. Continue to implement strategies, in cooperation with...

3. Locate seasonal and permanent camps, recreational facilities, mineral exploration, and operational facilities, log dumps and transfer facilities, where applicable to the Land Use Designation, more than 1 mile from sites of important seasonal brown bear concentrations to reduce chances of bear-human confrontations, where feasible.

Discussion

1. This recommendation is based on conclusions of work by Schoen, Beier, and Titus and the *Proposed Strategy for Maintaining Well-Distributed, Viable Populations of Wildlife Associated with Old-Growth Forests* (V-pop Report);
2. based on radio-tagging studies, bears appear to make limited use of clear-cuts in SE Alaska because more nutritious forage and better cover habitat is found elsewhere; only 2.8% of 854 radio reallocations of 27 collared bears occurred in clearcuts during 1983-1986; this is particularly true for sows and cubs;
3. old-growth forests are used extensively throughout the year for foraging, denning, and cover;
4. human induced mortality was a part of the brown bear habitat capability model because roading increases access and mortality from hunting, both legal and illegal;
5. increased protection of life and property mortality is associated with human settlement, increased bear/human interactions, and improper containment of garbage;
6. an old-growth reserve system and standards and guidelines are both required to meet minimum population viability standards and to maintain huntable populations; and
7. a Canadian study results indicate there is a reduced sustained yield of bears using areas which include communities and logging camps.

- FS Standard and Guideline WILD112 VIB: REPLACE with language for 500-foot riparian buffers, ADD "Consult with ADF&G...," ADD subsection "B1" with language to address bear habitat identification methods, and ADD reference to ADF&G involvement, to read:

VI. Brown Bear Habitat Management

B. Maintain at least a 500-foot buffer of productive old-growth forest on both sides of brown bear feeding concentration areas along Class 1 anadromous fish streams used as bear foraging habitat. These are generally . . . human/brown bear incidents. Consult with ADF&G to identify important foraging areas during project analysis.

1. Use channel type and stream class process groups (e.g., moderate gradient mixed control, floodplain) and ADF&G bear distribution maps to identify bear concentration areas on salmon streams where a 500-foot no-cut buffer is required. Criteria for identification will be decided in consultation with ADF&G and FS biologists.

Discussion

1. Bears concentrate along coastal salmon streams generally from mid-July through early September;
2. during late summer, 66% of bear reallocations occurred within 160 meters (480 feet) on either side of an anadromous fish stream (Schoen and Beier 1990);
3. bear use this riparian spruce-devil's club community for fishing along river banks, foraging on vegetation and berries, and security, loafing, and cover; and
4. Brown Bear Panel Assessment for TLMP revision recommended 500-foot no-cut riparian buffer.

- FS Standard and Guideline WILD112 VIC: ENUMERATE subsections, ADD new subsection "C2" with language to ensure scientific review of actions, ADD new subsection "C3" with original management conditions, ADD new subsection "C4" reference to management plan, and ADD new subsection "C5" with language addressing roads and bear concentration areas, to read:

C. Brown Bear Road Management Objectives:

1. Manage roads where concentrations of brown bear occur to minimize human/bear interactions and to ensure the long-term productivity of brown bears.

*** Minimize human/bear interactions...**

*** Maintain historic...**

*** Travel corridors...**

2. Road management plans will be developed by Interdisciplinary Team with wildlife biologist input as part of timber sale planning, implementation, and district-level management. The objective of road management for wildlife is to minimize the adverse effects of roads on wildlife species sensitive to over-harvest or disturbance.

3. Consult with the ADF&G to develop and implement a management plan when either of the following conditions occur:

- **Existing or planned open-road density exceeds 1.0 mile of Forest Develop-ment roads per square mile of landscape within a VCU that supports a brown bear population. Roads which are closed and made unusable for motorized traffic by administrative closure or obliterations through gating, ditching, or barricading after management activities are not included in calculating open road density. In areas where accessible coastline provides access to bears, the length of coastline is included in road density calculations.**

- **When recorded or modeled brown bear mortality (including legal hunter kill, defense of life and property, and illegal kills) exceeds 4% of the estimated brown bear population within a WAA for at least 2 of the past 5 years.**

4. **A management plan shall consider both road closures and, in cooperation with the ADF&G, season and bag limits to reduce mortality rates to sustainable levels.**
5. **Minimize road distance within, and stream crossings through, bear concentration areas.**

Discussion

1. ADF&G research documents that bear mortality in NE Chichagof is positively correlated with road density;
2. once an area is roaded, it often results in activities which reduce the area's capability for supporting viable bear populations; impacts occur due to increased access, to varying degree, regardless of administrative road closures (e.g., gates, pits) or permanent closure (e.g., bridge removal) if accessible by foot traffic;
3. engineering and design of roads away from salmon spawning areas and bear concentrations could help reduce the threat to bears;
4. Hoonah and Whitestone road is one area with road/bear conflicts; and
5. most of this recommendation inserts the language of the original draft of the Draft Revised Supplement TLMP as supported by ADF&G and FS biologists, including cooperative development of a management plan, if necessary, to offset risks to populations.

MARINE MAMMALS

- FS Standards and Guideline WILD112 VIIA1: ADD "permitted and approved" and reference timing of natural events to read:

VI. Marine Mammal Habitats

A.1. Ensure that Forest Service permitted and approved activities are conducted in a manner consistent with the MMPA, the ESA, and NMFS guidelines for approaching seals and sea lions. Consult with appropriate agency for identification of critical timing events, such as molting, parturition, etc. and standard distances to avoid disturbance. "Taking" of marine mammals is prohibited; "taking" includes harassment, pursuit, or attempting any such activity.

Discussion

1. Certain species (e.g., harbor seals) are particularly sensitive to human activity and disturbance and are known to abandon use areas;
2. energy budget of marine mammals hauling out is conservative enough to put them at risk when disturbed back into the water (e.g., lactating females); and
3. approved FS activities will include those involving FS staff.

- FS Standard and Guideline WILD112 VIIA2: DELETE "activities requiring FS approval," DELETE "as practicable" and ADD language prescribing minimum requirements, REPLACE "guidelines" and ADD "standards," ADD reference to MMPA, and ADD reference to "productivity," to read:

VI. Marine Mammal Habitats

A.2. Locate FS permitted and approved facilities and concentrated human activities as far from known marine haul outs, rookeries, and concentration areas as necessary to be consistent with ACMP habitat standards and the MMPA. The following distances shall be the minimum standards to maintain or enhance the productivity of marine mammal habitats and reducing human disturbance:

SEABIRDS

- FS Standard and Guideline WILD112 VIIIA: DELETE "as practicable," ADD "so as to maintain seabird colonies," ADD MBTA as a legal reference, and refer to ACMP, to read:

VIII. Seabird Rookeries

A.1. Locate facilities and concentrated human activities requiring FS approval as far from known seabird colonies as necessary to be consistent with the Migratory Bird Treaty Act and ACMP habitat standards and to maintain seabird productivity and integrity.

Discussion

Certain species (e.g., puffins) are sensitive to human activity and disturbance during the nesting period and may, as a result, abandon nests.

WATERFOWL

- FS Standard and Guideline WILD112 IX: ADD language to A2 to reference ACMP, ADD implementation language to A3, and ADD "as per ACMP/FPA and MBTA" to A4, to read:

IX. Waterfowl

A.2. Locate facilities and concentrated human activities requiring Forest Service approval as far as necessary from known waterfowl concentration area to be consistent with ACMP and to maintain or enhance known waterfowl concentration areas. Minimize disturbance of geese and waterfowl by restricting development activities to periods when geese and waterfowl are absent from the area.

A.3. During project planning, identify areas and implement rehabilitation or enhancement of waterfowl habitat for mitigation if there is no feasible alternative to the habitat disturbance. (Also see the Forest-wide standards and Guidelines for Wetlands.)

A.4. Maintain habitat capability in coastal wetlands and intertidal areas that are important migratory staging areas and fall/winter/spring concentration areas and in wetlands that are important nesting and brood-rearing habitats by avoiding all development activities, where feasible, which could fill wetlands, drain wetlands, or alter water levels resulting in loss of desirable vegetation or direct loss of habitat, as per ACMP and Migratory Bird Treaty Act.

- FS Standard and Guideline WILD112 IX: ADD new section "B" to address geese, cranes, and swans to read:

IX. Waterfowl

B. Conduct all activities to avoid or minimize disturbance to habitats within the forest, riparian, and estuarine areas which are important nesting, brooding, rearing, and molting areas for Vancouver Canada geese, sandhill cranes, or trumpeter swans.

Discussion

1. Most of the Southeast Alaska population of Vancouver Canada geese is sedentary and habitat for nesting and brood rearing is a limiting factor (Habitat Capability Model);
2. there is a very small population of trumpeters in Southeast Alaska; and
3. nesting, brood rearing, and molting are periods which are energetically costly to birds and are accompanied with particular vulnerabilities and sensitivities.

HERON AND RAPTOR NEST PROTECTION

- FS Standard and Guideline WILD112 XA: ADD new subsection "B" addressing pre-sale inventory to read:

X. Heron and Raptor Nest Protection

B. Conduct project-level inventories to identify heron rookeries and raptor nesting habitat using the most recent inventory protocols (e.g., V-pop Report) before timber sales.

Discussion

1. Forested areas considered for logging or road construction should be surveyed; and
2. counts of nests from the ground during the breeding season provide the most reliable estimates of colony size while counts from aircraft or aerial photographs, though precise, were consistently low (V-pop Report).

WOLF

- FS Standard and Guideline WILD112 XIA: REWRITE A2 to include reference to interagency consultation with ADF&G road density limits, wolf mortality limits, and joint management plan, and ADD new subsection "A5" to read:

XI. Alexander Archipelago Wolf

A.2. Manage wolves in cooperation with the ADF&G. Consider both access and road management and seasons and bag limits to achieve management objectives of a sustainable wolf population. Initiate interagency consultation when the ADF&G and FWS to develop and implement a joint management plan when either of the following conditions occur:

- **Existing or planned road density exceeds 1.0 mile of Forest Development Roads per square mile of landscape within a WAA (refer 1990 ADF&G WAA map). Roads which are closed and made unusable for motorized traffic by administrative order are not included in calculating road density.**

- **When recorded or modeled wolf mortality from all causes exceeds 20% of estimated population within a WAA.**

A.5. The joint management plan will consider both habitat and population management options. Management actions to meet mortality objectives will include minimizing or eliminating motorized human access to specific watershed to provide refugia for wolves or State harvest regulatory restrictions on hunting and trapping or both.

Discussion

ADF&G recommends incorporating the above original language into the S&G as concluded by the Interdisciplinary Team and joint federal and state biologists.

MOUNTAIN GOAT

- FS Standard and Guideline WILD112 XIIA1: DELETE "Seek to locate facilities..." language, ADD new item to A1 "*" addressing road management, REPLACE "should maintain" with "will maintain a 1500-foot" in A2, REPLACE "seek to avoid" with "will avoid known kidding areas....," and ADD new subsection "A4" to address research needs, to read:

XII. Mountain Goat

A.1. ...

*** Locate facilities, camps, LTFs, campgrounds, and other developments 1 mile or more from important wintering and kidding habitat.**

*** Roads will be closed consistently with enforceable standards of ACMP after completion of management activity as appropriate to maintain integrity of mountain goat habitat.**

A.2. FS permitted or approved aircraft flights (fixed wing and helicopter), including helicopter yarding of timber, will maintain a 1500-foot vertical and horizontal clearance from traditional kidding areas and from animals, whenever feasible. Flight paths will avoid known mountain goat kidding areas from May 15 through June 15. Pilots will not compromise safety.

A.4. Support inventory and research of goat winter, kidding, and summer habitats, and, identify high use areas and document goat behavior, use, or activity patterns in response to disturbance.

Discussion

1. There are examples of displacement and reduced productivity of goats due to increased access and human activities; more data are needed for management decisions;
2. noise disturbance can result in abandonment of areas, interference with reproductive behavior, susceptibility to predation, and increased mortality;
3. roads have increased hunter access resulting in significant population declines; and
4. of 7 populations of mountain goats in British Columbia which experienced population declines, 4 were accessible by roads (none of the stable populations were accessible by roads).

- FS Standard and Guideline WILD112 XIIA: ADD new section "A5" to address monitoring needs to read:

XII. Mountain Goat

A.5. Monitor implementation of management guidelines to determine adequacy of their meeting the objective to maintain the integrity of mountain goat populations. Monitor/study goat behavioral response to disturbance in disturbed versus undisturbed areas (refugia).

MOOSE

- FS Standard and Guideline WILD22 XIVA: ADD new subsection "A5" to address winter habitat protection with reference to ADF&G role to read:

XIV. Moose Habitat

A.5. Forest management activities within 1,000 feet of moose winter feeding concentration areas will be designed to maintain thermal and security cover and winter browse production, and will require consultation with ADF&G.

Discussion

Yakataga Area Plan requires similar guidelines on state lands in areas zoned for timber harvest.

WILDLIFE HABITAT RESTORATION

- FS Standard and Guideline WILD22 I: ADD new subsections "A5" and "A6" to address the need for a habitat restoration program, to read:

Wildlife Habitat Restoration

I. Restoration Program

A.5. Establish a Restoration Program which includes a research component to investigate restoration treatments to accelerate regrowth toward old-growth characteristics such as in forest structural complexity and species diversity and composition.

A.6. Old-Growth LUDs which have received harvest will be the highest priority for restoration.

RECOMMENDED MANAGEMENT PRESCRIPTIONS AND FOREST-WIDE STANDARDS AND GUIDELINES : CHAPTERS 3 AND 4

GENERAL

- FS Standards and Guidelines: global DELETE all vague language such as "when practicable," "consider," "when reasonable," and the like, and REPLACE with "when feasible" or specific language that dictates measurable results and/or provides accountability and/or informs and assures cooperation with ADF&G in discretionary decision-making affecting fish or wildlife.

  Discussion

  1. There is too much latitude for discretionary judgments by unqualified staff in the field, due to language which is not defined;
  2. poorly defined, vague, or unenforceable language interferes with consistent implementation of standards and guidelines;
  3. FPA definition of "feasible" refers to effectiveness and efficiency while "taking into account economic, environmental, technical, and safety factors"; and
  4. ACMP definition of feasible also includes actions consistent with sound engineering practice that do not cause environmental, social, and economic problems that outweigh the public benefit derived from the standard.

- FS Standards and Guidelines: global DELETE of all allowance for "unprogrammed commercial harvest" in areas where it compromises the purpose of the land use designation or the integrity of important fish and wildlife areas, including, but not limited to, the following:
  1) old-growth designation areas
  2) 100-foot riparian buffers
  3) 100- to 300-foot riparian areas with high fish or important wildlife values
  4) 500-foot primary beach zone
  5) 500- to 1000-foot secondary beach zone with important wildlife values
  6) 1000-foot estuary zone

- Count the volume of unprogrammed harvest towards the ASQ to ensure timber is harvested on a sustained-yield basis.

  Discussion

  1. The ADF&G has consistently argued against unprogrammed timber harvesting in important fish and wildlife areas;
  2. the definition of unprogrammed harvest includes, among other things, salvage sales, insect and disease abatement, and wood specialty timber harvest;
  3. the Timber Production section of the S&G "encourage timber stand improvement, sanitation, and salvage," all of which fall under the category of unprogrammed timber harvest;

4. there is great interest in directing state and federal incentives to stimulate wood specialty timber harvest, which falls under the category of unprogrammed harvest; and
5. harvest in the riparian zone is inconsistent with the FPA.

RECOMMENDATIONS FOR MONITORING AND EVALUATION PLAN: CHAPTER 6

- FS MONITORING QUESTION: ADD the following monitoring question, under section J.

Transportation:

7. Are Road Management Objectives (RMOs) Implemented as Planned?

a) Type: Implementation.
b) Land Use Designations Affected: All with development.
c) Action or Effect to be Measured: Road closure and maintenance work.
d) Sampling Methods: Summarize the following:
1) Miles of new road in each RMO class.
2) Miles of total road in each RMO class.
3) Miles of total road in RMO 2 class or greater that were maintained per RMO specifications.
4) Miles of new road in RMO 1 class that were:
i) Allowed to close by revegetation
ii) Closed by pulling drainage structures and installing water bars.
e) Expected Precision and Reliability: High
f) Reporting Period: Annual
g) Lead Responsibility: Area/District engineering staff officers, District Rangers.
h) Reference: [FS will need to provide this]

Discussion

1. This item is needed to track to the amount of different levels of maintenance and road closure that is done each year; and
2. the method of road closure and the amount of maintenance conducted are very important determinants of risk to water quality.

- FS Monitoring Question: K. Water, 3 Are watershed improvement measures effective in improving water quality? REWRITE to read:

3. Are watershed improvement measures implemented?
a) Type: Implementation
b) Land Use Designations Affected: Where watershed improvement activities are permitted.
c) Actions or Effects to be Measured: Watershed improvements.
d) Sampling Methods: Collect information from the Management Attainment Report. Compare implemented projects to results of Needs Assessments. If anticipated outputs are not achieved, determine the cause.

e) **Expected Precision and Reliability: Precision: High. Acreage and related measures are easily quantifiable. Reliability: High. No interpretation required.**
f) **Reporting Period: Annual.**
g) **Lead Responsibility: Area administrative and planning staff officers.**
h) **References: 36 CFR & 219.12 (k)**

4. **Are watershed improvement measures effective in improving fish habitat and water quality?**
   a) **Type: Effectiveness.**
   b) **Land Use Designations Affected: Where watershed improvement activities are permitted.**
   c) **Actions or Effects to be Measured: Watershed improvements.**
   d) **Sampling Methods: watershed improvement effectiveness determinations require the collection of quantitative data. Data collection should follow a carefully designed monitoring plan. Data should be collected before and after the implementation of the improvement project, if possible.**
   e) **Expected Precision and Reliability: Precision: Medium. Stream habitat and water quality data collection is difficult and subject to variability due to sampling methods and natural variation in physical conditions. Reliability: Medium. Currently, no specific standards exist for habitat condition. Reliability is higher for water quality, as specified standards exist.**
   f) **Reporting Period: Annual**
   g) **Lead Responsibility: Area administrative and planning staff officers.**
   h) **References: 36 CFR & 219.12(k).**

Discussion

1. The current monitoring item is not consistent, as it is titled "effective," but is written as "implementation" monitoring; and
2. it is important to monitor both the implementation and effectiveness of watershed improvements.

FS Monitoring Questions H (Subsistence) and O (Wildlife):

Memoranda of Understanding between ADFG and the Forest Service that involve cooperative data gathering should be mentioned in this section because these cooperative programs are important components of wildlife monitoring. The Conservation Assessment MOU between ADFG, the Fish and Wildlife Service and the Forest Service needs to be mentioned as an interagency monitoring mechanism to prevent species from being listed under the Endangered Species Act.

In general, the monitoring and evaluation plan is too vague. There are acknowledged problems with use of the terms accuracy and precision. The four goals of wildlife habitat monitoring include 1) maintaining dispersed old-growth blocks for viable and well-distributed wildlife populations, 2) ensure wildlife habitat corridors, 3) provide old growth habitat for uses beyond viability, and 4) minimize adverse impacts through road and facility management.

The following questions should be added to the monitoring plan to better address the state goals.

A. Are old-growth dependent wildlife expected to remain viable and well-distributed across the forest for the next 100 years under the adopted alternative?

a) Type: Effectiveness
b) Land Use Designation: All
c) Actions or Effects to be Measured: Habitats to maintain population viability
d) Sampling Methods: Population Viability Analyses, demographic studies, habitat modeling, GIS monitoring of habitats
e) Expected Precision and Reliability: High
f) Reporting Period: Once every five years
g) Lead Responsibility: Director - Regional Fish and Wildlife Program
h) References: National Forest Management Act; State of Alaska Statutes Sec. 16.05.020. Federal Endangered Species Act; State of Alaska Endangered Species Act.

B. Are wildlife habitats being maintained or improved that will allow for their human use, including viewing and hunting across the forest?

a) Type: Effectiveness
b) Land Use Designation: All
c) Actions or Effects to be Measured: Habitats to maintain useable wildlife populations
d) Sampling Methods: Population and Habitat Surveys, demographic studies, habitat modeling, GIS monitoring of habitats
e) Expected Precision and Reliability: High
f) Reporting Period: Annually
g) Lead Responsibility: Director - Regional Fish and Wildlife Program
h) References: National Forest Management Act; Multiple Use Act; State of Alaska Statutes Sec. 16.05.020.

Discussion: The monitoring plan has a goal to maintain habitats for useable wildlife populations but there is no proposed monitoring program.

Question 4 in the Draft EIS

4. Are the wildlife standards and guidelines reducing or eliminating adverse human effects from Forest Service activities on important habitats, as anticipated?

Discussion:

1. This text of this section deals only with bald eagles and bears, and it contains a factual error. The error is that defense of life and property bear mortalities must be reported to the Department of Public Safety, not the Alaska Department of Fish and Game.

2. Documenting adverse human impacts to species like bears by obtaining ADFG bear kill records has little or nothing to do with determining adverse human effects as related to habitat. As written this is not a monitoring program for bear habitat and it ignores many of the suggestions in the brown bear panel assessment. In order to monitor adverse impacts to bears, a well-designed monitoring program needs to be instituted. The level of the monitoring needs to be commensurate with the suspected risk caused by the management activity.

3. This section needs to address other wildlife in addtional to bears and bald eagles.

City and Borough of Sitka

100 LINCOLN STREET • SITKA, ALASKA 99835

016385

August 26, 1996

Tongass Forest Plan Revision Team
8465 Old Dairy Road
Juneau, AK 99801 FAX: 586-8894

Dear Revision Team:

At their August 13 regular meeting, the Sitka Assembly voted to support Alternative 2 of the Tongass Land Management Plan. The Sitka Coastal Management Program has reviewed this alternative for consistency with the Sitka Coastal Management Program.

The 1989 Revised Sitka Coastal Management Program Timber Harvest and Processing Section has as its primary goal and objectives the following -- "GOAL: To retain a viable timber industry in Sitka while minimizing any adverse effects on the environment. OBJECTIVE: To insure the continued economic benefits of a viable wood products industry. OBJECTIVE: To maintain a healthy, viable forest for use by the public for other uses, in addition to timber harvest."

Unfortunately, Sitka does not currently have a viable timber industry. The Sitka Coastal Program supports the restoration of a timber industry for Sitka, which will require a sustainable timber supply. The Municipal Assembly believes Alternative 2 is the best alternative to meet the needs of the timber industry for Southeast Alaska. While the Coastal Program has site-specific concerns which will be raised concerning specific timber sale proposals, there is nothing in the Coastal Program which would be inconsistent with the level of harvest proposed in Alternative 2. Furthermore, Alternative 2 does leave several environmentally sensitive areas in LUD II status, such as Lisianski River/upper Hoonah Sound and Kadashan Bay, both which are Special Management Areas in the Sitka Coastal Program Public Use Management Plan.

It is hoped that future timber sales will attempt to minimize adverse effects on the environment, especially in environmentally sensitive or high public use areas. The Coastal Program would need to comment on these proposals on a site-specific basis.

Alternative 2 appears consistent with the Sitka Coastal Management Program, which has no objection to its selection as the final Tongass Land Management Plan alternative. If any additional information is needed, please contact me at 747-1855/FAX 747-1856.

Sincerely,

Marlene A. Campbell
Coastal Management Coordinator

L-610

16.367

USDA FOREST SERVICE
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CITY AND BOROUGH OF YAKUTAT, ALASKA
RESOLUTION 96-20

A RESOLUTION CONCERNING THE TONGASS LAND USE PLAN OF 1996

WHEREAS: the City and Borough of Yakutat recognizes that continued economic and social development is important to the community of Yakutat; and

WHEREAS: to enhance the community of Yakutat's quality of life and to support the education of our next generation; and

WHEREAS: the natural resources of Yakutat Forelands are very important to the economy, education and social well being of the community of Yakutat; and

NOW, THEREFORE, BE IT RESOLVED by the Borough Assembly of the City and Borough of Yakutat, that the Assembly hereby supports:

SECTION 1: Remove the Wild, Scenic, or Recreational River designation on the Dangerous River as well as the small piece on the northwest end of Harlequin Lake. Let the Dangerous River area remain the LUD II area.

SECTION 2: Remove the Wild, Scenic, or Recreational River designation on the northeast end of Harlequin Lake. Let it remain Remote Recreation.

SECTION 3: Extend the Scenic Viewshed corridor along Forest Highway 10 across the Dangerous River bridge to the east bank.

SECTION 4: Remove the Wilderness Special Interest Area designation along the waters of the Russell Fjord.

SECTION 5: Designate Strawberry Point (Situk River commercial fish camp area) as Modified Landscape instead of Semi-Remote Recreation.

SECTION 6: The area south and west of Gateway Knob remain as Semi-Remote Recreation Designation, instead of Semi-Recreation.

SECTION 7: Designate Haenke Island as Semi-Remote Recreation.

SECTION 8: Designate all islands in Yakutat Bay as Semi-Remote Recreation.

SECTION 9: That sales of up to $500,000 board feet of timber be made available for local small timber operators, for local manufacture.

SECTION 10: Support and recognizes the importance of the tourism industry to the economy of Yakutat, and that it is compatible with other resource uses.

THAT this resolution be sent to the Alaska Congressman Don Young; Senators Ted Stevens and Frank Murkowski; Honorable Tony Knowles, Governor of Alaska. U.S. Forest Service Tongass Land Management Planning Team.

PASSED AND APPROVED THIS 16th DAY OF August, 1996.

CITY AND BOROUGH OF YAKUTAT, ALASKA

Dayrl R. James

DAYRL R. JAMES
Mayor

CITY AND BOROUGH OF YAKUTAT CORPORATE SEAL ALASKA SEPTEMBER 22, 1992

ATTEST:

Mona Swanson

MONA SWANSON
Borough Clerk