

Appendix A

Reasons for Scheduling the Environmental Analysis of the Navy Timber Sale

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Introduction

Coordinated timber sale planning is essential for meeting the goals of the Tongass Land and Resource Management Plan (Forest Plan) and to provide an orderly flow of timber to local industry. To determine the volume of timber to offer each year, the Forest Service can look to current market conditions and the level of industry operations. However, the planning process for timber harvest projects requires the Forest Service to rely on projections of future harvest levels to decide how many timber sale projects to begin each year. This document explains how the Forest Service uses information about future markets and past experience with timber sale planning to determine the volume of timber that needs to be started through this process each year. This appendix relies heavily on the current annual timber demand analysis and the most recent timber sale schedule.

The purpose of this appendix is two-fold: first, to explain why this project was selected for inclusion into the Tongass Timber Program and second, to explain the basis and components of the Tongass Timber program. To accomplish this, the following questions are answered:

- How does the Navy Timber Sale project fit into the Tongass Timber Sale Program?
- Why is timber from the Tongass National Forest being offered for sale?
- How does the Forest Service develop forecasts about future timber market demand?
- What steps must be completed to prepare a sale for offer?
- How does the Forest Service maintain an orderly and predictable timber sale program?
- How does the Forest Service decide where timber sale projects should be located?

How Does the Navy Timber Sale Project Fit into the Tongass Timber Sale Program?

This project is currently in Gate 2, Project Analysis and Design (See Forest Service Handbook 2409.18, Chapter 30 and subsequent discussion about the Gate System) and involves environmental analysis and public disclosure as required by the National Environmental Policy Act (NEPA). The amount of volume considered for harvest under the action alternatives for the Navy Timber Sale project ranges from 18.3 MMBF to 87.5 MMBF, with harvest potentially beginning in 2009. This volume would contribute to the Tongass timber sale program. A no-action alternative is also analyzed in this EIS. If an action alternative is selected in the decision for this project, this volume will be added to the volume available for sale. As displayed in Table A-2, the goal for volume under analysis on the Tongass National Forest is 299 MMBF. Currently, the forest-wide volume under analysis is about 300 MMBF and includes the volume for this project.

This project contributes to the timber sale program planning objective of providing an orderly flow of timber from planning through harvest to meet timber supply requirements. A position statement (Gate 1) was completed to document that this project warrants additional investment of funds and personnel. Therefore, it is reasonable to be conducting the environmental analysis for this project at this time.

This project meets all laws and regulations governing the removal of timber from National Forest System lands, including Forest Service policies as described in Forest Service manuals and handbooks, and the Forest Plan and Record of Decision. Based on current year and anticipated future timber demand, and the timber supply provisions of the Tongass Timber Reform Act, the Navy Timber Sale project is needed at this time to meet timber sale needs identified on the approved multiple-year timber sale plan. Anticipated budget allocations and resources are sufficient to prepare and offer this project for sale as scheduled.

Why is This Project Occurring in This Location?

Areas are selected for environmental analysis for timber harvest projects for a variety of reasons. The reasons this project was considered in this area include:

- The Navy Timber Sale project area contains sufficient acres (about 14,000) of suitable and available forest land to make this timber harvest proposal reasonable. Areas with available timber need to be considered for harvest in order to seek to provide a supply of timber from the Tongass which (1) meets the annual market demand from such forest, and (2) meets the market demand from such forest for each planning cycle, pursuant to Section 101 of the TTRA.
- All acres proposed for harvest are classified as suitable and available and can be managed for timber production in compliance with NFMA and other laws regulating timber harvest on National Forest System lands.

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All Forest Plan direction can be met while still providing for timber harvest.

- About 80 percent of the project area is identified in the 2008 Forest Plan as Timber Production, Modified Landscape, or Scenic Viewshed LUDs, which include timber harvest and associated road-building among their management goals. All harvest within the Navy project area is proposed in the Timber Production, Modified Landscape, and Scenic Viewshed LUDs (USDA Forest Service 2008).
- The rest of the project area is allocated to non-development LUDs. There are about 15,340 acres in Old-growth Habitat (OGR) LUD and 660 acres in Semi-remote Recreation LUD. The 2008 Forest Plan adjusted Old-growth Habitat LUDs on the Tongass to “improve the network of small OGRs”, and also “substantial(ly) increase...the amount of land allocated to other non-development LUDs”. These areas, along with other non-harvested areas such as riparian management areas, beach fringe, buffers and steep, unstable slopes, provide habitat for old-growth associated wildlife and plant species. The Navy Timber Sale project is consistent with all of the land allocations of the 2008 Forest Plan, including the Old-Growth Habitat LUDs.
- The project area contains approximately 50 miles of existing National Forest System (NFS) roads which would be used for to access timber and which may benefit by purchaser maintenance, as necessary, during the time of the active contract. This road maintenance would benefit the long-term use of the existing road system.
- Two existing marine access facilities (MAFs) are located in Anita Bay on the existing road system. These provide access to saltwater to supply logs to mills in nearby communities including Wrangell, Ketchikan, and Prince of Wales Island, benefitting the local and regional timber industry, thereby contributing to the local and regional economies of Southeast Alaska (2008 Forest Plan, p. 2-5).
- Employment in Wrangell includes jobs in the wood products industry and represents about 9 percent of the employment (1999). Between an estimated 63-429 jobs associated with logging and sawmilling would be supported if an action alternative is selected. This would promote a more stable economy for Wrangell by contributing to a diversified economy.
- Up to 3,600 acres are proposed to be helicopter-yarded in the Navy Timber Sale project in areas that were not easily accessible by roads or where resource concerns precluded building a road. These areas can be yarded with helicopters to retain a high percentage of standing trees. Partial harvest provides timber for wood products while maintaining scenic values along visual priority travel routes, reducing effects on water yields, reducing erosion and blowdown risks, and retaining more old-growth characteristics in the unit.

- Although inventoried roadless areas (IRAs) are within the project area, these IRAs are partially designated as Timber Production, Modified Landscape, and Scenic Viewshed LUDs, which allow management activities. Portions of the roadless area that are within the project area have been identified as part of Phase 1 of the Tongass Adaptive Management Strategy in the 2008 Forest Plan Amendment Record of Decision. Phase 1 includes areas that have lower values than roadless areas elsewhere on the Forest (USDA Forest Service 2003). The scheduled timber sale program will be generally confined to these Phase 1 lands until the actual level of harvest increases to 100 MMBF for 2 consecutive years. Phase 2 lands within the project area include the Navy watershed, which was analyzed in the Draft EIS, but has been removed from analysis and consideration in the Final EIS. Phase 2 lands would become eligible for management activity planning only when the harvest level of 100 MMBF for 2 consecutive years is reached. Therefore, this project may continue as planned.

In conclusion, this project area can provide a mixture of uses in compliance with the laws that govern National Forest management and be consistent with current Forest Direction.

Why is Timber from the Tongass National Forest Being Offered for Sale?

National Legislation

On a national level, the legislative record is clear about the role of the timber program in the multiple-use mandate of the national forests. One of the original objectives for creation of national forests was to provide natural resources, including timber, for the American public. The Organic Administration Act of 1897 (partially repealed in 1976) directed the agency to manage the forests in order to "improve and protect the forest ... [and] for the purpose of securing favorable conditions of water flows, *and to furnish a continuous supply of timber* for the use and necessities of the citizens of the United States" (emphasis added). The Multiple-Use Sustained Yield Act of 1960 directs the Forest Service to administer federal lands for "outdoor recreation, range, timber, watershed, and wildlife and fish purposes."

The National Forest Management Act (NFMA) of 1976 states that "the Secretary of Agriculture...may sell, at not less than appraised value, trees, portions of trees, or forest products located on National Forest System Lands." Although the heart of the Act is the land management planning process for national forests, the Act also sets policy direction for timber management and public participation in Forest Service decision making. Under NFMA, the Forest Service was directed to "limit the sale of timber from each national forest to a quantity equal to or less than a quantity which can be removed from such forest annually in perpetuity on a sustained-yield basis."

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The NFMA directs the Forest Service to complete land management plans for all units of the National Forest System. Forest plans are developed by an interdisciplinary team to provide for the coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. Forest plans designate areas of national forest where different management activities and uses are considered appropriate including those areas suitable for timber harvest.

Alaska-Specific Legislation

Timber from the Tongass National Forest is being offered for sale as part of the multiple-use mission of the Forest Service identified in the public laws guiding the agency. In addition, Alaska-specific legislation and the Tongass Forest Plan direct the Forest Service to seek to provide timber to meet market demand, subject to certain limitations.

The Alaska National Interest Lands Conservation Act (ANILCA) and the Tongass Timber Reform Act (TTRA) provide direction on the issue of Tongass timber supply. Section 101 of TTRA amended the ANILCA timber supply mandate and fixed budget appropriations and replaced them with the following text in Section 705 (a):

“Sec. 705. (a) Subject to appropriations, other applicable law, and the requirements of the National Forest Management Act of 1976 (P.L. 94-588); except as provided in subsection (d) of this section, 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 annual market demand from such forest for each planning cycle.”

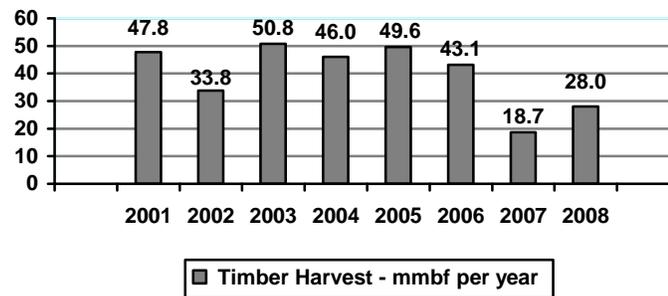
Tongass National Forest Land and Resource Management Plan (Forest Plan, as amended)

The Tongass Land Management Plan was completed in 1979 and revised in 1997. The Record of Decision (ROD) for the 2008 Tongass Land Management Plan Amendment (Forest Plan) was signed by the Alaska Regional Forester January 23, 2008. The Forest Plan incorporates new resource information and scientific studies and reflects an extensive public involvement process. The 2008 Forest Plan defines appropriate activities within each of 19 land use designations (LUDs). Approximately 79 percent of the Tongass was allocated to LUDs where scheduled commercial timber harvest is not allowed. The decision for the 2008 Forest Plan establishes the annual average allowable sale quantity (ASQ, the maximum amount of timber that may be offered for sale) at 267 million board feet (MMBF). This is the same as the ASQ established for the previous Forest Plan in 1997. While technically a limit on sale volume, in effect the ASQ also limits the amount of timber that may be harvested on the Tongass National Forest.

The environmental effects analysis in the Final EIS for the 2008 Forest Plan assumed the maximum timber harvest allowed under each alternative would occur annually over the next 100 to 150 years. In that way, the Forest Plan analysis displayed the maximum environmental effects that could be reasonably foreseen. However, substantially less timber volume and acres have

actually been harvested over the last several years than the maximum level allowed under the 1997 Forest Plan (see Figure A-1). Thus, the effects on resources are expected to be less than projected in the 2008 Final EIS for the Forest Plan Amendment.

Figure A-1
Tongass Timber Harvest, Fiscal Years 2001-2008



The Record of Decision for the 2008 Forest Plan Amendment includes transition language for projects that were being planned when the Forest Plan was completed. That language identifies three different categories of projects, depending on how far along they were in the project planning process when the Forest Plan Amendment was completed, and specifies the extent to which projects in each category must comply with the amended Forest Plan. The transition language lists this project as being in Category 2, which requires the Forest Supervisor to review the project and incorporate the new direction in the amended Forest Plan to the extent this can be done without causing major disruptions in the implementation of the project. Information on the inclusion of the 2008 direction is included as appropriate in the Navy Timber Sale Final EIS and will be included in the decision.

Timber Sale Program Adaptive Management Strategy

To further balance the competing demands and respond to requests for additional protection of roadless areas, the Record of Decision for the 2008 Forest Plan Amendment also approved the Timber Sale Program Adaptive Management Strategy. The Strategy is based on three critical factors:

1. The long-term demand for timber from the Tongass is inherently very uncertain, and is influenced by the ability of all interested parties to work together to stabilize the timber supply.
2. The annual average ASQ of 267 MMBF is considerably higher than the current level of timber harvest on the Tongass.
3. The land base associated with the ASQ includes roadless areas, many of which are highly valued by substantial portions of the public.

Under the Timber Sale Program Adaptive Management Strategy, actual operation of the timber sale program will be implemented in three phases, as determined by actual timber harvest levels.

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In Phase 1, the timber program will be restricted to a portion of the suitable land base focusing on the roaded portion and some lower-value roadless areas and excludes moderate and higher-value roadless areas.

The Phase 1 portion includes approximately 537,000 suitable acres, or 69 percent of the total suitable land base. Should the actual level of timber harvest reach 100 MMBF for 2 consecutive fiscal years, the Tongass could then plan for timber projects in the Phase 2 portion of the approved suitable land base, resulting in a program that operates on 680,000 acres of suitable lands, including some moderate-value roadless areas. Not all of these suitable acres are scheduled for timber harvest during the life of this Forest Plan. If timber harvest reaches 150 MMBF for 2 consecutive fiscal years, the Tongass could then plan for timber projects in Phase 3, which includes the entire suitable land base. The Navy Timber Sale project is located in the Phase 1 portion of the suitable land base; accordingly, planning and implementation of it may proceed under the Timber Sale Program Adaptive Management Strategy.

Roadless Area Conservation Rule

The January 2001 Roadless Area Conservation Rule prohibited most timber harvest and road construction in inventoried roadless areas on National Forest System lands. The Roadless Rule has been the subject of several lawsuits. In the most recent court ruling (9/20/06), the court re-instituted the 2004 version of the Roadless Rule, including 36 CFR Part 294.14(d): "this subpart does not apply to road construction, road reconstruction, or the cutting, sale or removal of timber in inventoried roadless areas on the Tongass National Forest". Accordingly, the Tongass National Forest is exempt from the Roadless Rule's prohibitions against timber harvest, road construction, and reconstruction in inventoried roadless areas. Such activities may occur on the Tongass where allowed by the 2008 Forest Plan.

An analysis of the effects to roadless areas within the project area has been included as part of the analysis for this project. This project is consistent with agency policy and procedures and has been designed to meet the management direction, goals and objectives, and standards and guidelines in the Forest Plan.

How Does the Forest Service Develop Forecasts about Future Timber Market Demand?

Consistent with the provisions of the Tongass Timber Reform Act, the Forest Service makes two types of forecasts of market demand for timber from the Tongass National Forest. The first, "planning cycle market demand," forecasts the long-term demand for timber from the Tongass over the life of the Forest Plan, derived from trends in international demand for end products manufactured from such timber. Based on these long-term projections, the Forest Service also estimates annual market demand in order to determine how much timber to plan to offer for sale.

Market Demand for the Planning Cycle

Research economists with the Forest Service's Pacific Northwest (PNW) Research Station have prepared several studies of "planning cycle market

demand” for Tongass timber, including three General Technical Reports by Brooks and Haynes (1990, 1994, and 1997). In 2006, the PNW Research Station published new harvest projections (Brackley et al. 2006). This report and an addendum to it (Brackley and Haynes, 2008) provided key information for the 2008 Forest Plan Amendment analysis.

The Brackley et al. 2006 projections include four scenarios: 1) limited lumber production, which represents the situation the timber industry in Southeast Alaska has faced over the last several years; 2) expanded lumber production, which assumes some form of demand stimulus occurs; 3) medium integrated industry, which assumes sufficient demand stimulus occurs to cause an expansion of the current industry capacity and better utilization of forest products removed from public timber sales; and 4) high integrated industry, assumes some kind of additional demand stimulation to result in full utilization of all types of forest products available from the Tongass. More detailed information about these scenarios and their assumptions is in the Forest Plan Amendment Final EIS and ROD (January 2008), and in Brackley and Haynes, 2008.

The Brackley et al. 2006 study displays alternative projections of derived demand for timber from the Tongass National Forest. For the first two scenarios, which assume no market for low-grade sawlogs and utility volume, the figures in that table includes sawtimber only. For the two integrated industry scenarios, the projections include total volume, including both sawlogs and utility. Utility volume must be cut down along with higher-quality timber even if there is no demand for it. It is the total volume of timber cut on the Tongass that is of most interest, in part because environmental effects result from total volume cut. In addition, any comparison of scenarios must be based on comparable figures. Accordingly, the table below shows Brackley et al 2006 projections for all four scenarios in terms of total volume:

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Table A-1
Tongass National Forest Timber Sale Volume Necessary to Supply Derived Demand for Decked Log Volume and Chips, in Million Board Feet (MMBF); (Alexander, 2008¹)

Year	Scenario 1 Limited lumber	Scenario 2 Expanded lumber	Scenario 3 Medium integrated	Scenario 4 High integrated
2007	49.8	61.9	67	67
2008	49.8	66.4	139	139
2009	51.3	72.4	151	151
2010	52.8	78.5	166	166
2011	52.8	84.5	184	184
2012	54.3	90.5	204	286
2013	55.8	98.1	204	291
2014	57.3	105.6	204	295
2015	58.9	113.2	204	299
2016	58.9	122.2	204	303
2017	60.4	131.3	204	308
2018	61.9	140.3	204	312
2019	63.4	150.1	204	317
2020	64.9	163.0	204	325
2021	66.4	175.0	204	333
2022	67.9	187.1	204	342
2023	69.4	200.7	204	351
2024	70.9	215.8	204	360
2025	72.4	230.9	204	370

¹ Annualized calculation to fulfill derived demand scenarios from Brackley et al. (2006). This table was created using annualized values provided by Dr. Allen Brackley (personal communication, Nov 29 2006) from the model used to develop derived demand estimates in Brackley et al. (2006). The values for Limited Lumber Scenario and Expanded Lumber scenarios reported in this table have been adjusted to include low quality material not included in the demand projections and include saw logs, cedar export, and utility (chip) volumes available from sawmill production. The Medium and High Integrated Scenarios are not adjusted and include saw logs, cedar exports, chip volumes, low-grade material, and utility in Brackley et al. (2006).

After the Brackley et al. 2006 study was published, the Regional Forester approved a policy under which timber purchasers may ship to the lower 48 states unprocessed certain small-diameter and low-quality logs harvested from the Tongass, up to 50 percent of the volume harvested on each sale. This policy creates a market opportunity for low-quality material that the Brackley et al. 2006 study assumed would not be utilized under scenarios 1 and 2. In response to the new interstate shipment policy and other recent events, Brackley and Haynes (2008) conclude that “[D]emand for national forest

Annual Market Demand

timber in Alaska is on a trajectory more similar to the scenario 2 (expanded lumber production).”

The annual market demand forecast is a methodology used to set the short-term goals for the Tongass timber sale program –the volume the Forest plans to offer for sale in the current year pending sufficient funding.

The formulas and procedures used in forecasting annual market demand are described in a Forest Service report titled Responding to the Market Demand for Tongass Timber (Morse, 2000). These procedures, which have become known as the “Morse methodology,” are based on the premise that:

- Forest product markets are volatile, especially in the short run.
- Timber purchasers in Southeast Alaska have few alternative suppliers of timber if they cannot obtain it from the Tongass National Forest. Oversupplying this market has relatively few adverse economic effects; undersupplying it can have much greater negative economic consequences.
- It takes years to prepare National Forest timber for sale, including completion of environmental impact statements.
- It is difficult to estimate demand for timber from the Tongass, even a year or two in advance.
- Industry must be able to respond to rapidly changing market conditions in order to remain competitive.

Accordingly, the Morse methodology establishes a system that considers factors such as mill capacity and utilization of that capacity, and seeks to build and maintain sufficient volume of timber under contract (i.e., timber purchased but not yet harvested) to allow the industry to react promptly to market fluctuations. Industry actions such as annual harvest levels are monitored and timber program targets are developed by estimating the amount of timber needed to replace volume harvested from year to year. The methodology is adaptive, because if harvest level drop below expectations and other factors remain constant, future timber sale offerings would also be reduced to levels needed to maintain the target level of volume under contract. Conversely, if harvest levels rise unexpectedly, future timber sale targets would also increase sufficiently to ensure that the inventory of volume under contract is not exhausted. By dealing with uncertainty in a flexible, science-based fashion, the Morse methodology is an example of adaptive management.

The Morse methodology originally used the projected harvest from the final 1997 Brooks and Haynes report. These procedures were recently updated (Alexander, 2008) to use the annual projected harvest figures from Brackley et al. 2006 in calculations of annual timber offer targets. No further changes to the Morse methodology were required as a result of the updated long-term demand projections contained in the Brackley et al. study.

Using the updated annual market demand procedures, the Forest Service has set a goal for volume to be offered in FY 2009 of 177 MMBF. This figure was

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calculated using the Brackley et al. 2006 “expanded lumber scenario.” The Region 10 shipment policy and the success of Alaska producers in niche or specialty markets, the appraisal in Brackley et. al 2008 determined that demand for National Forest timber in Alaska is on a trajectory most similar to the scenario 2 (expanded lumber production). The actual volume of timber offered for sale reflects a combination of factors, such as final budget appropriations, completing the NEPA process; the practice of offering smaller sales for smaller operators rather than all the volume from a NEPA decision; the statutory requirement that timber sales offered in the Alaska Region appraise positive; and volume enjoined from being offered because of litigation. The spreadsheet displaying the annual demand calculation and a summary of the factors used in these calculations are in the project record.

The planned annual timber volume offer could include a combination of new, previously offered, and reconfigured timber sales. Both green timber and salvage will be components of the program. Offerings will consist of those targeted for Small Business qualified firms, as well as a portion of the volume being made available for the open market.

For planning and scheduling purposes, the Tongass uses a 5-year timber sale plan, which is consistent with Forest Service Manual 2430. This 5-year plan is based on completed and ongoing environmental analyses and contains information to purchasers and other interested parties, and provides a plan that can be adjusted in response to changing market conditions.

Both the “annual market demand” and the “planning cycle market demand” projections are important for timber sale program planning purposes. They provide guidance to the Forest Service to request budgets, to make decisions about workforce and facilities, and to indicate the need to begin new environmental analysis for future program offerings. They also provide a basis for expectations regarding future harvest, and thus provide an important source of information for establishing the schedule of probable future sale offerings. The weight given to the projections will vary depending on a number of factors, such as how recently they were done and how well they appear to have accounted for recent, site-specific events in the timber market.

What Steps Must Be Completed to Prepare a Sale for Offer?

The Tongass National Forest’s timber sale program is complex. A number of projects are underway at any given point in time, each of which may be in a different stage of planning and preparation. A system of checkpoints, or “gates”, helps the Forest Service track the accomplishments of each stage of a project from inception to contract termination.

Gate 1 – Initial Planning of Timber Sale Project

A Timber Sale Project Plan, often referred to as a Position Statement, is a brief analysis of the project area with the intent of determining the feasibility of a

potential timber sale. After the Position Statement is developed, the Forest Service decides whether the project area merits continued investment of time and funds in sale planning.

Gate 2 – Project Analysis, Sale Area Design, and Decision

This step is commonly referred to as the “NEPA” phase and includes field work, public scoping, analysis, draft disclosure of the effects of the project on the environment, public comment, final analysis and disclosure, decision, and potentially administrative appeals and litigation. Gate 2 activities must be completed before a sale is awarded. Legislation, policy changes, and appeals and litigation have recently extended completion of some projects for a much longer timeframe, often doubling the desired time frame.

Gate 3 – Preparation of a Timber Sale

During this step, the information and direction included in the decision document from Gate 2 is used to layout units and design roads on the ground. Additional site-specific information is collected at this time. In order to maintain an orderly flow of sales, Gate 3 activities need to be complete before a sale is advertised.

Gate 4 – Advertise a Timber Sale

The costs and value associated with the timber sale designed in Gate 3 are appraised and packaged in a timber sale contract. The contract is a legally binding document that tells a prospective timber sale purchaser how the sale must be harvested to conform to the project decision document. This step occurs during the final year of the project development and culminates with the advertisement of the project for sale.

Gate 5 – Bid Opening

Gate 5 is completed with the opening of bids for the project. If a bid is submitted, contractual provisions govern when the award of the sale takes place, when the sale will be completed (contract length and operation season), and how timber removal is to occur.

Gate 6 – Award a Timber Sale Contract

Gate 6 is the formal designation of a contract between a bidder and the Forest Service.

How Does the Forest Service Maintain an Orderly and Predictable Timber Sale Program?

Pools of Timber (Pipeline Volume)

As discussed earlier, the Forest Service tracks the accomplishment of the different steps of development of each timber sale with the Gate System (Forest Service Handbook 2409.18). From a timber sale program standpoint, it is also necessary to track and manage multiple projects as they move through the Gate System. Because of the timeframes needed to accomplish a given timber sale and the complexities inherent in timber sale project and program development, it is necessary to track various timber sale program volumes from Gate 1 through Gate 6.

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The goal of the Tongass National Forest is to provide an even flow of timber sale offerings on a sustained-yield basis to meet market demand. In recent years, this has been difficult to accomplish due to a combination of uncertainties such as delays related to appeals and litigation; changing economic factors, such as rapid market fluctuations; and industry-related factors, such as changes in timber industry processing capabilities. To achieve an even flow of timber sale offerings, ‘pools’ of volume in various stages of the Gate System are maintained so volume offered can be balanced against current year demand and market cycle projections.

Today, upward trends in demand are resolved by moving out-year timber projects forward, which may leave later years not capable of meeting the needs of the industry. In other instances, a number of new projects are started based on today’s market but will not be available for a number of years. By the time the added projects are ready for offer, the market and demand for this volume may have changed. Three pools of timber volume are tracked to achieve an even flow of timber sale offerings.

The objective of the timber pools concept is to maintain sufficient volume in preparation and under contract to be able to respond to yearly fluctuations in a timely manner. Refer to Table A-2, which displays the current estimated volume in each pool, as well as the goal which the Tongass has established for the volume to be maintained in each pool, based on historic patterns. Appeals and litigation can cause timber sale projects to be reevaluated to ensure they meet current standards and direction, which can cause delays in making projects available to move through the pools, thereby not fully meeting the goals for volumes in each pool.

Pool 1 - Timber Volume Under Analysis (Gate 1 and Gate 2)

Volume in Gate 1, the initial planning step, represents a large amount of volume, but represents a relatively low investment in each project. This relatively low investment level offers the timber program manager a higher degree of flexibility and thus, does not greatly influence the flow of volume through the pipeline. A signed Project Plan (FSH 2409.18, Chapter 20) is the completion of this gate.

Gate 2, timber volume under environmental analysis, includes sales being analyzed and undergoing public comment through the NEPA process. This pool includes any project that has started the scoping process through those projects ready to have a decision issued. In addition, tracking how much volume is involved in appeals or litigation may be necessary to determine possible effects on the flow of potential timber sales. A signed NEPA decision (FSH 2409.18, Chapter 30) is the completion of this gate. Volume affected by appeals and litigation is tracked as a subset of this pool (Table A-3).

Based on historic patterns, the Tongass has established a goal for the pipeline volume to be maintained in each of the timber pools. The goal for Pool 1 is to be maintained at approximately 4.5 times the amount of the projected harvest to account for projects at various stages of analysis. That goal reflects a number

of factors which can lead to a decrease in volume available, such as a decision in Gate 1 to drop further analysis in a particular planning area (called the “no go” decision), a falldown in estimated volume between Gate 1 and Gate 2, and volume not available for harvest due to appeals or litigation.

Pool 2 - Timber Volume Available for Sale (Gates 3, 4 and 5)

Timber volume available for sale includes sales for which environmental analysis has been completed, and have had any administrative appeals and litigation resolved. Enough volume in this pool is needed to be maintained to be able to schedule future sale offerings of the size and configuration that best meets market needs in an orderly manner.

As a matter of policy and sound business practice, the Forest Service announces probable future sale offerings through the Periodic Timber Sale Announcement. Delays at Gate 2 have affected sale preparation (Gate 3) and have made scheduling of sales uncertain. At Gate 4, sales have been fully prepared and appraised, and are available to managers to advertise for sale. This allows potential purchasers an opportunity to do their own evaluations of these offerings to determine whether to bid, and if so, at what level.

Timber in this pool can include a combination of new sales, previously offered unsold sales, and remaining volume from cancelled sales. The goal is to maintain Pool 2 at approximately 1.3 times the amount of the projected harvest to allow flexibility in offering sales.

Pool 3 - Timber Volume Under Contract (Gate 6)

Timber volume under contract contains sales that have been sold and a contract awarded to a purchaser, but which have not yet been fully harvested. Contract length is based on the amount of timber in the sale, the current timber demand, and the accessibility of the area for mobilization. The longer the contract period, the more flexibility the operator has to remove the timber based on market fluctuations. Timber contracts typically initially give the purchaser 3 years to harvest and remove the timber purchased; however, they can be extended under certain circumstances, such as inoperable periods of weather, injunctions, and other contractual delays.

The Tongass attempts to maintain roughly 3 years of unharvested volume under contract to the industry as a whole. This volume of timber is the industry’s dependable timber supply, which allows adaptability for business decisions. This practice is not limited to the Alaska Region, but is particularly pertinent to Alaska because of the nature of the land base. The relative absence of roads, the island geography, the steep terrain, and the consequent isolation of much of the timber land means that timber purchasers need longer-than-average lead times to plan operations, stage equipment, set up camps, and construct roads prior to beginning harvest.

A combination of projected harvest and projected demand is used to estimate the volume needed to maintain an even-flow timber sale program. As purchasers harvest timber, they deplete the volume under contract. Timber harvest is then planned and offered by the agency as sales that give the industry

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the opportunity to replace this volume and build or maintain their working inventory. Although there will be variation for practical reasons from year to year, in the long-run over both the high points and low points of the market cycle, the volume harvested will equal the timber volume sold, excluding cancelled sales.

The goal for Pool 3, volume under contract, is to maintain timber volume at approximately three times the amount of annual projected harvest. This allows the purchasers to have a continuous supply of timber volume available for harvest so they can plan their operations and be flexible to allow for weather conditions and market fluctuations.

Table A-2
Accomplishments in Gate System and Timber Pools (MMBF)

Pipeline Pool Volume	2009 Goal	FY 09 (as of 02/02/09)
Pool 1 Volume Under Analysis (Gate 1 and 2)	326 ¹	460
Pool 2 Volume Available for Sale (Gate 3, Gate 4 and Gate 5)	94 ²	44 ³
Pool 3 Volume Under Contract (Gate 6)	217 ⁴	97 ⁵

¹The goal for volume under analysis is approximately 4.5 times the projected harvest for the current year (72.4 MMBF for 2009 based on expanded lumber scenario). Volume under analysis includes all volume in projects from the Notice of Intent through completion of the environmental analysis for sales planned.

²The goal for volume available for sale is to have at least 1.3 times the projected harvest for the current year (72.4 MMBF) in sales that have approved NEPA and completion of timber sale preparation.

³As of the date in the table, this is the estimated volume that is expected to appraise positive and is not slated for multiple small sales over a period of years. Volume that appraises deficit can not be offered since it currently appraises deficit (2008 Appropriations Bill P.L. 110-161, H. Rept. 110-497, Sec. 411). Some projects (75 mmbf) will have small sales offered first and the total volume from these projects will not be available this year. As a result, only 19% of the NEPA-cleared Pool 2 volume (232 mmbf) is readily available for sale. This figure also includes volume under litigation – see Table A-3.

⁴The goal for volume under contract is for purchasers to have 3 times the volume under contract as projected for harvest for the current year (72.4 MMBF).

⁵Estimated volume under contract available for harvest from latest report 12/08 (not including timber enjoined from harvest or sales that have had mutual cancellation requests granted).

How Appeals and Litigation Affect the Timber Sale Program

Timber harvest projects require site-specific environmental analysis that usually is documented in an environmental assessment (EA) or an environmental impact statement (EIS). The public is notified of the analysis and is provided the opportunity to comment on proposals and file an appeal on

decisions. The administrative appeal process for most timber harvest projects takes up to 105 days before implementation to occur.

When decisions are appealed and affirmed through the administrative appeal process, the project can still be litigated. Litigation can be a lengthy process. Although litigation does not preclude offering timber for sale, the Forest Service and potential purchasers are often reluctant to enter into a contract where the outcome is uncertain. Recently, sales were enjoined from harvest after the contracts were awarded. The outcome of litigation affects the Forest’s ability to provide a reliable timber supply.

Table A-3
Timber Volume Involved in Appeals and/or Litigation ¹

Timber volume with decision reversed on appeals ²	0 MMBF
Timber volume involved with litigation	41.7 MMBF

¹ As of March 2009.

² Decision overturned during internal review. Does not include volume in decisions currently in the appeal period or undergoing an appeal review.

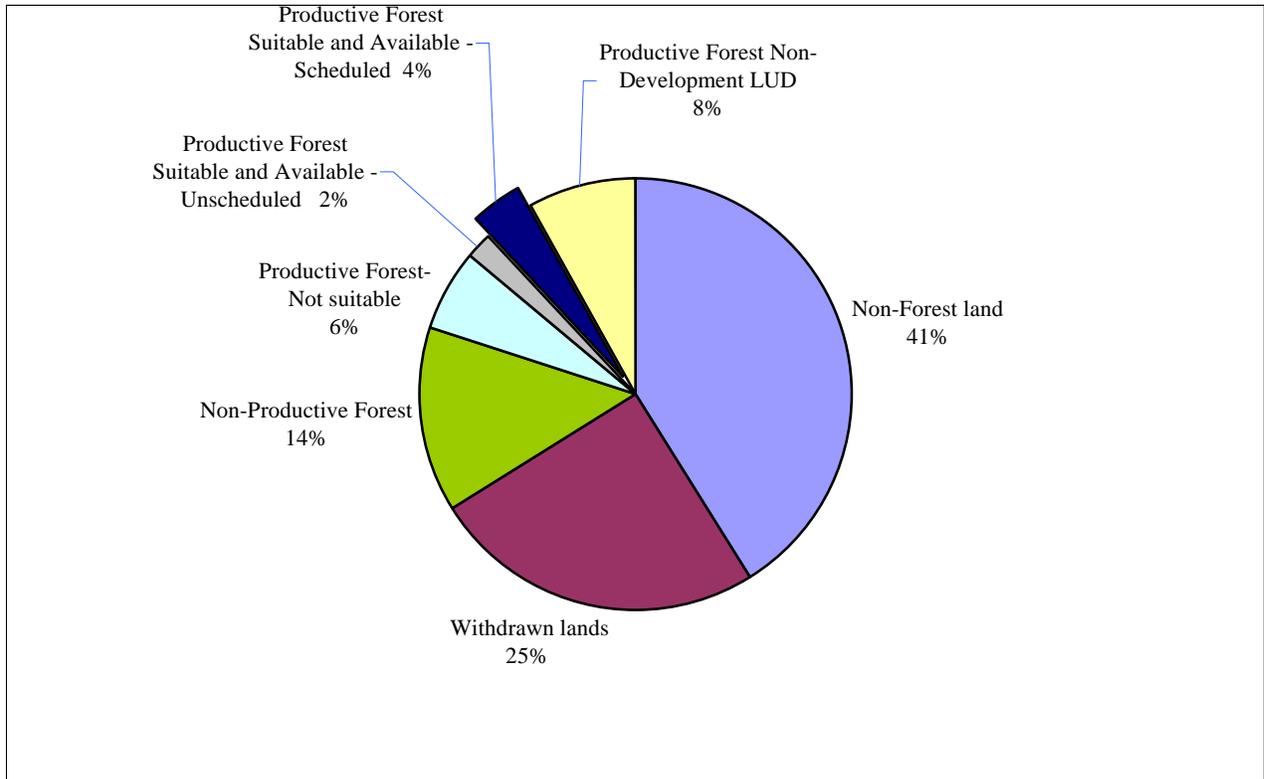
How Does The Forest Service Decide Where Timber Harvest Projects Should Be Located?

The location of timber sale projects is based first on the land allocation decisions in the Forest Plan. Under the Forest Plan, lands designated for possible timber harvest are in the development land use designations (LUDs), primarily the Timber Production, Modified Landscape, and Scenic Viewshed LUDs.

The second consideration is the suitability of the land for timber production. Many acres within the development LUDs are not suitable for timber production due to poor soils or steep slopes. The process for determining the suitability of the land is found in the 2008 Forest Plan Amendment, Appendix A. Figure A-2 depicts the classification of all the lands within the Tongass National Forest. Four percent of the Tongass land base, the suitable, available and scheduled forest land, provides the land base for the allowable sale quantity of 267 MMBF per year. Under the 2008 Forest Plan, the remainder of the land, approximately 96 percent or 663,000 acres, is not physically suitable, does not allow timber harvest, or is not scheduled.

Timber Resource Land Suitability

Figure A-2
2008 Forest Plan Timber Resource Suitability Analysis



Non-Forest land – Land that has never supported forests, e.g. muskeg, rock, ice, etc.

Withdrawn Lands – Lands designated by Congress, the Secretary of Agriculture, or Chief for purposes that preclude timber harvest, e.g. Wilderness Areas.

Non-productive Forest – Forest land not capable of producing commercial wood on a sustained yield basis.

Productive Forest, Not suitable, Physical Attributes – Forest land unsuitable for timber due to physical attributes (steep slopes, soils, etc.) and/or inadequate information to ensure restocking of trees within five years of final harvest.

Productive Forest, Not Suitable, Non-development LUD – Productive forest lands where timber production is not allowed due to Forest Plan land use designation, e.g. Semi-Remote Recreation, Old-growth Habitat, etc.

Productive Forest, Suitable and Available, Scheduled – Forest land that meets all the criteria for timber production suitability and is available and is scheduled by the Forest Plan over the planning horizon.

Productive Forest Suitable and Available Unscheduled – Forest land that meets all the criteria for timber production suitability, is available for harvest, however was not scheduled in the Forest Plan model for harvest includes the model implementation reduction factor (MIRF) acreage of 226, 000 acres.

District-Level The Tongass National Forest is divided into ten ranger districts. As described in the 2008 Forest Plan Amendment ROD, under the Timber Sale

Program Adaptive Management Strategy, the timber sale program will be implemented in three phases as determined by actual timber harvest levels. For current planning and scheduling purposes, the Forest will operate on the Phase 1 portion of the suitable land base, capable of supporting a sustained harvest of 150 MMBF annually. Personal use of timber, micro sales, salvage sales, small commercial timber sales generally less than one MMBF, young-growth management projects, and the roads associated with these activities, would be allowed in development LUDs outside of the Phase 1 portion of the ASQ land base.

The Forest Supervisor for the Tongass National Forest is responsible for the overall management of the Forest's timber sale program. Included within these responsibilities is making the determination on the amount of timber volume to be made available to industry. Whether or not sufficient funding is appropriated to attain the program is the responsibility of the Congress and the President.

District Rangers develop a timber sale plan of potential timber harvest projects. The goal of the plan is to attain the targeted offer level for the current year, based on the estimated annual market demand, and to develop a timber program for several years of the planning cycle. The offer level for the current year is based, to the extent possible, on the forecasted annual market demand. Actual demand may fluctuate from year to year due to short-term market fluctuations. Actual offer levels vary year to year depending on several factors, including volume in Gates 2 through 3, and current market conditions.

The District Ranger is responsible for identifying and recommending the project areas for the 5-Year Timber Sale Plan. The Ranger's role is to develop and recommend to the Forest Supervisor timber harvest projects that meet Forest Plan goals and objectives. Districts work on various timber sale projects simultaneously, resulting in continual movement of projects through the stages of the timber program pipeline. This schedule allows the necessary time to complete preliminary analysis, resource inventories, environmental documentation, field layout preparations and permit acquisition, appraisal of timber resource values, advertisement of sale characteristics for potential bidders, bid opening, and physical award of the timber sale. Project delays through the completion of Gate 2 attributable to legal injunctions and litigation have affected the offer level in recent years. Once all of the Rangers' recommendations are made and compiled into a consolidated schedule, the Forest Supervisor is responsible for the review and approval of the final timber sale plan and prioritization of projects as necessary.

Considerations the District Ranger takes into account for each project include:

- If the project area contains a sufficient number of suitable timber production acres allocated to development land use designations. Consideration includes if the timber volume being considered for harvest can be achieved while meeting Forest Plan goals, objectives, and standards and guidelines.

Appendix A

- Other resource uses and potential future uses of the area and of adjacent areas and of non-National Forest System lands.
- Areas where the investment necessary for project infrastructure (roads, bridges, etc) is achievable with the estimated value of timber volume in the project area. Where infrastructure already exists, the project would allow any maintenance and upgrade of the facilities necessary for removal of timber volume.
- Areas where investments for the project coincide with long-term management based on Forest Plan direction.

The implementation of the sales on the timber sale plan depends in part on the final budget appropriation to the agency. In the event insufficient budget is allocated, or resolution of pending litigation or other factors delay planned sales, timber sale projects are selected and implemented on a priority basis. Generally, the higher-priority projects include sales where investments such as road networks, camps or log transfer facilities have already been established or where land management status is not under dispute. The distribution of sales across the Tongass is also taken into account to distribute the effects of sales and to provide sales in proximity to timber processing facilities. Timber sale projects scheduled for the current year that are not implemented, or the remaining volume of projects that are only partially implemented, are shifted to future years in the plan. The sale plan becomes very dynamic in nature due to the number of influences on each district.

Conclusion

There is a long legislative recognition that timber harvest is one of the appropriate activities on national forests, starting with the founding legislation for national forests in 1897. The Organic Administration Act provides that national forests may be established “*to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of the citizens of the United States.*”

Congress’s policy for national forests, as stated in the Multiple-Use Sustained Yield Act of 1960, is “the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes.” Accordingly, Congress has authorized the Secretary of Agriculture to sell trees and forest products from the national forests “at no less than appraised value.” The National Forest Management Act directs that forest plans shall “provide for multiple use and sustained yield, and in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife, fish and wilderness.” ANLICA provided for timber harvest from the Tongass as well as other uses such as subsistence. Effects on subsistence resources from timber harvest Tongass-wide are projected to have few differences based on the sequence in which areas are harvested. Because of the multiple use

mandate and other requirements of the laws, these effects to subsistence are necessary, consistent with sound management of public lands.

In addition to nationwide statutes, Section 101 of the Tongass Timber Reform Act directs the Forest Service to seek to meet market demand for timber from the Tongass, subject to certain qualifications. It is the goal of the Tongass National Forest to provide an even-flow of timber on a sustained-yield basis and in an economically efficient manner. The amount of timber offered for sale each year is based on the objective of offering enough volume for sale to meet the projected annual demand. That annual demand projection starts with installed mill capacity, and then looks to industry rate of capacity utilization under different market scenarios, the volume under contract, and a number of other factors, including anticipated harvest and the range of expected timber purchases.

As described by Morse (April 2000), in terms of short-term economic consequences, oversupplying the market is less damaging than undersupplying it. If more timber is offered than purchased in a given year, the unsold volume is still available for re-offer in future years. The unsold volume would have no environmental effects because it would not be harvested. Conversely, a short fall in the supply of timber can be financially devastating to the industry.

References

- Alexander, S. 2008. Tongass National Forest Timber Sale Procedures: Using Updated Information about Market Demand to Schedule FY 2006 Timber Offerings. USDA Forest Service Region 10, Juneau AK. 10 p. On file with: Regional Economist, Alaska Region, PO Box 21628, Juneau AK 99802.
- Brackley, A.M.; Rojas, T.D.; Haynes, R.W. 2006. Timber products output and timber harvests in Alaska: projections for 2005-25. Gen. Tech. Rep. PNW-GTR-677. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 33 p.
- Brackley, A.M. and Haynes, R.W. 2008. Timber Products Output and Timber Harvests in Alaska: An Addendum. Res. Note PNW-RN-559. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.
- Brooks, D.J.; Haynes, R.W. 1997. Timber products output and timber harvests in Alaska: projections for 1997-2010. Gen. Tech. Rep. PNW-GTR-409. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 17 p.
- Morse, K.S. 2000a. Responding to the Market Demand for Tongass Timber: Using Adaptive Management to Implement Sec. 101 of the 1990 Tongass Timber Reform Act. April 2000. Manag. Bull. R10-MB-413. Juneau, AK: U.S. Department of Agriculture, Forest Service, Alaska Region. 43 p.
- Morse, K.S. 2000b. Tongass National Forest timber sale procedures: Using Information About Market Demand to Schedule FY2001 Timber Sale Offerings. October 2000. On file with: Regional Economist, Ecosystem Planning. Juneau, AK: U.S. Department of Agriculture, Forest Service, Alaska Region. 17 p.
- USDA Forest Service, 2008a, Forest Plan Amendment Record of Decision, January 2008.
- USDA Forest Service, 2008b, Forest Plan, January 2008.
- USDA Forest Service, 2008, Forest Plan Amendment Final Environmental Impact Statement, January 2008.
- USDA Forest Service. 2003. Supplemental Environmental Impact Statement. Juneau, Alaska: U.S. Department of Agriculture, Forest Service, Alaska Region, Tongass National Forest. R10-MB-481a.

Appendix B

Comments and Responses

Appendix B

Response to Comments

Introduction

Appendix B includes responses to comments received for the Navy Timber Sale Draft Environmental Impact Statement (Draft EIS).

Analysis and Incorporation of Public Comment

Several agencies, organizations, and individuals submitted written comments on the Navy Timber Sale Draft EIS. These comments are included in this appendix.

Comments fell into two broad categories:

- 1) Those within the scope of the project and
- 2) Those outside the scope of the project.

Those comments within the scope of this project have been incorporated into the Final EIS. Some comments ask for clarification or additional information in the Final EIS. Other comments requested certain information be considered, requested modification to an alternative, or suggested a new alternative altogether. Many comments are addressed through existing Forest Plan direction and are not incorporated into the Final EIS.

Those comments outside the scope of this project have not been incorporated into the Final EIS. Some comments disagreed with the Forest Plan and other regulations decided at a different level, which makes them beyond the scope of this document. Comments that involve issues beyond the analysis area or speculation that does not involve reasonably foreseeable future projects are also beyond the scope of this document.

All comments on the Draft EIS were read and analyzed. Individual comments within each letter and the corresponding Forest Service response are numbered to facilitate analysis and response.

Letters Received from Individuals, Organizations, and Agencies

The following list includes all individuals, organizations, and agencies that the Forest Service received comments from during the 45-day comment period following the publication of the Navy Timber Sale Draft EIS. This document includes the Forest Service response to the issues addressed in the public comments.

Comment letters have been annotated on the right hand margin with a vertical line with an associated comment acronym and a number. Responses to these comments are identified with a corresponding acronym and number in the Forest

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Service Response section (see "Response Page" in table below) following the letter. For example, response "ACMP-1" would respond to the first issue identified in the Alaska Coastal Management Program letter.

Name	Organization/Comment Notation	City	State	Letter page	Response page
Joe Donohue	Alaska State Department of Natural Resources Division of Coastal and Ocean Management (ACMP)	Juneau	AK	B-3	B-26
Karin McCoy	Alaska State Department of Fish & Game (ADF&G)	Juneau	AK	B-27	B-46
Christine Reichgott	US Environmental Protection Agency (EPA)	Seattle	WA	B-52	B-56
Glen Ith	Individual (GI)	Petersburg	AK	B-58	B-62
James Balsiger	National Marine Fisheries Service (NMFS)	Juneau		B-65	B-69
B. Sachau	Individual (BS)	Florham Pk	NJ	B-70	B-72
Buck Lindekugel	Southeast Alaska Conservation Council (SEACC)	Juneau	AK	B-74	B-81
Michelle Metz	Sealaska Corporation (SC)	Juneau	AK	B-85	B-86
Paul Olson, et. al.	Sitka Conservation Society et al (SCS)	Sitka	AK	B-87	B-150
Karen Hardigg	The Wilderness Society (TWS)	Anchorage	AK	B-184	B-191
Pamela Bergmann	US Department of Interior (USDI)	Anchorage	AK	B-194	B-196
George Woodbury	Individual (GW)	Wrangell	AK	B-197	B-203

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF COASTAL AND OCEAN MANAGEMENT

SARAH PALIN, GOVERNOR

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January 14, 2008

Mr. Forrest Cole
Forest Supervisor
U.S. Forest Service – Alaska Region
Tongass National Forest
648 Mission Street
Ketchikan, Alaska 99901

Dear Mr. Cole:

**Subject: NEPA Scoping & Preliminary ACMP Consistency Review -
Proposed Response
Navy Timber Sale Draft EIS
State I.D. No. AK 0712-01J**

The Division of Coastal and Ocean Management (DCOM) is currently coordinating the State's review of the U.S. Forest Service's "*Navy Timber Sale Draft Environmental Impact Statement*" for NEPA scoping and preliminary ACMP consistency comments review of the proposed activity under the process described in Section 204, (A)(2) of the "*Memorandum of Understanding between the State of Alaska and the USDA Forest Service on Coastal Zone Management Act/Alaska Coastal Management Program Consistency Reviews*".

Based on an evaluation of your project by the Alaska Departments of Environmental Conservation and Natural Resources, the affected coastal resource district and the general public, DCOM is passing along NEPA scoping comments and preliminary ACMP consistency comments for the "*Navy Timber Sale Draft Environmental Impact Statement*" and your development of a final Environmental Impact Statement for this Federal activity.

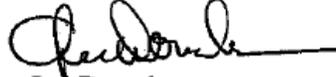
This is *not* the final ACMP consistency response for this particular Federal activity. The project may be the subject of a full public interest ACMP consistency review at a future date.

"Develop, Conserve, and Enhance Natural Resources for Present and Future Alaskans."

Appendix B

By copy of this letter, I am informing the U.S. Army Corps of Engineers and State review participants of DCOM's proposed finding. If you have any questions, please contact me at 907-465-4664 or email joe.donohue@alaska.gov.

Sincerely,



Joe Donohue
ACMP Project Specialist

Attachments:
Comments

Enclosure

cc: Kevin Hanley – ADEC, Juneau *
Mark Fink - ADFG, Anchorage *
Karin McCoy - ADFG, Wildlife, Douglas *
Jim Anderson – ADNR/DMLW, Juneau *
Ed Collazzi – ADNR/DMLW, Juneau *
Mike Curran – ADNR/Forestry, Ketchikan *
Jim Cariello - ADNR/OHMP, Petersburg *
Claire Batac – ADNR/DCOM, Juneau *
Margie Goatley - ADNR/SHPO, Anchorage*
Andy Hughes – ADOT/PF, Juneau *
Carol Rushmore - Coastal District, Wrangell *
Frank Roberts - USFS, Wrangell RD, Wrangell
Chris Meade - USEPA, Juneau *
Cindy Hartmann - NMFS, Juneau *

**ALASKA COASTAL MANAGEMENT PROGRAM
PROPOSED CONSISTENCY RESPONSE
CONCURRENCE**

DATE ISSUED: January 14, 2008

PROJECT TITLE: Navy Timber Sale Draft EIS - NEPA Scoping & Preliminary ACMP
Consistency Review - Proposed Response

STATE ID. NO.: AK 0712-01J

AFFECTED COASTAL RESOURCE DISTRICT: Wrangell

APPLICANT: U.S. Forest Service - Wrangell RD / Mr. Frank Roberts

DESCRIPTION OF PROJECT SUBJECT TO REVIEW:

The following is taken directly from the Summary section of the DEIS sent to DCOM by the Wrangell District Ranger:

"Introduction

The Forest Service prepared this Draft Environmental Impact Statement (DEIS) to address the potential effects of timber harvest in the Navy project area in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations.

Project Area

The Navy project is located on central Etolin Island approximately 22 air miles southwest of Wrangell, Alaska. The project area encompasses approximately 77,500 acres of National Forest System (NFS) land. There are approximately 14,000 acres considered suitable and available for timber management. The project area is within portions of Value Comparison Units (VCUs) 4640, 4650, 4660, 4670, and 4680. VCUs are comparable to large watersheds, and generally follow major watershed divides.

Proposed Action

A "Proposed Action" is defined early in the project-level planning process. This serves as a starting point for the IDT, and gives the public and other agencies specific information on which to focus comments. Using these comments and information for preliminary analysis, the IDT develops alternatives to the Proposed Action.

The Proposed Action for the Navy project is to harvest approximately 61.7 million board feet (MMBF) from approximately 4,700 acres of NFS land on Etolin Island in one or more offerings. This would require about 18 miles of new NFS road construction and reconstruction; and 8.4 miles of temporary road construction. The Proposed Action includes a non-significant amendment to the Forest Plan to modify the boundaries of the Anita, Burnett, Mosman, and Quiet small old growth reserves (small OGRs). Timber harvested would be hauled to Burnett Inlet, near Navy

Appendix B

Creek. For this analysis, harvest is expected to begin in 2008. the Proposed Action is Alternative B.

Purpose and Need

The Purpose and Need for this project is to:

- Manage suitable timber lands to achieve goals and objectives in the 1997 Forest Plan, as amended, to accomplish the desired conditions prescribed for the Land Use Designations (LUDs);
- Assist in providing a continuous wood supply to meet society's needs; and
- Contribute to the job market and the overall economy of Southeast Alaska.

Decisions to be Made

Based on the environmental analysis in this DEIS, the Tongass National Forest Supervisor will decide whether and how to make timber available from the Navy project area in accordance with the Forest Plan goals, objectives, and desired conditions. This decision will include:

- The location, design, and scheduling of timber harvest road construction and reconstruction, LFTs, and silviculture practices;
- The estimated timber volume available from the project area, and the number and size of the individual timber sales;
- Access management measures on proposed roads and LTFs;
- Mitigation measures and monitoring requirements;
- Whether there may be a significant possibility of a significant restriction on subsistence uses; and
- Whether any changes in small OGRs should be made, and approved as anon-significant amendment to the Forest Plan."

SCOPE OF PROJECT TO BE REVIEWED:

The scope of these concurrent NEPA scoping and preliminary ACMP consistency comment reviews includes all information, possible alternatives and their descriptions, and procedural decisions that are discussed within the "*Navy Timber Sale Area Draft Environmental Impact Statement*", as written and distributed by the U. S. Forest Service (USFS).

Activities related to development of log transfer facilities (LTF) as a direct result of this DEIS are not within the scope of this preliminary consistency exercise. New proposed LTFs or established transfer facilities that must undergo significant modifications to be used in future timber harvest activities will require their own separate full public interest ACMP consistency review.

PRELIMINARY CONSISTENCY STATEMENT:

Based on an evaluation of your project by the Alaska Department of Natural Resources' – Division of Mining, Land and Water (DMLW), and Office of Habitat Management and Permitting (OHMP), and statewide coastal resource districts, the State of Alaska preliminarily proposes to concur with the ACMP consistency determination submitted by the U.S. forest Service, Wrangell Ranger District.

COMMENTS RECEIVED:

DCOM received comments from the following:

- Alaska Department of Environmental Conservation , Division of Water (NEPA)
- Alaska Department of Natural resources, Office of Habitat Management and Permitting (ACMP and NEPA)
- Alaska Department of Fish and Game - Division of Wildlife Conservation (NEPA)
- Sealaska Corporation

Copies of each of these comment documents are included as attachments to this response to the “Navy Timber Sale DEIS”. The ACMP comments provided by the Office of Habitat Management and Permitting are reproduced at the end of this document.

ADVISORIES:

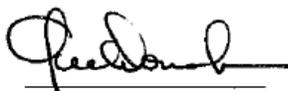
This consistency response may include reference to specific laws and regulations, but this in no way precludes an applicant’s responsibility to comply with all other applicable State and federal laws and regulations.

This consistency response is only for the project as described. If, after issuance of a final consistency response, the applicant proposes any changes to the approved project, including its intended use, prior to or during its siting, construction, or operation, the applicant must contact this office immediately to determine if further review and approval of the modifications to the project is necessary. Changes may require amendments to the State authorizations listed in this response, or may require additional authorizations.

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

PROPOSED NEPA & PRELIMINARY ACMP CONSISTENCY RESPONSE PREPARED BY:

Joe Donohue – ACMP Project Specialist
Department of Natural Resources
Division of Coastal and Ocean Management
PO Box 111030
Juneau, Alaska 99811-1030
(907) 465-4664



Joe Donohue

Appendix B

ASSOCIATED ACMP CONSISTENCY COMMENTS

DEPARTMENT OF NATURAL RESOURCES - OFFICE OF HABITAT MANAGEMENT AND PERMITTING

ACMP Comments

With the exception of new LTF construction and instream work activities within fish bearing waters, per 11 AAC 112, the activities described in the DEIS are consistent with the Alaska Coastal Management Program under the terms of the Tongass National Forest General Consistency Determination (GCD) issued on December 4, 2006. However, the DEIS does not disclose whether “Linear Grading” road construction will be used. Linear Grading includes clearing, grubbing, excavation and embankment, bridge and culvert installation, pit development, end haul, seeding and fertilization, borrow excavation, and erosion control. The Linear Grading method has been implemented in recent timber sales roads projects over the past two years totaling about 35 miles of road:

- Scratchings Public Works Roads Project
- Tuxekan Island Roads
- Boundary Public Works Road Construction
- Skipping Cow Roads
- Skipping Cow Roads Project
- Lindenberg Timber Sale Roads
- Buckdance-Madder Roads Project

ACMP-1

Since the Linear Grading method does not require the construction of a ditch line and the use of cross drains, there is concern for an increased risk of sedimentation from road bed erosion and cut slope failures. Of particular concern is the use of this method of road construction on roads with grades exceeding 8 percent in close proximity to fish habitat. It should not be up to the contractor’s discretion whether or not to construct a ditch line and install cross drains. If this method of road construction is intended to be used in the project area, the impacts upon water quality and fish habitat should be addressed, particularly in areas of concern such as slide prone areas, steep slopes and full-bench construction segments. When unit cards contain statements such as “*A high amount of sediment is likely to enter the stream where the road is constructed in the RMA*” we are concerned that these road construction procedures are inadequate in protecting water quality and fish habitat. Of particular concern is the Navy Creek watershed which according to the DEIS (page 3-125), “*The watershed is characterized by a glacial U-shaped valley with steep walls and a high percentage of high hazard soils. Landslides are common throughout the watershed; a sediment risk assessment ranked the watershed high. With anadromous fish barriers approximately one mile upstream of the mouth of the main channel, it is still one of the highest fish producing streams on Etolin Island. Fish spawning and rearing habitat is limited, but critical, in the depositional stream segments present in the lower portions of the watershed*”. In addition, “*Alternative B proposes several stream crossings on lower Navy Creek and builds the 6556 Road above lower*

ACMP-2

Navy Lake on a hillside that has several natural landslides. The hillside of the Lower Lake is more stable than the hillside of the upper lake, but landslides are still a concern” (DEIS, page 3-132). Another area of concern is the Quiet Creek watershed which received the highest sediment risk assessment score of all Etolin watersheds due to the amount of high hazard soils present and a historic landslide has dammed the creek, creating a small lake.

It does not appear that this method of road construction meets or exceeds the requirements of the Alaska Forest Resources and Practices Act Regulations 11 AAC 95.295 (Road drainage):

11 AAC 95.295. Road drainage. (a) This section sets out the drainage standards that apply to a forest road.

(b) An operator shall minimize the erosion of a road bed, cut bank, and fill slope through the use of cross drains, ditches, relief culverts, bridges, water bars, diversion ditches, or other structures demonstrated to be effective. These drainage structures shall be installed at all natural drainages and must be spaced at least as frequently as set out in the following table:

SPACING OF DRAINAGE STRUCTURES (in feet)		
PERCENT OF GRADE	REGION I	REGION II AND III
0 to 2	Meet other standards of this section	
2 to 7	1,000	1,500
8 to 15	800	1,000
Over 15	600	800

More frequent drainage structure spacing or other drainage improvements must be used where site-specific conditions of peak flows or soil instability makes additional drainage structures necessary to prevent degradation of standing or surface water quality. Less frequent drainage spacing is permissible if the parent material of the roadway is not erodible, such as rock or gravel; the topography or other local conditions are not conducive to erosion; or the degradation of surface or standing waters is not likely to occur.

- (c) During road construction, an operator shall install the appropriate ditches, culverts, cross drains, drainage dips, water bars, and diversion ditches when the natural drainage is crossed with the roadbed material.
- (d) A road shall be outsloped or ditched on the uphill side.
- (e) In the event an incomplete road is left over the winter season or other extended period, an operator shall, before suspending operations, provide adequate interim drainage by outsloping or cross draining the road, or by the use of water bars and diversion ditches.
- (f) An operator shall to the extent feasible direct ditchline water away from unstable soils and surface waters, and onto vegetated areas.
- (g) To minimize sedimentation of standing and surface waters, marshes, and nonforested muskegs caused by drainage from road surfaces and ditches, an operator shall use measures such as settling basins, cross drains, or vegetated areas.
- (h) A relief culvert installed on a forest road must be at least 12 inches in diameter or the equivalent capacity, and be installed sloping toward the downslope edge of

Appendix B

the road at a minimum gradient of three percent.

- (i) A cross drain, relief culvert, or diversion ditch may not discharge onto erodible soil or over fill slopes unless adequate outfall protection is provided and slope stability is ensured.
- (j) A drainage structure must also comply with the directional and placement requirements of 11 AAC 95.305. (Eff. 6/10/93, Register 126; am 6/24/2004, Register 170)

We request the Forest Service explain how “Linear Grading” road construction standards meet or exceed, the Alaska Forest Resources and Practices Act Regulations 11 AAC 95.295.

ACMP-3

MEMORANDUM

State of Alaska
Department of Environmental Conservation

TO: Joe Donohue
Project Review Coordinator
DNR - DCOM

DATE: December 13, 2007

FILE NO: AK 0712-01JJ

THRU:

TELEPHONE NO: 465-5364

FROM: Kevin J. Hanley
Environmental Specialist
Division of Water

SUBJECT: Navy Timber Sale DEIS

The Department of Environmental Conservation has reviewed the Draft Environmental Impact Statement (DEIS) for the U.S. Forest Service's proposed Navy Timber Sale on Etohin Island. Specifically, this project proposes to harvest between 18.7 and 97.9 MMBF of timber from approximately 1,322 to 7,800 acres, and to construct up to 19.9 miles of new National Forest System (NFS) roads, 17.5 miles of temporary roads, and to reconstruct up to 3.5 miles of existing NFS roads, depending on alternative. Under all the action alternatives, the harvested timber volume would be hauled to the permitted log transfer facility (LTF) at Anita Bay where it will be loaded on barges. Under Alternative B, a new LTF would be constructed at the entrance to Burnett Inlet near Navy Creek. Under Alternative C, a new LTF would be constructed on Mosman Inlet at Cooney Cove. Both of these new LTFs are proposed to be barge facilities. In addition, under Alternative C, timber harvested in the Navy Lake Creek watershed would be yarded by helicopter directly to barges for processing.

The DEIS identified Alternative D as the Forest Service's preferred alternative for this project. This alternative proposes to harvest approximately 36 MMBF of timber from an estimated 2,514 acres, and would involve the construction of 5.0 miles of new NFS roads, 5.3 miles of temporary roads, and the reconstruction of 0.7 mile of existing road.

With the exception of new LTF construction and instream work activities within fish bearing waters, per 11 AAC 112, the activities described in the DEIS are consistent with the Alaska Coastal Management Program under the terms of the Tongass National Forest General Consistency Determination (GCD) issued on December 4, 2006. Timber harvest activities under the scope of this GCD meet or exceed the standards of the Alaska Forest Resources & Practices Act and Regulations. We offer the following comments which address both Clean Water Act Section 319 and NEPA concerns:

1. Alternatives

We were pleased to see the wide range of alternatives that were developed for this project, however, we have concerns regarding Alternatives B and C, which propose a substantial amount of harvest and road construction on potentially unstable slopes, many of which occur within high fish-producing watersheds. According to the DEIS (page 3-92), "*Alternative C poses the greatest risk with 580 acres of harvest on slopes greater than 72%, followed by Alternative B (420 acres).*" In comparison, "*Alternatives D and F have the fewest acres of harvest on slopes*

greater than 72% and would pose the least risk.” In addition, in terms of risk of road induced slope failures, the DEIS (page 3-93) states “*Alternative C poses the highest risk followed by Alternative B, E, and D. Alternative F has no roads proposed on slopes greater than 67%.*” Alternatives B and C also propose the greatest amount of new NFS road construction (16.9 and 19.9 miles, respectively) of all the action alternatives and, presumably, the highest number of new Class I and Class II stream crossings (the DEIS provides no information regarding the number of stream crossings by alternative).

ACMP-4

We are also concerned with any entry into the Navy Lake Creek watershed, particularly that which is proposed under Alternative B, which involves conventional clearcutting and 2.7 miles of road construction. According to the DEIS (page 3-125), “*The watershed is characterized by a glacial U-shaped valley with steep walls and a high percentage of high hazard soils. Landslides are common throughout the watershed; a sediment risk assessment ranked the watershed high. With anadromous fish barriers approximately one mile upstream of the mouth of the main channel, it is still one of the highest fish producing streams on Etolin Island. Fish spawning and rearing habitat is limited, but critical, in the depositional stream segments present in the lower portions of the watershed*” (emphasis added). In addition, “*Alternative B proposes several stream crossings on lower Navy Creek and builds the 6556 Road above lower Navy Lake on a hillside that has several natural landslides. The hillside of the Lower Lake is more stable than the hillside of the upper lake, but landslides are still a concern*” (DEIS, page 3-132).

ACMP-5

Consequently, given the concerns cited above, we strongly recommend against the selection of Alternatives B or C for the Record of Decision for this project, as both alternatives pose the highest risk of sedimentation and hydrologic impacts of all the action alternatives. Alternatives D and F, on the other hand, build the least amount of roads and have the lowest risk of sedimentation and, therefore, are acceptable. However, Alternative F is clearly the environmentally preferred action alternative, as it constructs no new NFS roads and harvests the fewest acres; therefore, it is also our preferred alternative.

ACMP-6

2. “Red” Pipes in the Pump Creek Watershed

Culverts classified as “red” in the Road Condition Survey are those that are known to be incapable of providing upstream fish passage. According to the DEIS (page 3-127), “*Pump Creek watershed has the most anadromous fish habitat (8.1 miles); and is one of the top fish producing streams on Etolin Island. It has a relatively high road density (1.2 mi/mi²), and 5 ‘red’ pipes, the most of any watershed on Etolin Island. More than a mile of habitat is impacted by these fish passage restrictions. Efforts are being made to prioritize and fix fish passage problems across the Tongass*” (emphasis added). Given that access to more than a mile of anadromous fish habitat has been blocked by these culverts, they should be given high priority for either replacement or removal in conjunction with the Navy Timber Sale, as the equipment necessary to complete this work will already be in the project area and would not require independent mobilization.

ACMP-7

3. Unit Cards

Soils resource concerns for slope stability, such as recommendations to drop settings, change harvest prescriptions, or modify unit boundaries to avoid unstable slopes, do not appear to be reflected on the unit card maps for several units. For example:

ACMP-8

Unit 18: The Soils narrative states *“Setting N29 contains slopes >72% mid slope. This setting has a high risk of mass movement; excluding the northern portion of the setting is recommended.”* However, this recommendation is not reflected on the unit card map, as the entire setting remains depicted.

Unit 54: The Soils narrative states *“This unit contains slopes >72%. The unit lies in the landslide initiation zone of 4 identifiable landslide tracts. Risk of additional mass movement is extremely high. Recommend dropping setting B110.”* However, this setting remains on the unit card map.

Unit 92: The Soils narrative states *“Spur road is located on slopes >72% directly upslope from Class III stream, recommend avoiding this location by accessing the unit from the southeast (extension of spur accessing Unit 91) and reconfiguring unit to avoid slopes >72%.”* However, as depicted on the unit card map, the spur remains in the original location (accessing the unit from the north) instead of the recommended location.

Unit 108: The Soils narrative states *“The unit contains a cliff with slopes >72%. Consider excluding this from unit and helicopter yard the upper slope.”* However, according to the Silviculture and Timber/Logging narratives, the entire unit is still prescribed for clearcutting with downhill cable and shovel yarding.

We assume that these recommendations will be incorporated in the Phase II unit cards following final layout, and recommend that they also be included on the unit card maps for the FEIS if feasible. Without doing so, it is difficult to determine if the concerns raised by the Soil Scientist have been properly mitigated.

Units 53 and 55 present significant concerns for slope stability. Specifically, the Soils narrative for Unit 53 states *“This unit contains slopes >72% in an area with historic landslide tracts. The risk of additional mass movement is high.”* Given this risk, we recommend deleting this unit from harvest consideration, particularly since it occurs directly upslope of Class II fish habitat. Similarly, the Soils narrative for Unit 55 states *“This unit contains slopes >72%. Layout backline of setting B107 to avoid slopes >85%. Two large historic landslides in this unit are indicative of landslide prone terrain.”* Because of this apparent slope instability, we recommend dropping this unit from harvest consideration as well.

3. Road Cards – Stream Crossings

Several of the proposed crossing structures on the following roads present concerns for road prism stability and fish passage. These include the following:

Road No. 51421: According to the road card, this road crosses a Class III stream at milepost 0.57 that has a gradient of 20-30%, a bankfull width of 8 feet, and a high bedload. However, the proposed crossing structure is identified as a 48-60 inch CMP (culvert). Given the width and gradient of this stream, and the indicated high bedload content, such a structure would appear to be incapable of efficiently accommodating bedload movement during high flows. Consequently,

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con't.

ACMP-8a

ACMP-9

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Joe Donohue

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December 13, 2007

we feel that a bridge rather than a culvert would be more appropriate for this crossing site, as it would better ensure the long-term stability of the road prism by allowing bedload to be transported downstream unimpeded.

Road No. 51561: At milepost 0.57, this road crosses a Class II stream with a gradient of 12% and a bankfull width of 4-6 feet. However, given the gradient at the crossing site, the proposed 48-60 inch culvert would be incapable of providing upstream fish passage. Since this road is proposed to be placed in storage upon completion of timber sale activities, we recommend that a log culvert (short log stringer bridge) be installed to ensure that fish passage is maintained. Such a structure would also minimize or avoid the instream work and associated sedimentation that would result from the installation and removal of a culvert.

Road No. 6555: This road crosses a Class II stream at milepost 1.19, where a 48-inch culvert is proposed. However, given the 8-10 foot bankfull width and the 13% gradient at this location, the proposed culvert would present a velocity barrier to upstream fish passage. Therefore, a temporary log stringer bridge should be installed to ensure that fish passage is maintained during the service life of the road (the road is proposed to be closed and put into storage upon completion of timber sale activities).

Road No. 6556: The same is true for the 40-60 inch CMP that is proposed for the Class II stream crossing at milepost 1.16 of this road, where the bankfull width is 5-9 feet, and the gradient is 10%. As with Road No. 6555, a temporary log stringer bridge should be installed at this location to ensure that fish passage is maintained (this road is also proposed to be closed and placed in storage after timber sale activities are complete).

We appreciate the opportunity to comment.

cc: Laura Eldred, ADEC
Jim Cariello, ADNR/OHMP
Al Ott, ADNR/OHMP
Richard Enriquez, USF&WS
Peter Contreras, USEPA
Cindy Hartmann, NMFS
Frank Roberts, USFS
Mark Hummel, USFS

ACMP-9,
con't.



MEMORANDUM

STATE OF ALASKA

Department of Natural Resources
Office of Habitat Management and Permitting

TO: Joe Donohue
ACMP Project Specialist

DATE: January 4, 2008

FILE NO: AK 0712-01J

THRU:

SUBJECT: Navy Timber Sale

FROM: Jim Cariello
Area Manager

TELEPHONE NO: 772-5224

The Department of Natural Resources Office of Habitat Management and Permitting (OHMP) has reviewed the Draft Environmental Impact Statement (DEIS) for the U.S. Forest Service's proposed Navy Timber Sale on Etolin Island. Specifically, this project proposes to harvest between 18.7 and 97.9 MMBF of timber from about 1,322 to 7,800 acres, and to construct up to 19.9 miles of new National Forest System (NFS) roads, 17.5 miles of temporary roads, and to reconstruct up to 3.5 miles of existing NFS roads, depending on the alternative. Under all the action alternatives, the harvested timber volume would be hauled to the permitted log transfer facility (LTF) at Anita Bay where it will be loaded on barges. Under Alternative B, a new LTF would be constructed at the entrance to Burnett Inlet near Navy Creek. Under Alternative C, a new LTF would be constructed on Mosman Inlet at Cooney Cove. Both of these new LTF's are proposed to be barge facilities. In addition, under Alternative C, timber harvested in the Navy Lake Creek watershed would be yarded by helicopter directly to barges for processing.

The DEIS identified Alternative D as the Forest Service's preferred alternative for this project. This alternative proposes to harvest about 36 MMBF of timber from an estimated 2,514 acres, and would involve the construction of 5.0 miles of new NFS roads, 5.3 miles of temporary roads, and the reconstruction of 0.7 mile of existing road.

We offer the following comments which address both ACMP and NEPA concerns:

ACMP Comments

With the exception of new LTF construction and instream work activities within fish bearing waters, per 11 AAC 112, the activities described in the DEIS are consistent with the Alaska Coastal Management Program under the terms of the Tongass National Forest General Consistency Determination (GCD) issued on December 4, 2006. However, the DEIS does not disclose whether "Linear Grading" road construction will be used. Linear Grading includes clearing, grubbing, excavation and embankment, bridge and culvert installation, pit development,

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end haul, seeding and fertilization, borrow excavation, and erosion control. The Linear Grading method has been implemented in recent timber sales roads projects over the past two years totaling about 35 miles of road:

- Scratchings Public Works Roads Project
- Tuxekan Island Roads
- Boundary Public Works Road Construction
- Skipping Cow Roads
- Skipping Cow Roads Project
- Lindenberg Timber Sale Roads
- Buckdance-Madder Roads Project

Since the Linear Grading method does not require the construction of a ditch line and the use of cross drains, there is concern for an increased risk of sedimentation from road bed erosion and cut slope failures. Of particular concern is the use of this method of road construction on roads with grades exceeding 8 percent in close proximity to fish habitat. It should not be up to the contractor's discretion whether or not to construct a ditch line and install cross drains. If this method of road construction is intended to be used in the project area, the impacts upon water quality and fish habitat should be addressed, particularly in areas of concern such as slide prone areas, steep slopes and full-bench construction segments. When unit cards contain statements such as "*A high amount of sediment is likely to enter the stream where the road is constructed in the RMA*" we are concerned that these road construction procedures are inadequate in protecting water quality and fish habitat. Of particular concern is the Navy Creek watershed which according to the DEIS (page 3-125), "*The watershed is characterized by a glacial U-shaped valley with steep walls and a high percentage of high hazard soils. Landslides are common throughout the watershed; a sediment risk assessment ranked the watershed high. With anadromous fish barriers approximately one mile upstream of the mouth of the main channel, it is still one of the highest fish producing streams on Etolin Island. Fish spawning and rearing habitat is limited, but critical, in the depositional stream segments present in the lower portions of the watershed*". In addition, "*Alternative B proposes several stream crossings on lower Navy Creek and builds the 6556 Road above lower Navy Lake on a hillside that has several natural landslides. The hillside of the Lower Lake is more stable than the hillside of the upper lake, but landslides are still a concern*" (DEIS, page 3-132). Another area of concern is the Quiet Creek watershed which received the highest sediment risk assessment score of all Etolin watersheds due to the amount of high hazard soils present and a historic landslide has dammed the creek, creating a small lake.

It does not appear that this method of road construction meets or exceeds the requirements of the Alaska Forest Resources and Practices Act Regulations 11 AAC 95.295 (Road drainage):

11 AAC 95.295. Road drainage. (a) This section sets out the drainage standards that apply to a forest road.

(b) An operator shall minimize the erosion of a road bed, cut bank, and fill slope through the use of cross drains, ditches, relief culverts, bridges, water bars, diversion ditches, or other structures demonstrated to be effective. These drainage structures shall be installed at all natural drainages and must be spaced at least as frequently as set out in the following table:

SPACING OF DRAINAGE STRUCTURES (in feet)		
PERCENT OF GRADE	REGION I	REGION II AND III

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0 to 2	Meet other standards of this section	
2 to 7	1,000	1,500
8 to 15	800	1,000
Over 15	600	800

More frequent drainage structure spacing or other drainage improvements must be used where site-specific conditions of peak flows or soil instability makes additional drainage structures necessary to prevent degradation of standing or surface water quality. Less frequent drainage spacing is permissible if the parent material of the roadway is not erodible, such as rock or gravel; the topography or other local conditions are not conducive to erosion; or the degradation of surface or standing waters is not likely to occur.

- (c) During road construction, an operator shall install the appropriate ditches, culverts, cross drains, drainage dips, water bars, and diversion ditches when the natural drainage is crossed with the roadbed material.
- (d) A road shall be outsloped or ditched on the uphill side.
- (e) In the event an incomplete road is left over the winter season or other extended period, an operator shall, before suspending operations, provide adequate interim drainage by outsloping or cross draining the road, or by the use of water bars and diversion ditches.
- (f) An operator shall to the extent feasible direct ditchline water away from unstable soils and surface waters, and onto vegetated areas.
- (g) To minimize sedimentation of standing and surface waters, marshes, and nonforested muskegs caused by drainage from road surfaces and ditches, an operator shall use measures such as settling basins, cross drains, or vegetated areas.
- (h) A relief culvert installed on a forest road must be at least 12 inches in diameter or the equivalent capacity, and be installed sloping toward the downslope edge of the road at a minimum gradient of three percent.
- (i) A cross drain, relief culvert, or diversion ditch may not discharge onto erodible soil or over fill slopes unless adequate outfall protection is provided and slope stability is ensured.
- (j) A drainage structure must also comply with the directional and placement requirements of 11 AAC 95.305. (Eff. 6/10/93, Register 126; am 6/24/2004, Register 170)

We request the Forest Service explain how “Linear Grading” road construction standards meet or exceed, the Alaska Forest Resources and Practices Act Regulations 11 AAC 95.295. **ACMP-11**

NEPA Comments

Watershed/Fisheries

It is difficult to adequately assess the impacts upon water quality and fish habitat since the DEIS does not contain a map of showing stream classes with units and roads. The Alternative maps depict streams however, the stream classes are not shown, making it impossible to clearly see the proximity of units and roads to anadromous and resident fish habitat. At a minimum, we recommend the addition of color coded stream classes to the Alternative maps in the FEIS.

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The DEIS does not provide information regarding the number of stream crossings by alternative. The TLMP Amendment DEIS recognized the potential risk of roads and stream crossings and included an estimate of the number of new stream crossings by alternative. It further states:

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“Roads pose the greatest risk to fish resources on the Tongass (Dunlap 1996), partly because they pose the largest risk of management-caused sediment input to streams (Reid and Dunne 1984, Furniss et al. 1991, Gomi et al. 2005, Hassan et al. 2005)... Increased sediment yield, including yields during road construction, road use during timber harvest activities, and lack of sufficient maintenance or proper closure following timber harvest activities, are all viewed as potential areas of risk for maintaining fish resources. Roads may also increase risk to fish movement due to blocked culverts. The number of road crossings of streams increases the risk of both adding sediment to streams and impeding fish passage (Class I and II streams)... An index of these risks to both added sediment from road crossings and impedance of fish passage is shown in Table 3.6-4.”

The FEIS should include a table showing number of stream crossings (by stream class) on both NFS and temporary road, for each alternative.

The DEIS recognizes the potential short-term increases in sediment from drainage structure installation and removal. Implementation of Best Management Practices (BMP's) described on the road cards are expected to maintain water quality and minimize impacts to fish habitat. With the recent use of Linear Grading road construction standards, we question whether BMP's will be fully implemented, particularly 14.8 – Measures to Minimize Surface Erosion and 14.9 – Drainage Control to Minimize Erosion and Sedimentation. Since timber sale contracts may extend four years or more, surface erosion from roads can produce chronic sources of sediment, particularly if they are used in fall and winter months. The 2007 Tongass Best Management Practices Monitoring trip included roads constructed under the new standards, however analysis has not yet been completed. We disagree with the statement on page 3-129 that “none of the alternatives are expected to result in significant direct, indirect, or cumulative impacts to watershed resources.”

ACMP-13

The Data Sources section on page 3-115 indicates fish habitat extent was updated with electro-shocking of streams within and around unit boundaries. The Memorandum of Understanding (MOU) between the USDA Forest Service Alaska Region and the State of Alaska Department of Natural Resources 04MU-111001-094, dated 6/25/2004, states the Forest Service shall: “Cooperate with ADNR-OHMP in updating and mapping of the *Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes* by providing nominations to the Catalog. The Forest Service maintains mapping of waters and attribute information in the Arc info Geographic Information Systems database. The Forest Service and ADNR-OHMP will share electronic information periodically to ensure each has current data.” We suggest that District hydrology and fisheries staff make arrangements with DNR-OHMP and ADFG to get updated fish habitat extent information into the Catalog. The ADF&G contact is J.D.Johnson (j.johnson@alaska.gov) and can be reached at 907-267-2337 to answer any questions concerning nomination procedures.

ACMP-14

Culverts that do not meet current fish passage standards are classified as “red culverts”. According to the DEIS (page 3-125,) there are a total of 12 red culverts in the project area. Though efforts are being made to prioritize and fix fish passage across the Tongass, the DEIS offers no commitment to fix these culverts while there is equipment mobilized on site. Pump Creek (106-22-10080) has the most anadromous fish habitat (8.1 miles) and is one of the top fish producing anadromous fish streams on Etolin Island. More than a mile of fish habitat is impacted by the 5 “red” culverts within

ACMP-15

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this watershed. The FEIS should include a commitment to correcting “red culverts” in conjunction with the Navy Timber Sale project.

↑
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Unit Cards

Stream numbers referenced in the narrative portion are not shown on the map, making it difficult to clearly see which stream is referenced. The channel type of streams within and adjacent to units are also not shown on the map or identified in the narrative. This information would be helpful to assess the stream characteristics and associated fish habitat which may be impacted. Slopes > 72% are not shown on the maps, though their presence is discussed in the narrative. In assessing potential impacts of harvest on these slopes, it would be useful to see their location in relation to streams within and adjacent to the unit.

ACMP-16

Unit Specific Concerns

Unit 11 – Prior to final layout verify upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter. ←ACMP-16a

Unit 12 - Prior to final layout verify upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter. ←ACMP-16b

Unit 13 - Prior to final layout verify upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter. ←ACMP-16c

Unit 14 - Prior to final layout verify upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter. ←ACMP-16d

Unit 18 – Prior to final layout verify upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter. The proposed location of the temporary road is questionable as the spur junction is located within the Class 1 riparian buffer. The landing location on the southeast side of setting N29 necessitates yarding through the Class I riparian buffer. Locate road alignment outside of the buffer or drop those cable settings and associated temporary road construction. ←ACMP-16e

Unit 21 - Prior to final layout verify upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter. The Unit is adjacent to Navy Lake, a Class II lake and there is a high probability that resident fish may use the tributaries within and adjacent to the unit for spawning, particularly the alluvial fan channel along the unit boundary. ←ACMP-16f

Unit 22 - Prior to final layout verify upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter. The Unit is adjacent to Navy Lake, a Class II lake and there is a high probability that resident fish may use the tributaries within and adjacent to the unit for spawning, particularly the alluvial fan channel along the unit boundary. ←ACMP-16g

Unit 31 – Road 51461 crosses an alluvial fan channel in setting M167. Locate road upstream of the alluvial channel. ←ACMP-16h

Unit 44 – Unit card states “A high amount of sediment is likely to enter the stream where the road is constructed in the RMA”. If the road can’t be relocated and constructed without adversely impacting the Class I/II stream, this unit should be dropped or harvested by helicopter only. ←ACMP-16i

Unit 47 - Prior to final layout verify upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter, particularly the alluvial fan channels. The junction of the temporary spur is located within the alluvial fan RMA. Locate the temporary spur where it will not encroach upon or bisect the alluvial fan. ←ACMP-16j

Units 53, 54, and 55 contain slopes >72% and historic landslide tracts. Due to slope instability we recommend deleting these units from all alternatives. ←ACMP-16k

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Unit 63 – Avoid crossing the alluvial fan with a road if possible or cross as high up on the fan as feasible. ←ACMP-16I

Unit 104 – Move road uphill, if possible, to avoid alluvial fan channel on north side of unit. ←ACMP-16m

Road Cards

Road 6547 – This road was located at the base of steep slopes to access units, which are mostly designated for downhill yarding. Of particular concern is the crossing at MP 2.938, which has been identified as an alluvial fan Class II stream crossing. | ACMP-17

Road 6545 extension – This temporary road (approximately 1.3 miles) will access units 103, 104 and 106 in Alternatives CDE&F. This road crosses several sensitive Class II streams, including an alluvial fan channel, yet there is no road card with descriptions of Fish/Watershed concerns. Why has this road been designated a temporary road? Of particular concern is the Class II crossing in Unit 106 and the Class II alluvial fan crossing on the northern boundary of Unit 104. The Quiet Creek watershed received the highest sediment risk assessment score of all Etolin watersheds due to the amount of high hazard soils present and a historic landslide has dammed the creek, creating a small lake. | ACMP-18

Road 51561 – At milepost 0.16, the road crosses a Class II stream with a gradient of 5% and a bankfull width of 2-6 feet. The 36” or smaller CMP proposed for this site would be incapable of providing upstream fish passage and may be exceeding the hydraulic capacity of the pipe. A Title 41 Concurrence Checklist will need to be completed for this structure prior to any instream work. | ACMP-19

Road 51561 - At milepost 0.57 the road crosses a Class II stream with a gradient of 12% and a bankfull width of 4-6 feet. The 48-60” CMP proposed for this site would be incapable of providing upstream fish passage. We recommend a short log stringer bridge for this site to ensure fish passage is maintained and to minimize sedimentation associated with the installation of the culvert. A Title 41 Concurrence Checklist will need to be completed for this structure prior to any instream work. | ACMP-20

Road 6546 - At milepost 2.44 the road crosses a Class II stream with a gradient of 10-15% and a bankfull width of 2-4 feet. A short bridge or 36” CMP is proposed for this site; however, if the road location can be moved up hill, the culvert may be located above fish habitat. Verify the upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter. Otherwise, we recommend a short log stringer bridge for this site to ensure fish passage is maintained and to minimize sedimentation associated with the installation of the culvert. A Title 41 Concurrence Checklist will need to be completed for this structure prior to any instream work. | ACMP-21

Road 6547 – The crossing at milepost 2.94 is an alluvial fan Class II stream crossing. Avoid crossing the alluvial fan with a road if possible, or cross as high up on the fan as feasible. A Title 41 Concurrence Checklist will need to be completed for this structure prior to any instream work. | ACMP-22

Road 6555 – At milepost 1.19, the road crosses a Class II stream, where a 48” CMP is proposed. With a stream gradient of 13% and a bankfull width of 8-10 feet, this structure would not be capable of providing fish passage. We recommend a log stringer bridge for this site to ensure fish passage is maintained and to minimize sedimentation associated with the installation of the culvert. A Title 41 Concurrence Checklist will need to be completed for this structure prior to any instream work. | ACMP-23

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Road 6556 – At milepost 0.72 the road crosses a Class II stream, where a 60” CMP or bridge is proposed. The stream gradient is 9-14% and bankfull width is 7-10 feet. However, if the road location can be moved up hill the culvert may be located above fish habitat. Verify the upper limit of fish habitat, preferably in the fall when juvenile fish may be moving further upstream to overwinter. Otherwise, we recommend a short log stringer bridge for this site to ensure fish passage is maintained and to minimize sedimentation associated with the installation of the culvert. A Title 41 Concurrence Checklist will need to be completed for this structure prior to any instream work.

ACMP-24

Road 6556 – At milepost 1.16, a 48-60’ CMP is proposed for a Class II stream crossing, where the stream gradient is 10% and the bankfull width is 5-9 feet. The structure proposed for this site would be incapable of providing upstream fish passage. We recommend a short log stringer bridge for this site to ensure fish passage is maintained and to minimize sedimentation associated with the installation of the culvert. A Title 41 Concurrence Checklist will need to be completed for this structure prior to any instream work.

ACMP-25

The following NEPA comments were received from the Alaska Department of Fish and Game:

Commercial Fisheries

The Mosman and Burnett Inlets area contains ten anadromous salmon streams that contribute to commercial fisheries. Pink salmon is the primary species returning to these systems, however coho and chum salmon are also produced. The average pink salmon peak escapement index count for these systems from 1998 to 2007 is approximately 114,000 pink salmon (the escapement index count is an index of escapement, it is not a measure of total escapement). Navy Creek (10622-10160), Flat Creek (10622-10060) and Mosman Creek East Head (10622-10080) are the largest contributors of pink salmon returns to the Mosman/Burnett area. The commercial purse seine fishery in statistical area 106-22 (Mosman/Burnett area) has harvested an average of 134,500 with a high of over 300,000 pink salmon from 1998 to 2007. An unknown amount of pink salmon returning to the Mosman/Burnett area is harvested in statistical area 106-20, the area immediately adjacent to 106-22. An average of 222,000 pink salmon has been harvested in this area from 1998 to 2007. In addition, unknown amounts of returns to the Mosman/Burnett area are also harvested in commercial purse seine and gillnet fisheries in Clarence Straits and Sumner Straits.

Sport Fish

We have reviewed the draft EIS and find that we have been provided with very little information regarding fish streams from the Wrangell Ranger District with which to use in commenting. It is our understanding that given the current range of alternatives, the timber sale may harvest between 18.7 and 97.9 MMBF of timber. The alternative’s harvests would be taken off of 1,322 to 7,800 acres, and to do this the projects would need to reconstruct some roads, build other temporary roads, and add to the existing FS road network on Etolin Island. Following the ACMP’s approach of commenting on the preferred alternative, we will assume now that Alternative D will stand, however if additions were significant, additional commenting would be called for.

ACMP-26

Etolin Island has hosted significant past timber production and the proposed Navy sale will extend timber harvest in the vicinity of older harvest areas. Depending on the selected alternative (in the future record of decision), this timber sale may open up new areas. Etolin Island also hosts a considerable number of wild stock salmon and resident species producing streams, although not all are highly productive. Additional fish are reared and released at several sites including releases of

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hatchery Chinook, coho, and chum salmon into Anita Bay, and summer-run coho and sockeye at the Burnett Inlet Hatchery, operated by Southern Southeast Regional Aquaculture Association (SSRAA). The current timber sale includes sale units spread across a number of watersheds that produce fish species targeted by sport, commercial, and possibly subsistence fishers. We have indications that Sport fishery activity levels may be light in these freshwaters. We base this on responses to the Statewide Harvest Survey, the recent freshwater guiding logbook program, staff contacts with area residents, and information requested from FS Guide Outfitter program. It is thought that many of the watersheds included in the timber sale require significant efforts to access, particularly when other more easily accessed sites may offer similar or better angling opportunities. However, smaller scale uses associated with other activities likely occurs by resident and nonresident visitors who seasonally visit this remote area by liveaboard boats. Some commercial operators are permitted in the area of this timber sale for kayaking and canoeing, but shoreline and freshwater use is likely very light at present. One operator advertises fishing in conjunction with kayak trips in areas immediately to the South of the Navy Timber Sale. Another commercial lodge/fishing operator is currently advertising guided saltwater fishing at their floating lodge which will be located at Etolin Island in the entrance to Burnett Inlet during August 2008. Past and existing saltwater sport fisheries occur in the waters adjacent to the timber sale that include guided and unguided anglers fishing for halibut, rockfish, Chinook and coho salmon. This includes boats from Wrangell, Thorn Bay, and Coffman Cove. Commercial fisheries are also prosecuted annually by area fishers in close proximity to watersheds proposed for timber sales, that already produce and contribute pink, chum, and coho salmon to the fisheries. Additionally, shellfish resources also exist within the inlets and around Etolin's shorelines.

The Navy Timber sale area encompasses several lakes, namely Navy, Burnett, and Kindergarten lakes. Navy Creek is listed in the Anadromous Waters Catalog (AWC) as supporting runs of Pink, Chum and Coho salmon, as well as having Dolly Varden and Steelhead. AWC and or other ADF&G files indicate cutthroat trout, steelhead/rainbow trout, and Dolly Varden either reside or pass into Navy Lake. Burnett Lake is known to have resident populations of cutthroat trout and Dolly Varden, and this watershed also is utilized by the Burnett Inlet Hatchery. However, with Kindergarten Lake, the only information we have received has been angling responses to the Statewide Harvest Survey that indicated catches of Cutthroat trout. Of the three significant lakes, only Kindergarten Lake is remaining in the area for the preferred alternative.

The sale also includes timber units in a number of class I and II watersheds. These watersheds produce salmon and other species, which are commercially important. In the Preferred alternative this will include timber units in Mirkwood Crk(106-22-10040), Logjam Crk (106-22-10060), Pump Crk (106-22-10080), and Wetbeck Crk (106-22-10100) watersheds at the head of Mosman Inlet. In nearby Burnett Inlet, units would be in Camp Crk (106-25-10140) and Detailer Crk (106-25-10148) watersheds. Other locations for the preferred alternative include Quiet Harbor's watershed (106-30-10040), and off of Anita Bay there are the Duckbill Crk (107-30-10760) and Fishtrap Crk (107-30-10810), and Anita Crk (no AWC listing) watersheds.

General NEPA Comments:

If no additions or deletions occurred to the preferred alternative then the timber sale would harvest approximately 36 MMBF, from 2,514 acres, requiring construction or reconstruction of 11 miles of roads. At present, Alternative D (Preferred) contains approximately 58 sale units of which many are in direct or close proximity to previously harvested units and roads. Previous harvesting activity have included significant harvests (up to 37.5%) of the Riparian Management Areas (RMA's) in some of the the significant watersheds listed above. Of the units associated with the preferred

↓ ACMP-27

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alternative, I reviewed 42 units associated with watersheds with greater fish production. Within these I noted that 25 units included slopes in excess of 72%, and at least 15 noted higher wind throw potentials or prescribed measures for windfirmness. Moreover, these characteristics often are clustered, such that many units in particular watersheds will have steep slopes, or windthrow considerations. Given that timber production’s negative impacts on fish habitats are strongly linked to transported sediments, the past activity and results (some landslides, relatively high and increasing road density, existing erosion features and problem culverts) might predict that future timbering without any additional impacts to fisheries will be a significant challenge. There are also additional risks of environmental degradation that can come about through accidental spills of fuel, such as the significant spill when a fuel truck overturned near Roosevelt Harbor on Zarembo Island.

↑ ACMP-27, con’t.
ACMP-28
ACMP-29

Additional timber production afforded by the selected alternative for the Navy project will further increase the road density, that may increase the risks of damage to fish bearing streams (class I and II streams) during construction and later with runoff bearing sediments. Road condition surveys have already indicated a large number of existing stream crossings in some watersheds, with relatively high incidence of documented erosion features. Additionally, there are already a number of “red” or problem culverts that require work. It will be important that road design, construction, and maintenance of existing and new roads ensure against sedimentation and erosion as well as to provide for fish passage. One question is whether the funding to decommission the many temporary roads is assured, and will decommissioning occur immediately following harvest to prevent temporary roads from creating longer-term problems. As fishery biologists we have recently seen and heard about how existing budgets preclude standard methods of road decommissioning and delay road closures. Additionally, best management practices will need to be carefully followed in the vicinity and headwaters of fish producing watersheds, where most timbering will occur, since transport of sediments are assured with the higher stream gradients.

ACMP-30
ACMP-31

Although we find that the current uses in the area appear very light, maybe due to the areas remoteness or economics, we cannot project future interest levels for sport fishing in these watersheds. However, in the process of locating fisheries information for our comments, we have found that beginning in 2008 a remote floating lodge is currently planning to be operating in lower Burnett Inlet. We can be certain that sustained production levels for salmon and other resident species, as well as the sustained watershed function will be important to all current and future users, and this does justify careful management.

ACMP-32

Specific comments:

We found that providing specific comments regarding the individual units to be difficult for a number of reasons that could have been avoided during preparation of the DEIS or the alternatives. These include:

- The distributed DEIS included maps that were of small scale and often did not include relevant information to allow for commenting on fisheries and fisheries habitat.
 - We eventually needed to request fish maps and alternative overlays, which resulted in hardcopied maps (not overlays) of differing scales so that proposed units could not be examined with reference to a base map details such as stream class, channel types, and of great importance, the presence of steep slopes.
- Unit cards provided in the DEIS did not include shading or other graphic indications of high risk slopes in, or adjacent to the units.
- Unit cards provided in the DEIS Appendix lacked relevant information such as stream channel classifications, watershed names, and Anadromous Waters Catalogue numbers.

ACMP-33
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- Anadromous stream numbers should have been applied to the watersheds identifiers throughout the DEIS. *(I have provided many of these numbers in the narrative)* | **ACMP-36**
- Basic fisheries information, such as the species present, and some information on the previous and current uses of those fish stocks would be valuable to all individuals reviewing the DEIS. | **ACMP-37**
- The DEIS should have been provided a somewhat comprehensive overview of the fisheries conducted in the local area that may be linked to production in waters included in the Navy timber sale. The fisheries valued by local residents and visitors include commercial, subsistence, and sport fisheries. | **ACMP-38**
- Since fish and marine invertebrates have been stated as generally providing a majority of Subsistence resource harvests, and the Forest Service is actively involved in Subsistence Management on Federal Waters, how does the Navy DEIS reflect this by only focusing on deer ? | **ACMP-39**
- Since Subsistence resources are stated as also including trout and char, this implies freshwater harvests may be needed or culturally significant. Wouldn't it follow that sustained harvests would functionally provide the basis or need for a subsistence opportunity. (i.e. if there are no fish, then logically why would an individual need Federal Managers to assure a continued opportunity ? Moreover, how has the Navy timber sale staff addressed and presented the risks to future subsistence use in any or all watersheds with this DEIS ? | **ACMP-40**
- Although Wrangell District project staff conducted fisheries sampling in a number of watersheds within the Navy sale area, it appears that AWC updates/nominations were not filed by staff. For future reference, Fisheries Resource Permits issued by Division of Sport Fish will stipulate that this occurs so field data is archived and useable. | **ACMP-41**

SUMMARY

The Navy Timber Sale DEIS does not adequately address potential impacts of new road construction with Linear Grading methods. Construction of roads with gradients greater than 8 percent, on steep unstable slopes, in close proximity to fish streams are of particular concern due to the potential for surface erosion and sediment entering streams. We are concerned that these road construction methods may not meet the standards of the Alaska Forest Resources and Practices Act Regulations and are inconsistent with the USFS Best Management Practices Handbook (FSH 2509.22).

ACMP-42

District hydrology and fisheries staff should make arrangements with DNR-OHMP and ADF&G to get updated fish habitat extent information into the Anadromous Waters catalog.

ACMP-43

The DEIS fails to make a commitment to restore fish passage at the 12 “red culverts” within the project area, which do not meet the current fish passage standard. In addition, we have concerns with the culvert sizing, structure type or stream crossing location at the following sites:

ACMP-44

Road 6545(extension)	MP unknown
Road 6546	MP 2.44
Road 6547	MP 2.95
Road 6555	MP 1.19
Road 6556	MP 0.72
Road 6556	MP 1.16
Road 6547	MP 2.938
Road 51561	MP 0.16
Road 51561	MP 0.57

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cc: Al Ott, DNR-OHMP
Kerry Howard, DNR-OHMP
Kevin Hanley, DEC
Doug Flemming, ADF&G
Rich Lowell, ADF&G
Troy Thynes, ADF&G

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Forest Service Response to Alaska State Department of Natural Resources Division of Coastal and Ocean Management (ACMP) Comments:

ACMP-1

Response: Linear grading is now disclosed in Chapter 2 under Items Common to All Alternatives and discussed in Chapter 3 under Transportation.

ACMP-2

Response: National Forest System roads will be designed for the use they are intended as outlined on the road cards to the specifications needed to support this use. Linear grading will be used for the construction of the National Forest System (NFS) roads in the Navy project.

Linear grading is a construction tool used to reduce survey and design costs. The result of a road constructed by linear grading on the Wrangell Ranger District is similar to other construction. Originally, the linear grading standard drawings did not contain ditches on a typical sidehill section. This has changed and now ditching is incorporated into linear grading construction. All streams receive adequate structures under the same specifications used traditionally on the Forest. All major structures (bridges and large culverts) are still surveyed and designed. The maximum allowable grades for the road have not changed. All best management practices apply.

In addition, almost 10 miles of new linear grading construction on the Wrangell Ranger District met the BMPs and did not negatively affect water quality (see BMP reports done after the actual implementation. Monitoring of linear grading will continue to occur as part of the annual monitoring program.

Linear grading has not been shown to negatively affect water quality any more than traditional road construction methods. All alternatives may result in short-term increases in sediment. In particular, road construction and drainage structure installation and removal are expected to temporarily increase sediment delivery to streams. The temporary increase would not degrade water quality or fish habitat. Implementation of BMPs described in the unit and road cards is expected to maintain water quality within standards established under the Clean Water Act, and minimize impacts to essential fish habitat. Please refer to Chapter 3, Watersheds and Fisheries section in the FEIS for a detailed discussion of road construction effects to water quality and fish habitat.

For additional clarification of linear grading, there are two PDF drawings and the Region 10 specification for linear grading available for review in the project record under Transportation.

ACMP-3

Response: A crosswalk to show how linear grading compares with the Alaska Forest Resources and Practices Act Regulations 11 AAC 95 and the best management practices has been added to the project records under references for the Transportation Resource Folder.

ACMP-4

Response: There are no Class I stream crossings on proposed roads (NFS or temporary) in this project. Table 3-39 in the Watersheds and Fisheries section of Chapter 3 displays the number of stream crossings for Class II and Class III streams proposed for all alternatives.

ACMP-5

Response: The Navy Creek watershed is no longer being considered as part of the present Navy Timber Sale and, thus, will not be impacted by any alternatives. See Chapter 2, Changes Between Draft and Final, for additional information.

ACMP-6

Response: The State's preference for Alternative F is noted.

ACMP-7

Response: The discussion of fish passage has been augmented in the Watershed and Fisheries section of Chapter 3. Table 3-40 now discloses the length of habitat affected by red pipes by watershed. At this time, the Forest Service plans to replace one red culvert in the Pump Creek watershed during implementation of the Navy Timber Sale. The 6544 road is scheduled to be stored under implementation of the Wrangell Ranger District Access and Travel Management Plan (ATMP), which will remove an additional red pipe, restoring 1,345 feet of Class II habitat in the Upper Big Bend frontal watershed. The other red pipes are planned to be corrected in the future under the ATMP, as funding becomes available.

ACMP-8

Response: Numerous changes in unit and road locations have been incorporated into final alternatives. Specific units of concern were modified as follows:

Unit 18 is dropped from all alternatives, because it is in the Navy watershed, which is a Phase 2 area in the Forest Plan. Phase 2 areas are currently deferred from timber harvest. See Chapter 2, Changes Between Draft and Final.

Unit 54 setting 110 is dropped from all alternatives due to soils concerns.

Unit 92 spur road will come in from the south end of the unit, avoiding the steep slopes on in the northern portion of the unit.

Unit 108 has been approved for cable and shovel logging. The DEIS unit card was correct and now states "The unit includes about 3 acres of slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes will be avoided."

ACMP-8a

Response: Units 53 and 55: The risk of mass movement in these units was associated with the road construction and clearcut harvest. These have been changed in the FEIS. There is no road construction now as these units are now proposed as helicopter harvest. The prescriptions have been changed to partial harvest (retaining 70 percent of volume). These measures reduce the potential to impact slope stability.

ACMP-9

Response: The road locations with concerns were reviewed and the following actions were taken:

Road 51421: According to the road location notes, a 36-inch culvert would be adequate to handle the volume of water in this stream. However, due to the high bedload, a 48- or 60-inch culvert would be installed. The stream crossing was field verified by an experienced technician to determine the correct sized culvert.

Road 51561: This road is no longer in any alternative. See Chapter 2, Changes Between Draft and Final. This section discusses some of the changes to roads and units as a result of the Forest Plan Adaptive Management Strategy. This road was located in a Phase 2 area, which defers harvest activities at this time.

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Road 6555: When the road was located, it was not apparent that this was a fish stream. The road card has since been updated to reflect the requirement of fish passage for the stream crossing.

Road 6556: This road has been deleted from all alternatives for the same reasons as Road 51561.

ACMP-10

Response: See response to comment ACMP-2.

ACMP-11

Response: See response to comment ACMP-3.

ACMP-12

Response: The unit and road card maps in the DEIS do show streams by stream class. However, on the alternative maps, due to the scale of the maps, and the numerous streams in the project area, neither color-coding streams nor using the dot-key symbol was adequate to display stream class on the streams.

Stream channel types were added to the unit and road card narratives. Edits to unit and road card narratives give a more detailed view of particular streams. The updated unit cards are available in the project record.

Table 3-39 in the Watersheds and Fisheries section of Chapter 3 displays the number of stream crossings for Class II and Class III streams proposed for all alternatives.

ACMP-13

Response: Please see the response to comment ACMP-2.

ACMP-14

Response: This process is currently being negotiated between the Tongass National Forest and ADF&G. Initial discussions indicate that ADF&G will soon incorporate Forest Service stream data into the Anadromous Waters Catalog. These negotiations and data transfers, which include the entire Tongass National Forest, are occurring separate of this project. For this project, field verification was the best way to determine fish habitat extent.

ACMP-15

Response: See response to comment ACMP-7.

ACMP-16

Response: See ACMP-12 for the response concerning streams. Streams are identifiable by comparing the map with the stream crossing narrative. Stream crossings are noted by mileposts, which start from the beginning of a road to the end of the road. Including this information on the maps created clutter and confusion at these map scales.

Slope information was not shown on maps because slope information comes from two different sources of information. LIDAR slope data is available for part of the project area. This information was found to be very accurate-to the point that it recognized small insignificant features such as small bedrock knobs which do not pose a slope stability or productivity issue. The 30-meter Digital Elevation Model (DEM) is used to display slopes >72 percent for the other part of the project area. Slope information has been recorded in the FEIS unit cards in the project record.

ACMP-16a through 16m

Response: Field verification of the upper limit of fish habitat was completed and this information has been added to the project record and the unit cards.

ACMP-17

Response: The crossing at MP 2.94 on Road 6547 is mapped as an alluvial fan Class II stream crossing. A hydro site survey will be needed. If possible, the road will be relocated above the alluvial fan. MP 3.01 is the Class II crossing of Detailer Creek; a bridge will be needed at this location. MP 3.11 is a Class IV stream crossing and may need a hydro site survey. All other stream crossings will need adequate structures (BMPs 13.16, 14.3, and 14.5).

ACMP-18

Response: The road crossing on the Class II stream on this temporary road has now been avoided through a change in the temporary road alignment. The unit and road cards have been updated to reflect this change and additional information concerning stream crossings has been added to the unit card. This road was proposed as a temporary road since it avoided the Class II stream and the associated fish habitat.

ACMP-19

Response: This road has been deleted from all alternatives. See Chapter 2, Changes Between Draft and Final. This section discusses some of the changes to roads and units as a result of the Forest Plan Adaptive Management Strategy. This road was located in a Phase 2 area, which defers harvest activities at this time.

ACMP-20

Response: This road has been deleted from all alternatives. See Chapter 2, Changes Between Draft and Final. This section discusses some of the changes to roads and units as a result of the Forest Plan Adaptive Management Strategy. This road was located in a Phase 2 area, which defers harvest activities at this time.

ACMP-21

Response: This road has been deleted from all alternatives. See Chapter 2, Changes Between Draft and Final. This section discusses some of the changes to roads and units as a result of the Forest Plan changes in land use designations and small old-growth reserves. The area this road would have accessed is now a small Old-growth Reserve.

ACMP-22

Response: The road location across the alluvial fan will be reexamined and, if possible, the road will be relocated above the alluvial fan. The Forest Service will comply with Title 41 Concurrence for instream activity. See the details concerning this stream crossing in the 6547 road card narrative.

ACMP-23

Response: The road card notes that the crossing could be either a bridge or a 60-inch culvert. In either case, fish passage would be ensured and Title 41 Concurrence would be obtained prior to any instream activity. Road 6555: When the road was located, it was not apparent that this was a fish stream. The road card has since been updated to reflect the requirement of fish passage for the stream crossing.

ACMP-24

Response: See the response to comment ACMP-9.

ACMP-25

Response: See the response to comment ACMP-9.

ACMP-26

Response: Detailed fishery information for Etolin Island streams is limited. The Wrangell District completed an Etolin Island Landscape Assessment in 2007 that considered aquatic resources. The

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aquatic resources section of this document contains summary fishery information for the islands' streams. Data for this document was largely supplied by ADF&G Commercial Fisheries Division.

ACMP-27

Response: No harvest is proposed within the riparian management areas. Harvest on slopes greater than 72 percent has been or will be field verified to determine the soil stability and no timber harvest will occur on those slopes determined to be unstable. Streams within units with identified high windthrow risk will have reasonable assurance of windfirmness (RAW) buffers applied as necessary to reduce sediment sources. Many of the units on steeper slopes will have 70 percent retention of trees and will be helicopter logged, which will reduce the amount of ground disturbance.

ACMP-28

Response: The Watershed and Fisheries section of Chapter 3 and the Watershed / Fisheries Resource Report, in the planning record, contain additional discussion and analysis of sedimentation and erosion features that you mention. Windfirmness of stands and stream buffers is discussed in the Silviculture Section of Chapter 3 and the Silviculture Resource Report, and the RAW buffers are displayed on the unit cards. All of the effects from proposed development consider past harvest as well as reasonably foreseeable future harvest for the cumulative watershed effects.

ACMP-29

Response: There are contract provisions that apply to contractors who have large quantities of fuel on site (such as Roosevelt Harbor) specifying that they must have a Spill Prevention, Control, and Countermeasure (SPCC) Plan in accordance with 40 CFR 112.

ACMP-30

Response: See the response to comments ACMP-7 and 28. New road construction must follow the BMPs outlined in the Forest Plan as well as the requirements listed in the response to comment ACMP-2.

The Wrangell ATM EA (July 2007) covered road maintenance and road management in detail. The Wrangell ATM EA outlines plans for reducing the size of the road system, so our current maintenance funding will provide the maintenance needed for the road system. The implementation of the Wrangell ATM EA has already begun. See the Transportation Cumulative Effects section in Chapter 3 of the FEIS for additional information.

Maintenance of the Anita Bay road system would be required prior to any timber haul. Red pipes are prioritized at the Forest level and removal or replacements are usually completed independent of timber sale projects.

ACMP-31

Response: All temporary roads associated with the timber sale will be decommissioned by the contractor after timber sale activities. Best management practices, stream RMA and RAW buffers help reduce the potential for sediments to reach aquatic systems.

ACMP-32

Response: The project has applied Forest Plan direction, taken reasonable steps and conducted a thorough analysis to ensure that stream health will be maintained. These concerns have been accounted for, and no adverse affects are expected from proposed activities. See the response to comments ACMP-7, 28, and 31.

ACMP-33

Response: The Draft EIS is produced for wide distribution to the public. The maps in the document were at varying scales to display the information to the best advantage for that resource.

Additional information will be provided when requested depending on our capabilities. Updated unit cards with the information for the ACMP MOU requested by email were provided to the Alaska Fish and Game in December 2007 electronically. Project maps were mailed as hard copies. Overlay material was not available in the timeframe requested for the reply.

We do want to point out that this additional information was requested because it was listed in the ACMP MOU Attachment 1. Since the GCD (see response to ACMP-1) for Tongass timber sales has been signed no individual ACMP review is necessary, and the information requested did not have to be provided to meet that rationale. This is explained in the Navy DEIS, Chapter 1 and referenced in your letter (p. 6 of 8)

ACMP-34

Response: Unit cards have been updated to provide additional slope information; see the response to comment ACMP-16.

ACMP-35

Response: If all the requested data were placed on the unit card maps, it would result in an unreadable map, so some of the information was placed in the narrative. Channel classifications are in the unit card and road card narratives. Watershed names and ADF&G catalog numbers have been added to the Watershed / Fisheries section of Chapter 3 in the Final EIS. Additional information can be provided to your agency upon request.

ACMP-36

Response: See the response to comment ACMP-35. For most of the public, these numbers are not as valuable or complete as watershed names, so we used watershed names as the primary identifier.

ACMP-37

Response: The Watershed and Fisheries, and Subsistence sections of Chapter 3, and the Watershed / Fisheries Resource Report, in the project record, contain additional discussion about fish species in the project area and their use.

ACMP-38

Response: The Forest Plan contains general information concerning community use of subsistence resources. The Recreation Resource Report noted that there is very little sport fishing activity within the project area. A discussion about commercial fishing is beyond the scope of this analysis. The alternatives comply with Forest Plan direction for the protection of anadromous fish habitat. See the response to comment ACMP-37.

ACMP-39

Response: With the passage of TTRA, no commercial timber harvest can occur on 100 feet of each side of anadromous fish streams (Class I) and resident fish streams (Class II) that flow into those streams. In addition, Forest Plan Standards and Guidelines add additional riparian management areas to the TTRA buffers and include a 1,000-foot no-timber harvest buffer along beaches and estuaries. Therefore, the effects of timber harvest to these resources are minimized. Stream crossing information is addressed in the Chapter 3 Watersheds and Fisheries section. With implementation of all the above and best management practices, the effects to fish habitat is limited. Thus, the effects on recreational, commercial, and subsistence fisheries is minimal for both fresh and salt-water fish species.

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Deer is the primary terrestrial mammal that is harvested for subsistence use. Since deer use old-growth forest as habitat, the proposed timber harvest in this project would affect their habitat. Also, since they are hunted by vehicle from the road system as well as along the beach, additional road construction may affect the access, either negatively or positively, to this subsistence species.

The FEIS Subsistence section in Chapter 3 discusses other subsistence resource uses, but focuses on deer since it is the most important inland subsistence species. Refer to 36 CFR 242.3 (b), that states subsistence regulations apply to public lands and inland waters, (bv5c) further clarifies that these regulations on subsistence do not apply to the marine waters of Southeast Alaska. Furthermore, the 2008/2009 Federal Subsistence Fisheries Regulations page 73 states that marine waters are excluded. Therefore, there is no management direction to evaluate marine subsistence resources in this EIS. We do state that there is very little evidence to suggest that much, if any, marine subsistence harvest occurs in waters adjacent to the project area. The project is not expected to have any negative effect to surrounding marine resources because most activities would occur outside of the marine environment, and beach and stream buffers further protect against adverse estuarine effects.

The Recreation section of the FEIS does state that there is not much subsistence use of freshwater fish, and what does occur is mostly related to Burnett Lake, Navy Lake, and Navy Creek. Burnett Lake would not be affected by the proposed projects, and proposed activities in the Navy watershed have been dropped between Draft and Final EIS.

ACMP-40

Response: See response to comment ACMP-39.

ACMP-41

Response: Anadromous Waters Catalog (AWC) nominations and updates were not a stipulation of our sampling permit. The protocol we use to determine the presence and absence of fish is not sufficient to properly fill out the AWC form. It is, however, sufficient to determine the extent of fish habitat to meet Forest Plan standards and guidelines.

ACMP-42

Response: See the response to comments ACMP-2, 3, and 28.

ACMP-43

Response: At the end of each year, ADF&G is provided with all fisheries information the Forest Service has collected and the GIS information for the extent of fish habitat.

ACMP-44

Response: These identified concerns about red pipes, stream crossings, and road extensions have been addressed earlier in response to comments ACMP 7, 9, 17, 18, 19, 20, 21, 22, 23, and 30.

The first 0.48 mile of the temporary road extending from the existing 6545 road has been changed to a NFS road, the 51451. The stream crossings for the remainder of temporary road 6545 are discussed in the FEIS unit cards, with proposed crossings to be either relocated above fish habitat, or designed structure installed for fish passage. The stream crossing at MP 2.94 of the 6547 road will be reevaluated. Effort will be made to relocate the 6547 road above the alluvial fan.

See response to comment ACMP-7. The proposed fish crossing sites you have listed, that were not on roads that were deferred from analysis, will all have bridges installed to reduce the risk on fish population and keep construction costs down associated with designed fish pipes. All bridges will be removed at the end of timber sale activities.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME
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January 14, 2008

Frank Roberts, Planning Staff
Wrangell Ranger District
Tongass National Forest
P.O. Box 51
Wrangell, AK 99929

Re: Alaska Department of Fish and Game, Division of Wildlife Conservation Comments on the Navy Timber Sale Draft Environmental Impact Statement.

Dear Mr. Roberts,

The Alaska Department of Fish and Game (Department) appreciates the opportunity to comment to the USDA Forest Service (USFS) regarding the Navy Timber Sale Draft Environmental Impact Statement (DEIS). These comments focus on an evaluation of the proposed timber sale in the context of wildlife conservation and management. We commend USFS for including information previously requested by the Department for these types of analyses. However, as you will note in our comments below, we find some of the information presented in this document to be misleading or inadequate to fully assess potential effects on wildlife and wildlife user groups. Nevertheless, given the available information, the Department does not support USFS Preferred Alternative (D). Because Alternatives A and F would result in the least negative impacts to game and non-game wildlife species and their habitats, the Department recommends USFS select Alternative A or Alternative F, respectively. However, we recommend that Alternative F be modified to include all interagency recommended SOGRs.

ADF&G-1

Sincerely,

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Wildlife Biologist
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Appendix B

DETAILED COMMENTS

A. Old Growth Reserves (OGRs)

General Remarks

Table 3 (page 3-17) contains an error. The Small Old Growth Reserve (SOGR) option for Quiet Harbor in Alternative D should be IDT, not Interagency.

ADF&G-2

The DEIS states (page 3-20) that Alternative A “*will not make any changes to any of the small OGRs including those deficient in total required acres.*” This is clearly a misleading statement given that most, if not all of the SOGRs across the Tongass (including those within the Navy Project Area) were brought into compliance with Appendix K minimums during the current TLMP revision process and such changes will be incorporated in the final document regardless of which Alternative is selected.

ADF&G-3

Small Old Growth Reserves (SOGRs)

A major assertion of the interagency SOGR meetings was the need to protect of the pinch-point between Anita Bay and Burnett Inlet. As a collaborator in the effort to adequately protect important wildlife habitat in this WAA and to maintain connectivity on Etolin Island, the Department is disappointed to see that the interagency recommendation for the SOGR at the Anita Bay pinch-point is included in just one action alternative (E). The importance of the pinch point to wildlife is widely acknowledged in the DEIS, yet this concern is addressed in only one action alternative. As stated on page 3-18 “*...further development of roads or timber harvest in this area will contribute to a reduction in the connectivity between northern and southern halves of Etolin Island*” and “*increased isolation of previously connected populations of wildlife typically makes these populations more vulnerable to population declines or local extinction.*” As stated on page 3-26, “*Contiguous POG connections between OGRs on the north half of the island and the south half of the island are lacking, particularly in the area between Anita Bay and Burnett Inlet.*” The pinch-point serves as the only landscape connectivity between the medium old growth reserves (MOGRs) on the northern lobe of the island and the South Etolin Wilderness, and yet all action alternatives except Alternative E (with interagency OGRs) propose clearcutting high volume old growth in the pinch-point. Given the recommendations of two independent panels of interagency biologists, failure to protect the pinch-point at Anita Bay in all alternatives is a major shortcoming of the DEIS.

ADF&G-4

As acknowledged by USFS, pinch-points are defined as “*critical links between major landscapes within inlands,*” and “*must be carefully protected*” (TLMP Revision FEIS, Appendix N, Volume 4 page N-28) While the TLMP FEIS failed to identify the Etolin pinch-point as one of the six important pinch-points on the forest, this omission is clearly an oversight. The Etolin pinch-point is actually narrower and more constraining than 4 of the 6 recognized pinch-points identified in TLMP (i.e. Lindenberg Peninsula, Neck Lake, Lisianski, and Sulzer Portage).

As outlined in the DEIS, the Anita pinch-point area contains valuable wildlife habitat and provides a critical link between the two halves of the island. The Department of Fish and Game strongly recommends that USFS drop all proposed harvest in the pinch-point to maintain landscape connectivity across the entire island. However, if an alternative without the South Anita Bay SOGR is selected, we recommend that any proposed

clearcuts in this pinch-point area be replaced with partial harvest and/or uneven-aged harvest prescriptions. As acknowledged in Forest Service planning efforts: *“An additional approach to achieving landscape connectivity is to use timber harvest practices that retain some forest structure within the stand after harvest (TLMP FEIS, Appendix N, Volume 4, page N-27).”*

ADF&G-4,
con’t.

The Mossman SOGR is another area of concern to the department. Alternatives B and C introduce extensive new logging activity and miles of road into an area on the eastern shore of Mossman inlet that is not only an inventoried roadless area, but that also contains the area recommended by interagency biologists to be included into the Mossman SOGR. Including this area into the Mossman SOGR will bring this SOGR up to the required number of acres, and protect a pristine valley with extensive raptor activity (goshawk, red-tail, barred owl, small owls). The proposed road would likely disturb known goshawk nesting and foraging sites (see section of goshawks). Harvest and roads in this area will reduce what appears to be the largest continuous block of remaining interior productive old growth (POG) in the WAA (page 3-27), and will also reduce connectivity to the Mossman SOGR. We strongly object to the introduction of timber management and roads into this area.

ADF&G-5

The Department believes its position on the SOGRs has been misrepresented to the public. The DEIS states that: *“IDT Option: Interagency adjustments to this reserve reduced the total acres and POG acres closer to the minimum Forest Plan Criteria. IDT members agreed to adopt the interagency option (page 3-20, paragraph 1).”* This statement implies that the decision to reduce total acres and POG acres in this SOGR was the result of an interagency decision. This is incorrect. It should be made clear to the public that the decision to reduce total acres and POG acres within this, and numerous other SOGRs that exceeded Appendix K minimums, was solely the result of the Forest Supervisor’s directive that the interagency OGR review team strictly adhere to Appendix K minimums and avoid any acreage “overages” whenever possible. This action was neither voluntary nor was it considered biologically desirable by the interagency review team. Therefore the implication that adjustments to reduce total acres was sanctioned by the interagency review team rather than a response to the Forest Supervisor’s directive is clearly misleading

ADF&G-6

The Navy Interdisciplinary Team (IDT) and/or Forest Supervisor have chosen to either modify or disregard the boundaries of the Interagency recommended SOGRs. The Interagency biologists recommended SOGRs that were developed in accordance with Appendix K criteria and specifically intended to protect important wildlife habitat such as deer winter range, known or suspected goshawk nesting habitat, the largest remaining blocks of contiguous old growth within a watershed, and stands with some of the Forest’s highest volume timber. On page 3-21 the DEIS acknowledges that *“Overall, this alternative [Alternative E Interagency recommended SOGRs] considers the most factors listed in Appendix K and therefore comes the closest to meeting the intent of the small reserve criteria.”* Yet the Forest Service lists Alternative D as its preferred Alternative, which includes only two of the four interagency recommended SOGRs.

We would like to remind USFS that the rules applicable to all reserves include:

- A. Spacing should generally consider the four cardinal directions.
- B. Reserves should be more circular rather than linear in shape to maximize the amount of interior (secure from the effects of forest edge) forest habitat.



Appendix B

- C. Minimize to the extent feasible, the amount of early seral habitat and roads within mapped reserves.
- D. Consider site-specific factors in placing reserves to help meet multiple biodiversity or wildlife habitat objectives. Factors include, but are not limited to:
 - 1. Important deer winter range to maintain important deer habitat capability to meet public demand for use of deer resources
 - 2. Known or suspected goshawk nesting habitat
 - 3. Known or suspected marbled murrelet nesting habitat
 - 4. The largest remaining blocks of contiguous old growth within a watershed
 - 5. Rare features such as underrepresented forest plant associations or stands with some of the Forest's highest volume timber

ADF&G-6,
con't.

The DEIS acknowledges that “*the location and configuration of OGRs can affect their quality and values as wildlife habitat*” (page 3-15), yet 4 of the 5 action alternatives include SOGR options developed by the IDT or Forest Supervisor either modify or completely relocate various SOGR boundaries recommended by two independent teams of interagency biologists, including the Forest Service’s own biologists. Actions on the part of the IDT to modify or completely change SOGR boundaries recommended by interagency biologist teams solely to facilitate timber harvest would appear to compromise the intent of the Old Growth Conservation Strategy (Old Growth Reserve System).

Medium Old Growth Reserves (MOGRs)

The DEIS includes very limited discussion of the MOGRs in the vicinity of the project area, even though action Alternatives C would require construction of a road and LTF within the Steamer MOGR. The department strongly opposes any alternative that would result in development activities within the existing MOGR, particularly since the Steamer MOGR fails to meet Appendix K minimum criteria. Because the Project Area includes a portion of the Steamer MOGR, one goal of the Navy planning process should be to rectify Appendix K deficiencies in the OGR. This is particularly important given that proposed timber harvest in three of the four action alternatives will severely compromise opportunities to bring the Steamer MOGR into compliance with Appendix K in the future. According to WRG GIS staff the Steamer MOGR (VCU 4660) is short ~ 1200 acres of high volume productive old growth (HV-POG). Opportunities to rectify this deficiency (incorporate more HV-POG) are extremely limited and do not exist within VCU 4660. Expanding the MOGR to meet Appendix K minimum criteria, therefore, will require including HV-POG from the adjacent VCU (the project area). This should be done “before” proposed timber harvest and road construction activities further compromise current options to bring the Steamer MOGR up to Appendix K minimums. All action-alternates, with the exception of Alternative F (Roadless Alternative) propose harvest units abutting the northern boundary of the Steamer MOGR. Roads and harvesting stands along the northern boundary of the MOGR prior to bring the MOGR into compliance with Appendix K will clearly limit options to make necessary adjustments to the MOGR in the future. According to the EXISTING_VEG GIS coverage there are no VC 6 or 7 stands located within the Steamer OGR, yet three of the four action alternatives propose to harvest an isolated VC-6 stand that abuts the existing northern boundary of the MOGR. Failure to bring the Steamer MOGR into compliance with at least minimum Appendix K criteria prior to deciding upon harvest alternatives may compromise the intent of the Old Growth Conservation Strategy (OG Reserve System).

ADF&G-7

B. Habitat Fragmentation

This chapter actually measures habitat loss, not habitat fragmentation that will result in negative impacts to wildlife species of concern or the management indicator species selected for this project. For example nearly 50% of the historical amount of high value marten habitat has already been removed as a result of previous timber harvest activity and road construction, however, this unit of measure is not used to disclose the negative impacts to marten resulting from old growth habitat fragmentation. Because habitat loss is a contributing factor to habitat fragmentation, there is often a correlation between the two. While an analysis of habitat loss is informative in itself for assessing effects, a true analysis of habitat fragmentation would also need to consider the size and spatial arrangement of habitat patches on the landscape. More heavily fragmented areas are characterized by smaller and smaller blocks of habitat separated by larger and larger areas of unsuitable habitat. Areas may be considered unsuitable habitat because of clearcutting, roads, development, and human activity. A true measure of habitat fragmentation, at a minimum, should include an analysis of the amount of “edge” (perimeter of habitat patches) to the area of those habitat patches, as well as an analysis of distance between habitat patches. Differences in habitat fragmentation as outline above could also be done to look at the additive fragmentary effects of roads and human development by buffering these areas and including them with harvest units as areas of unsuitable habitat.

ADF&G-8

Regarding the information on habitat loss that is provided in the section concerning Issue 3, the presentation of the data supplied could be improved to make it more useful. In particular, Figure HF-2 (page 28-3), is inadequate for evaluating the potential impacts of the various alternatives on existing coarse canopy stands. This Coarse Canopy Habitat map should be provided at the same scale as the various action and no action alternative maps, and should provide landscape features such as existing roads, existing units, POG, etc. that allow the reader to easily evaluate the location of coarse canopy stands relative to proposed harvest units.

C. Management Indicator Species and Other Species of Concern

Deer

1. Text and Tables

The tables in this section are confusing, which makes potential effects hard to assess. For example, Table 3-48 (page 144) indicates that Alternative B will further reduce habitat capability an additional 8% over the current condition. Table 3-49 indicates that currently (as of 2007), 9% of habitat capability has been reduced. This would indicate a habitat capability reduction of 17% (83% remaining). However, Table 3-49 indicates only 81% would be remaining. It is unclear why these numbers do not match up. It might have been clearer to have one table combining current project and cumulative effects.

ADF&G-9

The text is also confusing. The DEIS text outlines reductions in top quartile habitat capability, acres of habitat capability, and acres of top quartile habitat capability. The information presented in the Wildlife Resource report puts this information into tables that are far easier to understand and compare among alternatives. It is unclear why some of the information provided in the Wildlife Resource report is omitted from the DEIS.

ADF&G-10

Appendix B

2. Deer Habitat Capability

It appears that the calculations of deer/mi² have been done incorrectly. Page 142 *incorrectly* indicates that an HSI value of 1.0 represents a habitat capability of 100 deer/mi². As the Department has explained to USFS in the past, this would only be true if the maximum HSI score was 1.0 (Alaska Department of Fish and Game, 2007). Because the HSI scale used is 0-1.3 (page 3-142), a HSI score of 1.3 (the highest category on the scale) would actually represent 100 deer/mi² (Alaska Department of Fish and Game, 2007). Therefore, an HSI score of 1.0 would represent less deer per square mile, specifically 100/1.3, which equals 77 deer/mi². As such, habitat capability is overestimated and percent declines in habitat capability are much greater than the tables in this section imply. Furthermore, this analysis fails to take into account that a unit change in deer carrying capacity (HSI) could lead to a much larger unit change in the number of deer because predation dynamics are non-linear (Alaska Department of Fish and Game 2007, Bowyer et al. 2005, Person 2001, Person et al. 1997). Because of this non-linear relationship, and because the HSI model does not take into account the effects of landscape features or fragmentation, there is a lower percentage of habitat capability remaining by alternative than is implied by Table 3-49.

ADF&G-11

The Department would also like to note that the criteria used to calculate HSI scores should be provided in the DEIS for public review. The Department requested this information from USFS, and some information was provided (Melissa Cady, USFS, Wrangell, AK, personal communication-email) in a look-up table. This table indicates that "Group Selection 10% cc/50 yr" is a habitat category included in the HSI model (excel database: 2007_Navy_model_data_waa1901_2033). In this table, polygons with this habitat category that have "low" snow, "south" aspects, and are "<800" feet in elevation have an HSI score of 1.19. This is the second highest HSI score in the model. While the habitat characteristics of this "habitat type" were not readily available for review, it appears this may be a habitat type including 10% clearcuts. The Department is not aware of any scientific evidence that would support this habitat type as one of the highest quality deer habitats, and would appreciate any available citations. The database shared with the Department appears to indicate that there are no acres in wildlife analysis area (WAA) 1901 of this habitat type, so the results of this particular analysis are not likely affected. However, the uncertainty around the validity of the HSI score of this habitat type exemplifies why USFS should provide the specific methods and criteria they use when conducting these types of analyses. HSI values without any context are biologically meaningless as a method by which to assess effects on wildlife.

ADF&G-12

3. Deer Habitat Capability Loss

Habitat capability continues to be modeled based on moderate snowfall (page 142), despite the information presented by the Department that planning for severe winters would be the most appropriate method of HSI modeling, especially considering the higher likelihood of extreme snow events due to climate change (Alaska Department of Fish and Game 2007). As a result, this analysis likely overestimates the amount deer habitat capability in every alternative. Although relative effects among alternatives should still be comparable, habitat capability should not be taken as an absolute. Furthermore, the Department notes that a reduction in deer habitat capability could also have cumulative effects that include negative implications for subsistence deer hunters and wolf viability.

ADF&G-13

ADF&G-14

Total habitat capability would be reduced by 9, 8 and 5 percent by Alternatives C, D, and E, respectively. Top quartile (HSI values 0.60-1.3) habitat capability would be reduced more drastically in Alternative C (13%) and Alternatives B and E (9%). Although harvest of top quartile habitat in Alternative E is equal to that of Alternative B, the document indicates that Alternative E is 60% partial harvest prescription and will therefore have less of an effect on deer than Alternative B. We agree that partial harvest in general will result in understory plant communities that are more similar to old growth forests than to clearcuts (Deal 2001). However, how similar partial harvest units are to old growth forest depends on the specific characteristics of partial harvest, specifically the size, slope, and aspect of openings. Where openings are larger and areas are more prone to the effects of wind, partial harvest could result in large forest openings that do not evolve into uneven-aged habitat similar to old growth forest. Further, while Deal (2001) found that large tree structure of partial cuts stands is similar to old growth forests in the long term (>60 years post-harvest), in the short-term these stands had very different structures regarding tree size. The range of tree sizes remaining after partial harvest will determine whether these units evolve into uneven-aged conditions similar to old growth forests. In the short term, deer may be heavily affected because timber harvest alters snow depths and persistence in by removing canopy cover, which reduces forage availability and impedes movement in times of heavier snow (McClellan 2000). Although single-tree harvest prescriptions are in place for much of Alternative E harvest units, care should be taken to keep cut openings small, maintain tree-size diversity, and not to selectively remove only the largest trees.

↑ ADF&G-14, con't.

ADF&G-15

Overall, the percent decline in both the habitat capability and top quartile habitat capability appear to be at levels of concern, especially when considering cumulative reductions of approximately 25% for alternatives B, C, and E. Because effects of Alternative E appear to be tempered by single-tree partial harvest prescriptions and the inclusion of the Anita Bay pinch-point SOGR, we believe this is a better alternative for deer than Alternative D. However, given the current reductions to deer habitat capability, to best provide for both critical winter habitat for deer and connectivity, Alternative A would be the preferred alternative, followed by F, E, and D. Alternatives B and C would have unacceptable declines in deer habitat capability.

ADF&G-16

Wolves

1. Wolves and Deer Habitat Capability

The calculations of deer/mi² have been done incorrectly (see deer habitat capability section). There would be relatively less deer/square mile by alternative than is listed in Table 3-51.

ADF&G-17

2. Wolf Harvest

The average home range of a wolf pack is approximately 300km². WAA 1901 is over twice that size, and at 730 km² could theoretically support two wolf packs and a few migrants. The average number of wolves we would expect to be within 300 km² is 9.5. ADFG considers average harvest rates exceeding 30% of the wolf population (approximately 2.8 wolves/300 km²) to be unsustainable. Furthermore, ADFG would also be concerned if harvest approached 85% (8 wolves)/300 km² in multiple years, because that would imply almost complete destruction of packs and heavy turnover. Despite high road densities, the average reported harvest in WAA 1901 for the last 10 years is below

ADF&G-18

Appendix B

30% (1.61 wolves/300 km²). The low harvest relative to the high road densities is likely related to that fact that these roads are not directly connected to communities, and access is somewhat limited by weather. However, it could also be that because of the remote location of the WAA, there may be more illegal or unreported harvest. Person and Russell (*in review*) found that despite regulations, access by humans can increase risk of death for wolves due to high rates of illegal harvest. In remote areas where traps are checked relatively less frequently, wolf carcasses are often scavenged before they are retrieved and trappers may not bring these ragged pelts in for sealing.

Harvest data indicates that harvest rates could increase to unsustainable levels. Although the average harvest rate for the preceding 10 years was below 30%, the harvest rate exceeded 30% in 3 of those 10 years. The department would be concerned if over-harvest of wolves over multiple years in the short term occurred due to increased human presence during the active phase of the project, or in the long-term in response to increased road density. This is especially true if harvest rates grew to exceed 85%. Increased harvest rates will likely vary by alternative in relation to the duration of the active phase of the project and the miles of roads built, but the length of the active phases is not quantified in this document. Higher harvest rates coupled with the habitat loss and fragmentation that will occur in the WAA could have a lasting effect on the wolf population in this area. If this occurs, it is possible the wolf population could be repopulated from wilderness refugia in WAA 1910, but this would likely be highly dependent on the protection of the Anita Bay pinch-point as an old growth reserve, an option in only one alternative.

ADF&G-18,
con't.

3. Wolves and Roads

ADFG commends the planners of this document for providing total road densities for the area below 1200 feet in elevation, which we believe is the best indicator of measuring the probable effect of roads on wolves. Total road density in WAA 1901 is already above 0.7 currently, and would increase up to a maximum of 0.97 in Alternative C. Because of the potential for over-harvest, increasing road densities by any magnitude is not recommended. However, although harvest for wolves at the current road density of 0.7 miles/mi² appears to be sustainable in this WAA (see “wolf harvest” section), this is likely due to relatively low accessibility of this area by nearby communities. During active timber harvesting, increased human activity on current roads coupled with increasing access to new areas while crews are on the ground could easily escalate harvest to unsustainable levels.

American Marten

1. Habitat and Habitat Loss

The document does not disclose what HSI scores were used to define either marten “habitat capability” or “high value marten habitat” (see table 3-53, page 154). Without knowing what scores were used to define marten habitat, it is difficult to fully assess the extent to which marten are likely to be affected. Furthermore, even if HSI scores were known, without knowing the criteria used for scoring habitats, the effects of the analysis results are difficult to interpret. Both the criteria for scoring different habitat types (HSI score look-up tables) and the scores used to define “marten habitat capability” and “high value marten habitat” should be disclosed in the DEIS. Please see our comments on Deer Habitat Capability regarding this concern.

ADF&G-19

The Department contacted USFS regarding these issues, and was informed that “high value marten habitat includes those habitats with HSI values ≥ 0.90 (Melissa Cady, USFS, Wrangell, AK, personal communication-email). While it has been disclosed that factors considered to determine high quality habitat include “vegetation, elevation, and whether or not the habitat is riparian (Melissa Cady, USFS, Wrangell, AK, personal communication- email),” the specific look-up table or criteria for ranking specific habitats was not provided (i.e. what habitats, elevations, etc get what HSI scores). This information should be presented and available in all EIS.

ADF&G-20

Nevertheless, we have attempted to review this section with the available information. Nearly 50% of the historical high value marten habitat has already been removed from the project area as a result of previous timber harvest activity and road construction (Table 3-53). Given this situation and current road densities (see below), the Department considers any further reduction of high quality marten habitat to be unacceptable. Any changes to high quality marten habitat should therefore be restricted to single-tree partial harvest.

ADF&G-21

2. Roads

Total roads are the appropriate factor to consider when measuring the effects of roads on marten, because closed roads are often used to access habitat for trapping due to a lack of effective barriers. The density of total roads in all of the alternatives are at levels at which we would expect to see moderate to high risk to marten populations. Road densities likely will affect marten populations even when considering only the open road densities provided. This would be even more pronounced if most roads go through the highest quality marten habitat. Road density is measured only by WAA, and therefore calculates road density without regard to the amount of actual marten habitat available and affected by the alternatives. The marten habitat capability model developed in 1988 had a function to evaluate potential road impacts based on road density. This method can be further extrapolated by only considering either a) forest habitat within the WAA or b) high quality marten habitat within the WAA, as defined by the HSI scores. This analysis is important because it has been established that roads have an immediate and relatively greater impact on relative habitat capability at lower densities when only considering the forested habitat within the WAA as compared to any habitat regardless of its’ value to marten (R. Flynn, ADFG, Douglas, AK, unpublished data, 2006). The document gives an assessment of open and closed road densities, but does not evaluate the density of roads in the highest quality marten habitat. Because high quality marten habitat often overlaps with desirable cutting units, it is likely that the density of roads in high quality marten habitat is substantially higher than the densities disclosed in this document.

ADF&G-22

The document states that while trapping pressure will likely increase during the active phases of the project due to personnel being on the ground, it is expected that it will return to current levels in the long-term. This fails to consider that if trapping pressure increases to a level where 90% or more of population is reduced, that trapping will no longer be a viable option in the future. The extent to which trapping pressure and success increases will be directly related to the quality of the marten habitat in which the trapping is occurring, as well as the duration of the “active phase” of the project in that area. Unfortunately, we suspect that “active phases” will be longer in areas and alternatives with higher proposed road densities, and these areas likely also overlap with some of the highest quality marten habitat. For any alternative, it is critical that accessible and roadless high quality habitat

ADF&G-23

ADF&G-24

Appendix B

remain nearby as refugia with which to repopulate what will likely be heavily affected areas.

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**ADF&G-24,
con't.**

3. Habitat Fragmentation

The document fails to consider the effects of habitat fragmentation on marten. While the document has a chapter titled "Habitat fragmentation", this only measures habitat loss. To assess habitat fragmentation, some methodology would need to be employed to measure the size, distribution, and connectivity between marten habitat patches. It is especially important to assess the effects of habitat fragmentation on marten because it has been established that marten density is best predicted by the number of habitat patches and the Shannon diversity index (Flynn et al. 2004). Higher marten densities are found in landscapes with when a given amount of habitat is spit into fewer and larger patches, and where there is a more even distribution of habitat patch types (Flynn et al. 2004). Mean nearest-neighbor distance is another measure of habitat fragmentation that could be used, but Flynn et al. (2004) found that it was correlated with the number of patches, and therefore should not be entered in the same model. These analyses can be easily conducted using Geographic Information Systems.

ADF&G-25

4. Prey Species

Abundance of species is one of the 3 main factors that can strongly influence the density of martens (Flynn et al. 2004), yet this document does not address this issue. While we recognize that there is little information readily available on the abundance of many prey species for marten, anadromous streams are catalogued to some extent in most areas. While it is recommended that the distribution of salmon spawning streams eventually be incorporated into the HSI model for marten (Flynn et al. 2004), a simple assessment of the number of salmon streams in high quality marten habitat by alternative would give some indication of the availability of at least one prey species. GIS layers that may prove useful for such an analysis include the Anadromous Waters Catalog (ADFG, Douglas, AK) and USFS hydro layers, which include a stream class attribute identifying the "fish potential" (anadromous or high value, resident fish only, or non-fish habitat) of streams segments. Because these layers only map areas where there is potential to find spawning salmon, streams identified in these layers should be surveyed during project planning efforts for actual spawning activity.

ADF&G-26

5. Refugia and Roadless Areas: The document provides information on the number of acres of roadless areas affected by timber harvest and road construction, and also identifies the miles of new construction in inventoried roadless areas, but it is unknown how much of inventoried roadless areas contain high quality marten habitat. Conversely, it is also unknown how much high quality marten habitat is also a roadless area. Because habitat loss and road construction are so important for marten, roadless areas greater than 0.93 miles from a road provide important refugia for marten that could be used for repopulation should marten populations decline. A more comprehensive landscape analysis is needed to address this issue.

ADF&G-27

The information provided does not provide enough detail to fully assess the potential effects of each alternative on marten. However, we suspect that the additional analyses outlined above would only make our concerns greater. Given the proposed densities of roads in a WAA where high quality marten habitat has already been decreased by almost 50% since 1900, ADFG is concerned about the short and long-term effects of this project on the local marten population. Flynn (2004) found that North Etolin had one of the lowest

ADF&G-28

marten numbers in their study, and which is likely related to previous harvest of high quality marten habitat. This document indicates that Marten Standards and Guidelines will provide protection for marten. Given this statement, we expect that these Standards and Guidelines will remain in effect for the duration of this project regardless of the later implementation of the proposed changes to these standards in the Tongass Land Management Plan FEIS. If this is not the case, it should be clearly stated.

ADF&G-29

Based on the road density and habitat capability information provided, Alternatives A (no action) and F will have the least effect on marten and would be the preferred alternatives for this species. Alternative E harvests 12.8 MMBF more forest than Alternative D and affects a larger amount of Inventoried Roadless Areas, but it also maintains more acres of productive old-growth, interior productive old growth, and course-canopy productive old-growth, both overall and within small old growth reserves. Because the quality of remaining habitat will be more important for marten than the quantity, Alternative E ranks as a better Alternative than D.

6. Standards and Guidelines

The DEIS outlines how the current Marten Standards and Guidelines (S&Gs) will help conserve marten and marten habitat, but does not address the fact that substantial changes are proposed to these guidelines in the Forest Plan Revision. It is unclear how these changes and the new “Legacy” guidelines will affect actions proposed in this particular project. The Department has recently expressed concerns regarding proposed changes to the Marten S&Gs during the current TLMP revision (Alaska Department of Fish and Game 2007), and we encourage USFS to review and address these concerns.

ADF&G-30

Goshawks

The DEIS states that Goshawk Standards and Guides (S&Gs) will continue to protect any known goshawk nests located outside of designated OGRs. As part of the ongoing TLMP revision process, however, negotiations are currently underway that would either modify or replace the existing goshawk standards and guides. Any resulting changes in the standards and guides that might serve to reduce or eliminate current levels of protection for known goshawk nest sites are certain to influence future road building and timber harvest activities across the forest, and within the project area. Therefore, is it appropriate to say in the DEIS that all goshawk nest sites will continue to receive protection under the current Goshawk S&Gs even as discussions are taking place that might alter or eliminate them? The Department has recently expressed concerns regarding proposed changes to the Goshawk S&Gs during the current TLMP revision (Alaska Department of Fish and Game 2007), and we encourage USFS to review and address these concerns.

ADF&G-31

Currently, three known goshawk nesting areas are located on Etolin Island, all of which are located within the Navy Project Area (Starfish, Camp Carl and Mosman). A nest site associated with the Starfish nest territory was first documented in 1991 giving this site one of the longest histories of documented goshawk nesting activity on the Tongass. While evidence of goshawk nesting activity was originally documented by a Forest Service biologist near the present day Mosman nest site in 1986, the presence of an active nest was only recently confirmed. Apparently this nesting territory also has a very long history of goshawk occupancy. Although an active nest was first identified near Camp Carl in 1997, goshawk activity was observed in the area prior to that year. Despite the long history of

ADF&G-32

Appendix B

goshawk nesting activity and site occupancy at the three known territories on Etolin, planned forest management activities associated with the Navy Timber Sale are likely to negatively impact some, if not all, of the known goshawk nesting territories on Etolin.

↑
**ADF&G-32,
con't.**

Depending on which Action Alternative is selected, anywhere from two to all three of the known goshawk nesting areas on Etolin are likely to be negatively impacted by proposed timber management and/or road building activities associated with the Navy Project. At best, two of the three known goshawk nesting areas (nests or nest clusters) would receive OGR protection under Alternative E, which is the only alternative that incorporates all interagency recommended SOGRs. Even under this alternative, however, extensive timber harvest is proposed in the vicinity of the Starfish nesting area. Under the preferred Alternative (D) two of the three known goshawk nest areas are likely to be negatively impacted by proposed harvest activities that would reduce foraging habitat in the vicinity of known nests. In two of the five Action Alternatives (B & C) all three of the known nesting territories on Etolin are likely to be negatively impacted by forest management activities.

While the current Goshawk S & Gs (as long as they remain in place) would continue to provide some level of protection for known nest sites usually in the form of the minimum required nest buffer, proposed harvest units are likely to eliminate important foraging habitat within two, if not all three known goshawk nesting territories on Etolin. It should also be noted that the design of S & G mandated goshawk nest buffers are frequently influenced by District Rangers and/or IDTs. In addition to eliminating potentially important goshawk foraging habitat near the Mosman nest site, Alternatives B & C also propose construction of an access road that appears to approach within close range of the one nest site identified in that area to date.

ADF&G-33

ADF&G-34

Despite the long history of goshawk nesting activity at three territories identified within the Navy Project Area, the DEIS proposes no long-term monitoring of goshawk nest areas to evaluate the potential impacts of proposed forest management activities on goshawk nest areas and nest-site occupancy. Failure to conduct long-term monitoring of goshawk nest areas and nest-site occupancy in the wake of currently planned timber harvest would forego the collection of important information necessary for managing goshawks in the future. Regular and continued monitoring of known goshawk nests in the post-harvest period could help to identify timber harvest techniques and/or harvest level thresholds that could be used to develop management practices that might allow forest management activities to occur while at the same time ensuring that goshawk nesting territories remain viable in the future. Long-term monitoring in the wake of forest management activities would be valuable for ensuring the persistence of nesting goshawks within managed landscapes on the Tongass. Therefore, the department strongly recommends that a long-term monitoring program be implemented for all known goshawk nesting areas within the project area that are likely to be affected by the proposed forest management activities.

ADF&G-35

Literature Cited

Alaska department of Fish and Game, 2007. Letter to Mr. Forrest Cole, Forest Supervisor, Tongass National Forest. State of Alaska comments on the Tongass Land and Resource Management Plan Amendment and Draft Environmental Impact Statement. April, 27, 2007.

Bowyer, R. T., D. K. Person, and B. M. Pierce. 2005. Detecting top-down regulation of ungulates by large carnivores: Implications for conservation of biodiversity. Pages 342-361 in Ray, J. C., K. H. Redford, R. S. Steneck, and J. Berger eds. Large carnivores and the conservation of biodiversity. Island Press. Covelo, CA, USA.

Deal, R.L., 2001. The effects of partial cutting on forest plant communities of western hemlock-Sitka spruce stands in southeast Alaska. Canadian Journal of Forest Research 31: 2067-2079.

Flynn, R. W., T. V. Schumacher, M. Ben-David. 2004. Abundance, prey availability and diets of American Martens: Implications for the design of old-growth reserves in southeast Alaska. Wildlife Research Final Report. Alaska Department of Fish and Game, Douglas, AK, USA.

McClellan, Michael H.; Swanston, Douglas N.; Hennon, Paul E.; Deal, Robert L.; de Santo, Toni L.; Wipfli, Mark S. 2000. Alternatives to clearcutting in the old growth forests of southeast Alaska: study plan and establishment report. Gen. Tech. Rep. PNW-GTR-494. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 40 p.

Person, D. K., M. D. Kirchhoff, V. Van Ballenberghe, and R. T. Boyer. 1997. Letter to Ms. Beth Pendleton, Tongass Land Management Planning Team, USDA Forest Service, regarding Appendix N of TLMP. Alaska Department of Fish and Game. September 19th, 1997.

Person 2001, D. K. 2001. Alexander Archipelago wolves: ecology and population viability in a disturbed, insular landscape. Ph.D. Dissertation, University of Alaska Fairbanks, Fairbanks, AK, USA.

Person, D. K. and A. Russell. *In review*. Correlates of mortality in an exploited wolf population. Journal of Wildlife Management.

Appendix B

Forest Service Response to AK State Dept. of Fish and Game (ADF&G) Comments:

ADF&G-1

Response: Your preference for Alternative F and the interagency locations for the small Old-growth Reserves is noted. However, all the small Old-growth Habitat Reserves within the Navy project area (VCUs 4640, 4650, 4670, and 4680) were redesigned and located on the land according to the 2008 Tongass Land and Resource Management Plan (Forest Plan) decision made January 23, 2008. For more project-level information, see Chapter 1 of the Navy FEIS under relationship to Forest Plan, and in Chapter 2, Changes Between Draft and Final.

ADF&G-2

Response: Thank you for pointing out the error in Table 3 of the DEIS.

ADF&G-3

Response: At the time of the release of the Navy Draft EIS in November 2007, this was a correct statement and no modification *by this project* was proposed. In the Navy Final EIS, the small Old-growth Reserves shown on Alternative 1, and all alternatives, are the small OGRs as allocated in the decision for the Forest Plan, signed on January 23, 2008, after the release of the Navy Draft EIS.

ADF&G-4

Response: See ADF&G-3. Additional information about the Anita Bay pinch-point has been added to Issue 2 of Chapter 3. Partial harvest for proposed timber harvest units within the pinch-point was considered during analysis. There will be no further adjustments for the OGRs in this decision, since the decision has already been made at the forest level. Please see the response to comment ADF&G-1 and GI-3.

ADF&G-5

Response: Please see the response to comment ADF&G-1. Impacts to goshawks are disclosed in the BABE, located in the project record, and in Chapter 3 of the FEIS under Threatened, Endangered, and Sensitive Species.

ADF&G-6

Response: The wording was meant to indicate that the IDT used the interagency design as a base and modified it to the minimum criteria as presented in Appendix K of the 1997 Forest Plan. The interagency recommendations were used as the interagency team designed them in Alternative E. The selection of Alternative D as the preferred alternative was based on many criteria for all resources not just the design of the small OGRs. However, the 2008 decision of the Forest Plan has already selected the small OGR designs within the Navy project area. There was a Tongass-wide net gain of lands allocated to Old-growth Reserves as a result of this decision.

ADF&G-7

Response: The development activities within the Steamer medium OGR were located due to topographical features, to follow Forest Plan direction, and sought to minimize effects on that medium OGR. Alternative C is the only alternative that will have an effect on the Steamer medium OGR. The Transportation and Fragmentation sections of Chapter 3 provide additional discussion about the Steamer medium OGR. The placement of most medium and large OGRs was finalized in the 1997 Forest Plan decision based on the criteria of previous work by the VPOP committee and others (see Forest Plan FEIS Volume 1 p. 3-253). The emphasis for the location of these OGRs was number, size and spacing. Sometimes, to achieve these objectives, the habitat of a reserve was less than optimal. Further

discussion of adjusting this medium OGR was done between Draft and Final EIS including discussions with ADF&G. No further adjustment to the medium OGR are proposed at this time.

ADF&G-8

Response: In the Navy FEIS, Chapter 3, Issue 2, Figures 3-1 and 3-2 have been updated to show patch size of interior Productive Old Growth. Connectivity was used as a habitat element to address fragmentation, and additional analysis has been added. The scales on maps in this section are now consistent when showing the same map extent. Figures 3-1 and 3-2 have been updated and are now the same. We have added many of the requested landscape features to these maps.

ADF&G-9

Response: Your recommendations to use the tables from the Wildlife resource report in the Final EIS have been incorporated.

ADF&G-10

Response: Resource reports provide the basis for the information in the EIS, and are part of the project record. Not all information in the all the resource reports is reproduced in the published EIS document, to keep the document concise and easily understood by the general public.

ADF&G-11

Response: The request to change the deer multiplier so that the HSI value of 1.3 instead of 1.0 would represent 100 deer has been subject to debate over the past few years with both ADF&G and appellants to the Forest Service. The analysis for the 2008 Forest Plan did use this coefficient as requested by ADF&G. The analysis for Navy FEIS also used the standardized coefficients of 0 to 1.0. However, both coefficients allow for the comparison of the relative values of the alternatives since habitat carrying capacities do not readily reflect actual deer populations.

The limitations of the deer model have been debated and these recommendations have been under review in conjunction with the Forest Plan analysis. However, especially because of the dissenting opinions, an interagency approach to any changes must be coordinated to come up with the best representation possible to determine the effects on habitat. There will never be a deer multiplier that will result in a totally accurate representation of the deer population and the effects of timber harvest on that population.

ADF&G-12

Response: The criteria used to calculate HSI scores (which rate the value of deer winter habitat) are vegetation type, snow level, aspect, and elevation. Each combination of these four criteria is assigned a value. The spreadsheet mentioned in your comment is located in the project record and will be provided to anyone who requests it; however, this kind of information is not the purpose of an EIS, which is to summarize the analysis for the public and decision maker not to provide a technical background of how the analysis was conducted.

The Group Selection 10% cc/50 yr was not used for any silvicultural prescriptions and has not been used in any projects to our knowledge. The high HSI value is derived from the fact that there will only be 10% of the stand removed every 50 years and so the stand would function as old-growth forest. Gene Degayner was the author of the model in 2003 before he left the Alsak Region for another position with the Forest Service.

There has much debate over the HSI values for the deer model over at least 20 years and many recommendations for HSI values. The model used for the Navy Draft EIS was the one used for the 1997 Forest Plan analysis, which was the Forest Plan direction at the time of the release of the Navy

Appendix B

Draft EIS. The Forest Service will continue to work with the State, USFWS and research scientists to collaboratively to modify this model as new information becomes available and to develop new models. See SCS- 118 to SCS -130 for more information on the deer model.

ADF&G-13

Response: The Forest Plan deer model is designed to provide estimates of habitat capability based on moderate winters. It is not designed to predict habitat capability for catastrophic events such as several severe winters. The model results are most useful for comparing relative changes by alternative and do not indicate actual deer populations.

ADF&G-14

Response: An updated discussion of subsistence and wolves is located in Chapter 3 of the FEIS. Pellet count surveys conducted with ADF&G have shown a steady or slightly increasing deer population on Etolin Island. Table 3-48 in the FEIS displays the modeled deer habitat capability by alternative over time. Modeling indicates a small decline in habitat. This *may* have an effect on deer winter habitat which *may* reduce the population to the point of restricting subsistence use of deer.

The viability of the wolf populations is a National Forest issue and was determined during the analysis of the Forest Plan (Final EIS, Volume 1 p. 3-281 to 3-284). ADF&G has not identified a wolf mortality concern for Etolin Island.

ADF&G-15

Response: Unit cards discuss the silvicultural prescriptions that indicate the size, slope and aspect of the units. Probability of windthrow has been considered in the harvest prescription. This partial harvest method is implemented to maintain high forest cover, regeneration of desirable species, and development of trees through a range (three or more) of diameter or age classes. It will maintain multiple canopy layers within treated units and meet the definition of uneven-aged stands. In general, opening size is not to exceed 2 acres, and this system is not expected to appreciably increase the likelihood of windthrow in these stands.

ADF&G-16

Response: Your preference for the various alternatives is noted. Alternative E no longer contains the Anita Bay OGR. See response to comment ADF&G-13 regarding deer habitat capability.

ADF&G-17

Response: See response to comment ADF&G-11.

ADF&G-18

Response: If wolf harvest drastically increases in this area, ADF&G could propose trapping and hunting restrictions. The Forest Service will work in conjunction with ADF&G and USFWS to implement a Wolf Habitat Management Program as described in the Forest Plan, Section XIV, Alexander Archipelago Wolf. Based on that analysis, appropriate measures could be taken such as adjusting or closing the wolf hunting/trapping regulations or closing roads (Forest Plan p. 4-95). All of the action alternatives meet the Forest Plan Standard and Guideline for total road densities, falling within the 0.7 to 1.0 mile/mi².

The duration and timing of the active timber operations is not known at this time, since the decision has not been made. There are many variables (purchaser, size of sale, market demand, weather, etc.) that could affect the duration of the sale. Although there may be increased activity on the roads, the road system will still not be connected to a community and will be limited to those accessing it by boat or air.

The Anita Bay pinch-point area was not selected for an OGR. Since the area is naturally fragmented and has existing roads, the effects to wolves would be similar to the current condition. Wolves are a highly mobile species and would be able to transverse the Anita Bay area.

ADF&G-19

Response: High-value marten habitat for this document was defined by the 1997 Forest Plan which was in effect at the time of the Draft EIS (1997 Forest Plan p. 4 –118). High-value marten habitat is high-volume strata stands less than 1,500 feet in elevation. These are defined by the interagency model as HSI value 0.9. This information has been added to Table 3-55 in the Navy FEIS. The Marten Standard and Guideline was replaced by the Legacy Standard and Guideline in the Forest Plan in 2008 and the analysis for marten was updated in the Final EIS.

The interagency marten model is discussed in 1992_Suring_et_al_Habitat Capability Model Marten Winter Habitat. The marten HSI values presented in this paper are those in the lookup table used in this analysis. Both are available in the project record as well as the GIS layer, which displays the spatial data.

ADF&G-20

Response: See response to comment ADF&G-19.

ADF&G-21

Response: Your comment that only single-tree partial harvest should occur in high-value marten habitat is noted. However, review of the Conservation Strategy during the Forest Plan analysis determined that the Old-growth Reserve system had more merit in maintaining marten populations than did the treatment of individual stands (which was much of the focus of the 1997 Forest Plan Marten Standard and Guideline). Therefore, the reserve system was enhanced by the review of small Old-growth Reserves and additional land allocated to non-development LUDs (Forest Plan ROD p. 25-26). The Legacy Structure Standard and Guideline adds additional old-growth habitat areas by focusing on maintaining acres of structure in those VCUs with a higher risk of providing sufficient habitat due to previous timber harvest (Forest Plan, p. 4-90 and 4-91). The Forest Plan Conservation Strategy (ROD), with its beach buffers, riparian buffers, non-development LUDs and Old-growth Reserve system and the Adaptive Management Strategy, provides sufficient habitat and connectivity to ensure species viability.

ADF&G-22

Response: Because of the difficulty of incorporating the road information into the model, this information was not included in the interagency marten model. While considering the road density at a WAA may be misrepresentative of the project area, attempting to calculate the road density only where the roads intersect in high-forest habitat or high-value marten habitat may be oppositely misleading. Instead, if roads have been determined to be a significant contributing factor to unsustainable marten mortality, local knowledge of the areas of habitat and road use could be used to determine any road closures or restrictions to trapping areas (Forest Plan p. 4-96 to 4-97).

ADF&G-23

Response: The Forest Service relies on ADF&G to determine if there is a trend to unacceptable trapping pressure on marten. ADF&G tracks marten harvest by areas, seals the skins, and regulates trapping before it reaches the point of no longer being an option due to extirpation within the project area.

Appendix B

ADF&G-24

Response: Please see response to comment ADF&G-18 and 21. The reference in ADF&G-18 is for wolf harvest but would also apply to marten trapping. The small OGRs as designated by the 2008 Forest Plan are all located in unroaded areas as are the medium and large OGRs on Etolin Island. The South Etolin Wilderness area, which is roughly a third of the island, will remain roadless in perpetuity. The undeveloped areas will still function as habitat refugia. Many of the harvest areas are designated as helicopter harvest with 70 percent retention of the basal area, which would result in areas of uneven-aged forest still suitable for marten. These areas will also have a higher percentage of downed logs for marten denning, and slash, which would provide habitat for prey.

ADF&G-25

Response: Please see response to comments ADF&G-8, 21, and 24. While many different kinds of analyses could be done on any resource, the analyses chosen to predict the effects to marten were the marten habitat model, which has been peer-reviewed and accepted by the interagency group, and one for road density.

The analysis of habitat fragmentation is not directed to only marten habitat, but includes habitat fragmentation for all species. An analysis on patch sizes has been added to the Navy FEIS with more explanation on the effects on the connectivity of these patches. Effects to marten habitat are considered in the Wildlife section of the FEIS. Fragmentation of old growth was also discussed in the Old-growth Resource Report.

ADF&G-26

Response: Flynn et al. 2004 was reviewed and placed in the project record. However, modifications to the marten model are not considered at the project level. If modifications to this model are recommended, they will be peer-reviewed before incorporated. Class I stream information is in the Watershed and Fisheries section of Chapter 3 in the Final EIS, and in the Watershed and Fisheries Resource Report.

ADF&G-27

Response: A separate analysis that only considered high-value marten habitat within inventoried roadless areas was not completed. Some inventoried roadless areas would not remain as refugia in the future, since the LUD may allow for timber harvest and/or road construction. Conversely, many areas within areas considered as roaded may remain as refugia since they are within areas where timber harvest is not allowed – beach buffers, riparian management areas, unstable slopes, or areas protected for other resources.

ADF&G-28

Response: Please see response to comments ADF&G-19 through 27. More information has been added to the Navy FEIS on patch size and connectivity.

ADF&G-29

Response: The Legacy Structure Standard and Guideline has been incorporated into the Navy project between Draft EIS and Final EIS. Information on the discontinuation of the Marten Standard and Guideline are located in the FEIS. The rationale for the replacement by the Legacy Standard and guideline is in the 2008 Forest Plan Record of Decision. The Forest Plan ROD provides transition language for timber projects and identifies Navy as a Category 2 timber project. This project is consistent with this transition language. None of the project area VCUs requires legacy structure retention (Forest Plan p. 4-90 and 4-91).

ADF&G-30

Response: Please see response to comment ADF&G-29. The Legacy Standard and Guideline was still draft at the time of the release of the Navy DEIS and this assessment could not be made.

ADF&G-31

Response: The Forest Plan ROD provides transition language for timber projects and identifies Navy as a Category 2 timber project. This project is consistent with this transition language. The Forest Plan Goshawk Standards and Guidelines (p. 4-99 and 4-100) have been applied to this project. It was appropriate in the DEIS to state that the standards and guidelines would be applied as directed by the Forest Plan since that was the direction, at the time. The changes to the Goshawk Standards and Guidelines are explained on pages 22 and 23 of the 2008 Forest Plan Record of Decision. Confirmed nests will still be protected with a 100-acre no-harvest old-growth buffer.

ADF&G-32

Response: Forest Plan Goshawk Standards and Guidelines (Forest Plan p. 4-99 and 4-100) have been followed for confirmed nests and will be followed for the life of the Forest Plan. The Biological Assessment/Biological Evaluation (BA/BE) found that the action alternatives may have an effect on the goshawks and their habitat within the project area. Discussion of those effects is in Chapter 3 of the Final EIS, under Threatened, Endangered, and Sensitive Species. In addition, an inactive nest was discovered in 2008 near Unit 84 after the analysis for the Navy FEIS was completed. This nest was buffered and will be taken into consideration during the decision for Navy Final EIS.

ADF&G-33

Response: Please see response to comment ADF&G-32. The effects to foraging habitat were considered in the analysis for the effects to productive old growth both in the BA/BE and the Navy FEIS. Foraging habitat is characterized by forested stands with a greater diversity of age classes and structural characteristics (e.g., snags, woody debris) than nesting areas (Reynolds et al. 1992). The reduction in suitable foraging and nesting habitat is expected to affect goshawks by removing habitat they use now and that they could use in the future. Harvest could increase competition, increase predation, reduce life expectancy and reduce nesting success on managed lands. The habitat on non-managed lands would not be reduced and is expected to provide enough habitat for a viable population.

ADF&G-34

Response: The Mosman nest site is now within a small OGR and the proposed units and roads in the DEIS close to the nest site area are no longer included in any of the action alternatives. Chapter 2, Changes between Draft and Final discusses the changes to small OGRs as a result of the Forest Plan. Please see response to comment ADF&G-29.

ADF&G-35

Response: Please see response to comment ADF&G-32. All Forest Plan Goshawk Standards and Guidelines (Forest Plan p. 4-99) have been followed. Monitoring of sensitive species, like Queen Charlotte goshawk, is part of the Forest Plan monitoring plan (Forest Plan p. 6-10).

Appendix B



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

January 14, 2008

Reply to
Attn Of: ETPA-088

Ref: 05-074-AFS

Frank Robert, Planning Staff
Tongass National Forest
Wrangell Ranger District
PO Box 51
Wrangell, AK 99929-0051

Dear Mr. Robert:

The U.S. Environmental Protection Agency (EPA) has reviewed the draft Environmental Impact Statement (DEIS) for the **Navy Timber Sale** (CEQ No. 20070503) in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309, independent of NEPA, specifically directs EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Under our policies and procedures we evaluate the document's adequacy in meeting NEPA requirements.

The Navy Timber Sale project area is located on central Etolin Island, approximately 22 miles southwest of Wrangell Island and is within the Wrangell Ranger District of the Tongass National Forest, in southeast Alaska. The DEIS proposes five action alternatives for harvesting timber, and one no-action alternative. The action alternatives range from 18.7 to 97.9 million-board feet (MMBF) of timber for harvest in the Navy project area. Major issues identified during the scoping process included timber supply and economics, old-growth reserves, wildlife habitat fragmentation, inventoried roadless areas, and road construction in the Navy Watershed.

Alternative D is identified as the Forest Service's (FS) Preferred Alternative, harvesting 36 MMBF of timber on 973 acres and building 5.7 miles of new road and 5.3 miles of temporary road. All temporary roads would be decommissioned after the timber sale. Timber would be removed by cable, shovel, and helicopter yarding systems. The existing log-transfer facility (LTF), Anita Bay would be used to transport logs. The Preferred Alternative would also convert 1,190 acres of old-growth stands to an even-aged condition, and 1,339 acres to an uneven aged condition.

Based on our review, we have rated the DEIS "EC-2", Environmental Concerns—Insufficient Information, due to the potential for water quality impacts, particularly in the Anita Creek, Quiet Creek, and Kindergarten Lake watersheds, as well as destruction of relatively high amounts of Productive Old Growth (POG) habitat. The Preferred Alternative does, however, develop fewer road miles than three other action alternatives, does not impact or create a new LTF in the Navy watershed, and is ranked highest, along with Alternative F, in addressing the timber supply and economics issue. A copy of our rating and a summary of our comments will be published in the Federal Register. An explanation of our rating system is enclosed for your information. We also request that the FEIS provide certain clarifying information regarding the Preferred Alternative, as discussed below.

EPA-1

In our scoping letter on December 21, 2005, EPA requested that the FS include an environmental analysis of the existing LTF (Anita Bay), as well as the applicable general permit requirements and monitoring results, to demonstrate baseline conditions for the area with respect to sediment and bark deposition and adjacent aquatic habitats that may be impacted. This information could not be found in the document. We also requested that a discussion of current funding for road maintenance and culvert replacement efforts in context of the planned new and temporary roads be included. This information was limited. *We recommend that the FEIS include additional information on both of these subjects.*

EPA-2

EPA-3

The DEIS does include a good summary of the tribal consultation activities that took place during the scoping and preparation of the document. The issue of Environmental Justice (EJ), however, does not appear to be addressed outside of the discussion of ANILCA 810 requirements. Please see EPA's scoping letter to see our recommendations regarding the development of an EJ analysis. *We recommend that such an analysis be included in the FEIS.*

EPA-4

Purpose and Need

The DEIS states that the Purpose and Need for the project is to: 1) manage timber to achieve goals of the 1997 Forest Plan, to accomplish the desired conditions prescribed in the Land Use Designations (LUDs); 2) assist in providing a continuous wood supply to meet society's needs; and 3) contribute to the job market and economy of southeast Alaska. This is a broad statement that could be achieved through alternatives considered through a much wider range of timber sale/harvest activities in southeast Alaska than what is presented in the DEIS. *EPA recommends that the FS revise the Purpose and Need statement to reflect the specificity of the goals of the Navy Timber Sale in the broader context of the Forest Plan, or expand the range of alternatives to cover the "full spectrum" of possible alternatives.*

EPA-5

Water Quality and Cumulative Impacts

EPA recognizes that the Preferred Alternative includes important Best Management Practices (BMPs) that reduce water quality impacts (e.g., riparian management areas, felling logs away from streams, removing the most landslide prone units from harvest), and provides analysis of the proposed action relative to forest plan standards and guidelines in a clear manner. We also appreciate the clarity of analysis presented in the DEIS.

However, the DEIS indicates that although little to no water quality monitoring has been completed in the project area, impacts that result from timber harvesting activities are known (increase in temperature, sediment increase, destruction of aquatic habitat, etc.). *EPA recommends minimal baseline monitoring prior to any timber harvest activity in the project area. We also recommend that the FEIS:*

EPA-6

- *Prohibit harvest from slopes greater than 72%, even if on-site slope stability analysis has been conducted (Alternative D has 75 units (160 acres) of slopes greater than 72%);*
- *Consider only uneven-age or two-age management to reduce cumulative watershed impacts; and*
- *Consider the selection of Alternative F to reduce the risks to sedimentation and water yield, particularly for the Anita Creek, Quiet Creek, and Kindergarten Lake Creek watersheds.*

EPA-7

EPA-8

EPA-9

Preferred Alternative

In general, EPA supports the consideration of any alternative or modified alternative that can meet project need and FS requirements, while avoiding or further minimizing environmental impacts, and particularly impacts to water quality. EPA continues to support alternatives that are consistent with the Clean Water Act 404(b)1 guidelines in that they represent the least environmentally damaging practicable alternative (LEDPA). *We recommend that the FS consider selecting Alternative F in its FEIS and Record of Decision (ROD) since this alternative does not require the construction of any new or temporary roads in Inventoried Roadless Areas, it ranks first in the FS comparison for economics, does not include any activity in the Navy Watershed, and causes the least amount of wildlife habitat fragmentation among the action alternatives.*

EPA-10

Specific Comments

Below are specific comments on readability, or suggestions for edit or correction:

- *Pages in the Table of Contents (pg. i) for the Summary are incorrectly numbered.*
- *Executive Summary incorrectly lists Final EIS, instead of Draft EIS, in title.*
- *Pg 1-11—States four issues identified in scoping, but five issues were actually identified.*
- *Pg. 3-113—First two paragraphs under "Analysis Area" section are duplicated.*

EPA-11

Thank you for the opportunity to provide comments on the DEIS. If you have any questions, you may contact Jennifer Curtis of my staff at (907) 271-6324 or curtis.jennifer@epa.gov.

Sincerely,



Christine Reichgott, Manager
NEPA Review Unit

Enclosure

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

Environmental Impact of the Action

LO – Lack of Objections

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

EC – Environmental Concerns

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

EO – Environmental Objections

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

EU – Environmentally Unsatisfactory

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

Adequacy of the Impact Statement

Category 1 – Adequate

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

Category 2 – Insufficient Information

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

Category 3 – Inadequate

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

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

Appendix B

Forest Service Response to Environmental Protection Agency (EPA) Comments:

EPA-1

Response: Forest Plan Standards and Guidelines, best management practices, and mitigation measures will minimize the effects to the watersheds. The management objective for the Timber Production LUD is timber management. The Fisheries and Watershed section of Chapter 3 has been updated to display additional analysis and data as a result of the DEIS public comments. Chapter 2, under Changes Between Draft and Final, Watersheds and Fisheries, and Unit and Road Cards, discusses changes to the document. Additional stream mapping, risk assessments, and changes to unit boundaries and road locations have been added to address water quality concerns.

EPA-2

Response: The environmental analysis for the Anita Bay LTFs was done prior to the construction of the LTF. Relevant information such as the permit and dive survey results are in the planning record and have been added to the Transportation and Watershed and Fisheries sections in Chapter 3 of the FEIS and the resource reports in the planning record.

The most recent NPDES permit (Authorization No. AK-G70-0014) has been added to the planning record. A new permit has been applied for, but due to a backlog of permit requests, the Alaska Department of Environmental Conservation extended the existing permit administratively until a new permit can be issued.

EPA-3

Response: Funding for road maintenance, including culvert replacement, is addressed on a District-wide level in the Wrangell Ranger District ATM EA/DN (Forest Service 2007b). That document analyzed roads in the Navy project area and is discussed in Chapter 3, Transportation Cumulative Effects section. The planned National Forest System (NFS) and temporary roads will be maintained by the purchaser during the time of the timber sale as part of the timber sale contract. Temporary roads will be decommissioned as part of the contract. Replacement of red-pipe culverts is addressed under response to comments ACMP-7 and 30 above.

However, the priorities related to constructing new roads versus repairing roads and replacing culverts is not set at the project level and is therefore outside the scope of this project.

EPA-4

Response: An Environmental Justice section is included in Chapter 3 of the Navy FEIS.

EPA-5

Response: The range of alternatives considers an amount of timber harvest from 0 MMBF to 87.5 MMBF. We could have chosen a wider range and harvested more timber from this project area. However, in order to respond to other resource concerns, we did not. Also, there could be an infinite number of alternatives that could be developed within this range. CEQ guidance is “When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS.” In addition to the six alternatives we analyzed in depth, there were alternatives that were considered but eliminated from detailed study. The public comments on the DEIS also recommended three more alternatives that have been considered by the ID Team and deciding officer. The deciding officer has reviewed and determined that the project has an adequate range of alternatives. A discussion of the alternatives analyzed in detail and those that were not analyzed in detail is located in Chapter 2 of the FEIS.

EPA-6

Response: The Tier-two stream surveys conducted on project area streams provide baseline information that can be used to evaluate the amount of disturbance and impact the proposed activities are having. Additional baseline data is collected as part of Forest Plan monitoring. Effectiveness monitoring using water quality data is conducted at the Forest level and reported annually in the Forest Plan monitoring and evaluation report.

EPA-7

Response: The Forest Plan allows for harvest on slopes >72 percent after an on-site stability analysis is conducted and the slope is found to be stable (Forest Plan p. 4-65). This project will follow appropriate Forest Plan direction.

EPA-8

Response: The Forest Plan Standards and Guidelines are designed to protect watersheds. All Class I and II streams are protected by TTRA buffers and RMA and RAW; Class III and IV streams are protected by riparian management areas (RMAs). Beach buffers serve to protect old-growth habitat, and reduce cumulative watershed effects. In addition, existing openings need to be regenerated with conifers that are 5 feet high before they are no longer considered an opening. These measures are designed to protect watershed quality.

Uneven-aged management prescriptions have been incorporated into the action alternatives and can be used to meet water quality and other resource concerns; for instance, helicopter logging may be proposed due to prohibitive road construction costs. Helicopter logging results in a lower percentage of soil disturbances than ground-based harvest systems. Two-aged management is used in the Navy project area as a method of meeting scenery requirements of the Forest Plan for Visual Priority Travel Routes adjacent to the project area (Forest Plan p. F-6). However, the goals and objectives of the Timber Production LUD, which most of the Navy project area is allocated as, include providing areas that can be efficiently logged. In Southeast Alaska, clearcutting is the most efficient silvicultural prescriptions since it allows the most mobility of equipment.

EPA-9

Response: Your preference for Alternative F is noted.

EPA-10

Response: All of the alternatives are consistent with Forest Plan direction and the Clean Water Act. The EPA's preference for Alternative F has been noted. In the FEIS, all proposed harvest and road construction in the Navy watershed has been dropped, due to the 2008 Forest Plan Timber Sale Program Adaptive Management Strategy (Chapter 2, Changes Between Draft and Final), which addresses one of your concerns.

EPA-11

Response: These typographical errors have been corrected in the Final EIS.

Appendix B

Navy Timber Sale Draft Environmental Impact Statement Comments

1. Medium Old-Growth Habitat Reserves

The Forest Plan incorporates large, medium, and small old-growth habitat reserves as the cornerstone of the Forest's old-growth habitat conservation strategy. It is important that these reserves at least meet the minimum criteria found in Appendix K. of the Forest Plan. The main objective of reserves is to support viable and well distributed populations of old-growth associated wildlife species.

In the DEIS it is clearly stated that Etohin Island is at or below the threshold level suggested to maintain viable populations of wolves while also satisfying human subsistence needs for deer under any of the alternatives, which would include the no-action alternative (the current condition).

With this expressed concern for wolf population viability, it would be extremely important to evaluate and display the land allocation and habitat components for the medium old-growth habitat reserves known as the Kunk MOGR (VCU 4630), and the Steamer MOGR (VCU 4660) to determine if these two medium reserves meet Forest Plan Appendix K. criteria.

If these two reserves fail to meet the minimum criteria as outlined in Appendix K., then additional suitable wildlife habitat contained within the project area, and possibly within proposed harvest units, may need to be added and protected in order to meet this criteria and to maintain the wildlife viability concerns expressed. This important evaluation is currently missing from the DEIS.

Current Forest Plan direction warrants that the evaluation of size and habitat composition of old-growth habitat reserves is appropriate during the project level environmental analysis. I request this evaluation be conducted as part of the Navy FEIS.

2. Landscape (Old-growth) Connectivity between Medium Old-growth Habitat Reserves

Both this DEIS (page 26) and the Forest Plan underscores the importance of old-growth habitat connectivity between medium and large reserves. The Forest Plan provides a provision to maintain this connectivity by designing productive old-growth corridors of sufficient width for interior forest conditions to occur between these reserves (Forest Plan 4-120). This connectivity is an important component of the Forest's old-growth habitat conservation strategy.

In the Navy DEIS a map displaying the interior forest conditions is presented as Figure HF-1. If the boundaries of the Kunk and Streamer MOGRs were drawn or overlaid on this map then one could conclude that a contiguous corridor of interior old-growth connecting these two reserves does not exist in the current condition.

The lack of old-growth habitat connectivity between these two reserves poses a potential barrier to the dispersion and distribution of endemic species. It is important to provide the likelihood that these species of concern (i.e. isolated endemic mammals), which may be dispersal limited, in this area of poor connectivity have a high likelihood of persistence. To reach this objective, old-growth habitat corridors that currently exist, but may not be

GI-1

GI-2

contiguous between these two MOGRs should be carefully identified, evaluated, and protected, under all alternatives proposed.

↑ GI-2, con't.

Related to this concern is the pinchpoint located between Anita Bay and Burnett Inlet as described on page 26. It appears that this specific pinchpoint was missed in Forest Plan FEIS analysis and subsequent Tongass National Forest Land and Resource Management Plan Implementation Policy Clarification (TPIT 1998). Full protection of the old-growth habitat within this pinchpoint may be critical under all alternatives proposed in this DEIS, and should be categorized as either a “Tier 1” or “Tier 2 “type of area requiring additional evaluation. This pinchpoint location was possibly overlooked in the team review conducted as part of TPIT (1998).

GI-3

4. The Navy DEIS fails to sufficiently evaluate and disclose impacts to important deer winter range.

Forest Plan direction calls for the identification and consideration of important deer winter range in project planning and as important criteria in the evaluation of existing or alternative small old-growth habitat reserves. The Forest Plan FEIS analysis describes important deer winter range as forested stands that containing an abundance of understory forage and a canopy structure that is capable of intercepting snow, so that forage is available to deer during deep snow conditions. Important deer winter range is represented in the medium and high volume strata old-growth forests. The logging of important deer winter range reduces deer habitat capability (Forest Plan FEIS page N-30 and N-31).

However, the features of important deer winter range as described in the preceding paragraph are not used to delineate this specific habitat type in the Navy DEIS. A range of habitat suitability index (HSI) values contained within the deer winter habitat capability model is used as the method of choice to delineate important deer winter range in the Navy DEIS. In at least three circumstances, this method contradicts the description used in the Forest Plan FEIS.

GI-4

First, recent clearcuts (less than 26 years old), located at low elevations (below 800 feet) with south (.75 HSI) and west (.60 HSI) aspects can possibly be considered important deer winter range, since these young growth stands receive scores of .75 and .60 HSI, thereby falling within the criteria set in the Navy DEIS as important deer winter range (this range is .6 to 1.3 HSI).

GI-4a

Based on ample deer habitat research in Southeast Alaska, clearcuts are not considered important deer winter range, since they lack the canopy structure capable of intercepting snow. To display a clear example of this circumstance please view Figure 3-4 of the Scott Peak Project Area FEIS and ROD, page 3-53 (December 2005). There are at least fifteen clearcuts located on the eastern shore of Portage Bay that are identified as important deer winter range.

GI-4b

Second, when potential logging units are proposed in the action alternatives and added into the deer model, it scores high and medium volume strata stands located at low elevations with south and west aspects with HSI values of 1.3, 1.01, .63, and .50. Three of these scores fall within the criteria selected in the DEIS. When these stands are logged in the model they remain important deer winter range since the HSI scores merely shift these logged acres to a different habitat category and give them scores of .75 and .60, therefore, they remain in the

GI-4c

Appendix B

important deer winter range category. Old-growth stands that are currently at .50, and are presently outside of the criteria, shift into the range and become important deer winter range when logged. Also, the habitat capability of these particular stands increase when this shift occurs. This acts to artificially create important deer winter range or buffer past, present, and future impacts to important deer winter range.

GI-4c,
con't.

Finally, the model assigns low volume strata stands located at low elevations (below 800 feet) with south (.39 HSI) and west (.31 HSI) aspects, in low snowfall areas that do not presently meet the important deer winter range criteria into important deer winter range when they are logged, since they now receive HSI scores of .75 and .60. This also acts to artificially create important deer winter range or buffer past, present, and future impacts to important deer winter range.

GI-4d

These three circumstances discussed above are inherent within the existing deer model, and act to contradict features of important deer winter range as described in the Forest Plan FEIS. This leads the decision maker and the public to an incorrect and false portrayal of true reductions from historical acres of important deer winter range.

GI-4e

According to NEPA, scientific methods must clearly be stated and these methods shall make references to scientific and other sources relied upon for conclusions. The Navy DEIS is tiered to information and references provided in analysis displayed in the Forest Plan FEIS. Impacts to important deer winter range are not consistent with this document and are therefore in violation of NEPA.

GI-4f

Please consider another method to determine and evaluate important deer winter range that is consistent with the description in the Forest Plan FEIS. In addition, I request that the Excel spreadsheet version of the deer winter habitat capability model, developed by Eugene DeGayner with modifications by Duane Fisher, be made available to the public in the planning record or as an appendix to the wildlife resource report for the Navy FEIS.

5. Fragmentation of Old-Growth Habitat

Old-growth habitat fragmentation is identified as one of five significant issues on page 11 and 12 of this DEIS (although it states in the first paragraph of page twelve that four issues are determined to be significant). However, the units of measure used to display impacts that address the significant issues of wildlife habitat fragmentation fails to specifically link old-growth habitat fragmentation with its negative consequences to associated wildlife species. This failure and is contrary to conventional thought in conservation biology. All three units of measure to determine the significance of fragmentation are merely displayed and evaluated as productive old growth habitat reductions. This measure may not necessarily show the true consequences to wildlife species. It is the suitability of interior old-growth habitat patches that is important to specifically evaluate and measure, since these areas are the most stable environments for associated species.

GI-5

The impacts to wildlife species by additional old-growth habitat fragmentation can be objectively and quantitatively measured by applying habitat capability values to the existing interior old-growth habitat patches contained within the project area and shown in Figure HF-1. These patches could then be compared to each other under each alternative to determine the most suitable patches. This would provide the necessary link of fragmentation to the negative consequences to associated wildlife species and address the population

viability concern for wolves expressed in the DEIS.

Evaluating interior old-growth habitat patches using habitat capability in the manner described above would most likely result in the most suitable patches being the very same patches that are impacted most significantly by the action alternatives. This can be expected, since most the proposed timber harvest units are located in low elevation old-growth habitat having the highest habitat capability.

↑
GI-5,
con't.

6. Deer and Marten Habitat Capability Models

On page 142 of this DEIS the importance of low elevation, high volume old growth habitat for deer in severe winters is highlighted. On the next page it is noted that deer habitat values as expressed by the deer model may over estimate the impact to habitat capability, since the model treats partial harvest as clearcuts.

It is appropriate to also mention that areas of low elevation old-growth habitat removed by existing and potential road construction, and rock quarries, are not taken into account in the deer and marten habitat capability models and in the evaluation of high value marten habitat (the project area has already lost half of the historical amounts of high value marten habitat). Noting the amounts of existing and proposed roads, this could add up to hundreds of acres of low elevation high value wildlife habitat that is not currently accounted for or disclosed in the habitat capability models.

GI-6

Summary

These six comments point to current major deficiencies in the Navy Timber Sale DEIS that must be resolved. These deficiencies are to the extent and degree that this DEIS does not disclose all of the direct, indirect, and cumulative impacts of this large timber sale proposal on old-growth habitat resources and associated wildlife species. As a consequence, the DEIS is currently so inadequate that an informed decision on the selection of any alternative, including the no-action alternative, would seem to be impossible without major corrections.

GI-7

Thank you for the opportunity to comment on this proposal.

Sincerely,
/s/ **Glen Ith**
PO Box 1612
Petersburg, AK 99833
January 13, 2008

Appendix B

Forest Service Response to Glen Ith (GI) Comments:

GI-1

Response: The viability of a species is addressed through Forest Plan at a Forest-wide scale to comply with NFMA. The viability of the wolf population has been addressed in the 2008 Forest Plan FEIS, Volume 1 (p. 3-284 and 3-285) and in the Forest Plan Record of Decision (p. 20). All the small Old-growth habitat Reserves within the Navy project area (VCUs 4640, 4650, 4670, and 4680) were redesigned and located according to the 2008 Forest Plan decision made in January 23, 2008. For more project-level information, see Chapter 1 of the Navy FEIS under Relationship to Forest Plan, and in Chapter 2, Changes Between Draft and Final.

The evaluation of the medium OGRs near the project area was not part of this project-level analysis, since the placement of medium and large OGRs were part of the Forest Plan analysis. The medium and large OGR locations were finalized in the 1997 Forest Plan and brought forward into the 2008 Forest Plan (Appendix K). When the placement of these OGRs occurred, it was realized that some medium and large OGRs may not meet the Forest Plan size and composition requirements, but the OGRs were placed to meet minimum spacing criteria (1997 Forest Plan FEIS, Appendix N; N-20). Only Alternative C proposes activities that affect the Steamer medium OGR and they are disclosed in the Fragmentation and Transportation sections of Chapter 3 in the FEIS.

GI-2

Response: There is a natural lack of old-growth connectivity between these two medium OGRs due to separation by saltwater and areas of non-forest habitat. This was considered with the placement of small OGRs during the 2008 Forest Plan analysis. This was also considered during the analysis of Issue 2 for the Navy project – Wildlife Habitat Fragmentation. Figures 3-4 and 3-5 have been updated to show the medium OGRs for reference to the habitat connectivity. Since portions of habitat connectivity routes are naturally fragmented, the animal species that live in a fragmented environment are adapted to that environment. The scrub corridor breaks do have POG adjacent to them, although in some cases it may not be the recommended 1,000-foot width. Only one connection is required between these medium OGRs and is mostly maintained by the 1,000-foot beach buffer from Steamer Bay north towards the Kunk medium OGR.

GI-3

Response: This area was not identified as either a Tier 1 or Tier 2 in the TPIT clarification letter. Ecological pinch-points are defined in the 2008 Forest Plan as “areas where habitat conditions within a landscape facilitate movement between habitat patches” (Forest Plan FEIS p. 3-222).

A small OGR was considered in this area for both the analysis for Navy and the Forest Plan. Additional discussion on the Anita Bay pinch-point has been added to the Issue 2 - Fragmentation section of Chapter 3. Much of this area is non-productive forest or muskeg.

This pinch-point is also an important area for a road connection to the existing LTF and has already had several roads and an LTF constructed, and previously harvested units. The placement of the small OGR in this location would place two different objectives in conflict and may result in either isolating timber within the Timber Production LUD or to designate an OGR without much old-growth habitat and with roads present. Instead, the decision for the 2008 Forest Plan placed the small OGR in the relatively undeveloped site to the north of Anita Bay.

GI-4

Response: The deer model was used as one method to compare the effects on deer habitat. The analysis on fragmentation, interior productive old growth, elevational corridors and connectivity also help assess the effects on deer habitat.

Important deer habitat was defined by the upper quartile of deer habitat, as determined by number of historical acres, to comply with the Memorandum of Understanding (MOU) between the State of Alaska and Forest Service, Alaska Region on Coastal Zone Management Act/Alaska Coastal Management Program Consistency Reviews (Attachment 1). The MOU states that the Forest Service will provide information on “[a]ll deer winter range in project area (that scores above zero in most recent interagency approved version of deer HSI model) distinguished by quartile (i.e. by 25 percent of acres)”.

In the Navy DEIS, this corresponded to those acres with a HSI value of 0.60 or greater. For the Navy FEIS, the value of 0.46 or greater was used. The difference in these values was caused by the use of the standardized model coefficients that were used for the analysis in 2008 Forest Plan FEIS. The value was also affected by the correction of a vegetation coding error for non-productive forest.

Looking at the spreadsheet, both values fall within the range of high- and medium- volume strata forest. The exception is for recent clearcuts or low-volume strata in locations that receive low snow levels and at low elevations. See responses to comments GI-4a through GI-4d for information on these situations.

GI-4a

Response: The discussion of important deer winter ranges and our analysis assumptions are discussed in the Wildlife section of Chapter 3 and in the Wildlife Resource Report in the project record. See response to comment GI-4.

GI-4b

Response: Clearcuts do lack the canopy structure capable of intercepting snow. However, these stands receive a higher HSI score, since during most winters, there is less or no snow at low elevations and the forage is available to the deer. Although the deer model does not account for the juxtaposition of stands, often these openings are adjacent to old growth, especially if adjacent to the beach buffer. This is discussed in the Issue 2: Fragmentation and Wildlife sections of Chapter 3 and in the Wildlife Resource Report in the project record.

GI-4c

Response: Habitat capability in medium- and low-volume stands in low-snow areas increases after harvest by about 20 percent and 90 percent, respectively, due to increased forage availability in the shrub-sapling stage. These stands may not provide snow intercept, but they may provide important winter forage areas. The deer model was run for the existing time period, post harvest, and 25 years after harvest to show the change in effects.

GI-4d

Response: Low-volume strata stands may receive a higher rating after harvested due to the flush of forage available immediately after timber harvest. This HSI value will lower when stem exclusion is reached, estimated to be 25 years old in the model. See response to comment GI-4c.

GI-4e

Response: All models have limitations and cannot accurately portray the exact conditions of all stands. They are used as a tool to quantitatively display the difference between alternative actions. This is discussed in the Wildlife sections of Chapter 3 and in the Wildlife Resource Report in the project record.

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GI-4f

Response: Effects to important deer winter range were considered and the analysis is consistent with the method used in the 2008 Forest Plan FEIS. The MS Access geodatabase which contains both the spatial and tabular data used in the deer model is in the project record and can be requested by the public. The GIS layer for deer winter range in this database uses the same habitat values as the Degayner/Fisher spreadsheet. An Excel spreadsheet with summary statistics by HSI value by alternative generated from this database is available in the project record.

GI-5

Response: A patch analysis that examined the effects to interior old growth was completed and displayed in the FEIS. See Chapter 3, Issue 2. Patch sizes and locations are displayed in Figure 3-1 and 3-2 of the FEIS. The discussion on connectivity was also expanded in the FEIS. To assess habitat connectivity on Etolin Island, the number of OGRs and other non-development LUDs that are connected to each other via continuous POG as mapped in GIS were compared.

GI-6

Response: The deer and marten models are limited and do not consider the loss of acres of habitat from roads or rock pits. All of the resource sections of Chapter 3 and the associated resource reports considered road construction and associated activities as part of the effects analysis of “harvest activities”. The miles of existing and proposed road can be multiplied by 60 feet (average clearing width) to obtain a rough estimate although roads are not always through old-growth forest.

GI-7

Response: Several of the points made in your comment letter reflect the deficiencies inherent in the use of wildlife models, which cannot be corrected in a NEPA document. The public comment period is the part of the process to ensure we have considered all concerns in the FEIS. Several items were added to the FEIS to respond to the public comments. The Changes Between Draft and Final in Chapter 2 of the FEIS provides a discussion of the changes that have been made to the FEIS.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

January 11, 2008

Frank Roberts
 Planning Staff
 Wrangell Ranger District
 Tongass National Forest
 P.O. Box 51
 Wrangell, Alaska 99929

RE: Navy Timber Sale, Draft Environmental Impact Statement

Dear Mr. Roberts:

The National Marine Fisheries Service (NMFS) has reviewed the Navy Timber Sale Draft Environmental Impact Statement (DEIS) and Essential Fish Habitat (EFH) assessment. The project is located on central Etolin Island approximately 22 air miles south of Wrangell, Alaska.

The Navy Timber Sale would harvest between 1,322 to 7,800 acres of Forest Service (FS) land, remove between 18.7 and 97.9 million board feet of timber and construct up to 19.9 miles of new FS roads. The FS preferred alternative, Alternative D, would harvest 2,514 acres, remove 36 million board feet of timber and construct 5.0 miles of new FS roads, 5.3 miles of temporary roads and reconstruct 0.7 miles of existing road. Under alternatives B and C, new log transfer facilities (LTF) would be constructed at Burnett Inlet near Navy Creek and Mosman Inlet at Cooney Cove, respectively.

The EFH assessment describes potential impacts to EFH in fresh and marine waters. Freshwater fish habitat in the Navy Project area supports populations of pink salmon, chum salmon, coho salmon, steelhead trout, and Dolly Varden char. Potential adverse effects to freshwater EFH include direct effects associated with fish stream drainage structure installation and removal, short-term sediment increases, incidental wind throw associated with some stream buffers, and loss of large wood regardless of which alternative is selected. Impacts would occur by entering Navy Lake Creek watershed, which supports one of the highest fish producing streams on Etolin Island, despite limited but critical rearing habitat (located in the depositional stream segments present in the lower portions of the watershed). Navy Lake watershed would be clearcut and modified with 2.7 miles of road construction under Alternative B. In addition, Pump Creek, which has the most anadromous fish habitat of any watershed in the project area (8.1 miles), and is one of the top fish producing streams on Etolin Island has existing impacts by the presence of "red" pipes (culverts). "Red" pipes are those that are restricting fish passage, and these five are the most of any watershed on Etolin Island. Finally, Alternatives B and C would include significant harvest and road construction on unstable slopes, ranging from 420 (B) to 589 (C) acres of harvest on slopes greater than 72%.



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

- The majority of the proposed roads will be stored following timber sale activities.
- All class I and II streams in the Navy Project area would be protected by a minimum 100' no-harvest buffer with more area protected for different process groups, sensitive riparian soils, elevated windthrow concern, and other relevant resource concerns.
- Maintenance will be built into road construction contracts that will correct existing erosion features.
- Site specific data was collected on all fish streams in the project area to ensure proper windfirmness buffers, proper channel classification, and the size of riparian management areas.
- BMPs would be implemented to protect water quality and aquatic habitats for all freshwater streams in the project area.
- Windfirmness has been incorporated into buffer design to protect all stream and lake buffers.

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

The Navy Timber Sale may include direct barging of logs or floating of logs if the sale operator will “apply for additional permits to water logs”. Therefore, bark deposition at the existing Anita Bay LTF, or the newly constructed LTFs at Burnett Inlet and Mosman Inlet may impact marine EFH by bark, sediment and debris deposition on the seafloor that diminishes habitat value for managed species and their prey due to additional bark accumulation that smothers subtidal habitat or creates unfavorable chemical conditions. Both new LTFs would be a “low angle rock ramp” design that would extend into the lower intertidal zone. Low angle ramps may be used for either barging or direct floating of logs into the water. Construction of either new LTF would further directly impact marine EFH by modifying the geophysical and biological characteristics of the intertidal zone and could indirectly impact marine EFH from incidental spillage of fuel or other hazardous materials associated with the facility.

The FS has proposed the following measures to minimize negative effects to marine EFH.

- LTF footprint will be minimized to reduce sediment production and land disturbance.

- LTF locations are located in areas where bark and fine sediments will be dispersed by strong tidal currents.
- Habitat surveys have been completed to determine marine habitat and potential impact areas. Locations of new LTFs considered siting guidelines as described in the Forest Plan (Appendix G). None of the LTFs are within 300 feet of an anadromous fish stream, in sensitive areas and are in areas described as typical for marine habitat of the region.
- Cumulative bark deposition is expected to remain within permit thresholds.
- There are no effects expected to affect marine-based aquaculture in Anita Bay or near Cooney Cove.

Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) requires federal agencies to consult with NMFS on all actions that may adversely affect EFH. NMFS is required to make conservation recommendations, which may include measures to avoid, minimize, mitigate or otherwise offset adverse effects. As you have acknowledged in your EFH assessment, the Navy Timber Sale would adversely affect both freshwater and marine EFH. Consequently, NMFS offers the following EFH Conservation Recommendation pursuant to Section 305(b)(4)(A) of the MSFCMA.

For freshwater EFH:

- | | |
|--|--------|
| 1) No harvest or road construction should occur in the Navy Lake Creek watershed. This watershed should be fully protected for its preeminent value as a high producing and pristine watershed in this area. Rearing habitat in this watershed is limited and located in the lower reaches where cumulative upstream effects of logging activities could concentrate and place the salmon productivity of the watershed at risk. | NMFS-1 |
| 2) All “red” culverts in the Pump Creek watershed should be replaced to provide adequate fish passage. This watershed has the most fish habitat of the project area, which should be made fully accessible. | NMFS-2 |
| 3) No harvest should occur on steep slopes (e.g., >67%) and road construction should be minimized in fish bearing watersheds and streams. | NMFS-3 |

For marine EFH:

- | | |
|---|--------|
| 4) Only barging of logs should be allowed to minimize the deposition of bark at either the existing or new LTF sites. | NMFS-4 |
| 5) If new LTFs are constructed, they should be of the deep water barge facility type rather than low angle ramps. Low angle ramps impact lower intertidal habitat by requiring rock fill. A barge facility would have less impact on the subtidal marine environment due to less bark deposition. | NMFS-5 |

Upon receipt of these EFH Conservation Recommendations, the MSFCMA requires federal

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agencies to respond to NMFS within 30 days informing us of the agency's decision regarding these recommendations.

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

Sincerely,


for James W. Balsiger
Administrator, Alaska Region

cc: *Chris Meade, EPA Juneau
*Tom Schumacher, ADF&G, Juneau
*Richard Enriquez and Bill Hanson, USFWS, Juneau
*Kevin Hanley, ADEC, Juneau
*Erin Allee, ADNR, Juneau
*Don Martin, USFS, Juneau
* NMFS, Juneau
*nepa.comments@noaa.gov

*email

Forest Service Response to National Marine Fisheries Service (NMFS) Comments:

NMFS-1

Response: The Changes Between Draft and Final section of Chapter 2 in the FEIS discusses the changes to the FEIS and the Navy watershed. The proposed timber harvest and road construction within the Navy Lake Creek watershed is no longer under consideration since this area is now in Phase 2 of the Tongass Adaptive Management Strategy (Forest Plan ROD p. 64-66). Suitable and available forest lands were categorized into three phases based on roadless characteristics and resource concerns. Phase 1 lands are those lands that are mostly roaded or can be access from an existing road system. Timber harvest on Phase 2 lands would not be considered until the timber harvest level is at 100 MMBF for 2 consecutive years.

NMFS-2

Response: Red pipes are usually replaced or removed as planned by the Regional Office as funds become available. Some may be replaced through a timber sale or ATM authorization. Prioritization for replacement is by amount of habitat affected and cost. Please see response to comments ACMP-7, 30, and 40 as those responses are about red pipes also.

NMFS-3

Response: The Forest Plan uses 72 percent slope as the maximum slope for lands considered suitable for timber harvest based on engineering analyses of soils in Southeast Alaska (Schroeder and Swanston 1987). Roads and landings on slopes steeper than 67 percent are avoided where feasible. Harvest on slopes steeper than 72 percent requires an on-site slope stability analysis, which considers potential impacts on downslope/downstream beneficial uses such as fish-bearing streams. The Transportation and Soils sections of Chapter 3 of the FEIS and the associated resource reports (planning record) discuss the effects of road construction or timber harvest on steep slopes. Road cards and unit cards include specific practices that will be implemented to mitigate impacts associated with harvest and road construction on steep slopes.

NMFS-4

Response: The timber purchaser would be required to obtain the appropriate permits for barging or rafting prior to operations. The Anita Bay LTF is designed (and permitted) for either barge or rafting operations.

NMFS-5

Response: The shoreline in the Cooney Cove area is not ideally suited for a deep-water barge facility. This is due to the moderately sloped beaches (Haggitt Consulting 2007). Based on observations, it appears that a deep-water barge facility and accompanying bulkhead would involve more fill in the intertidal zone than a barge ramp, resulting in more effects. An engineering survey will be conducted and options will be evaluated based on that data rather than the current estimates. At this time, a design for the LTF has not been completed. Consideration of a deep-water barge facility will be included at the time of the facility design.

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To: comments-alaska-tongass-wrangell@fs.fed.us, americanvoices@mail.house.gov, comments@whitehouse.gov, foe@foe.org, humanelines@hsus.org, info@peta.org, info@defenders.org
cc: media@cagw.org, jersey@nytimes.com
Subject: public comment on navy timber sale deis wrangell ranger district alaska of nov

the scandal plagued us dept of agriculture has a plan for the complete destruction of etolin island. attention frank roberts

1. i object to black tailed deer killing caused by this plan.

2. this plan is an assault on wildlife and birds in this area, which should be protected and is being sold for greed and money. rare plants will be decimated with this plan.

pg 97-this plan kills deer wildlife and birds

pg 118 the water quality will be terribly harmed by this plan and erosion will be rampant. global warming will exacerbate all of these effects and absolutely no attention has been paid to this assault on all of our climate in all parts of the world from this slash plan.

pg 122-the fish and marine habitat will be negatively affected by this slash plan.

pg 134-this plan negatively harms the wetlands, the birthplace of all species and for which there is a wetlands protection act, which seems to be ignored in this faulty plan.

pg 141-this plan will harm bear, otter and all creatures immensely, harming the people who respect the fact that God put these animals on earth and who want to protect these creatures of God.

the bibliography used for this plan is ancient and obsolete. it has no recent research from the last fifteen years, which shows that this country in 2007 is not what it was in 1990 and use of these old documents means a plan not in accord with what is going on in the world RIGHT NOW. THIS PLAN NEEDS TO BE THROWN OUT. MORE MODERN RESEARCH NEEDS TO BE CONSIDERED IN ANY PLAN.

AS TO THE APPENDICES VOLUME

1. timber from the tongass should not be sold

2. forecasts about demand are irrelevant in what happens to nationally owned by taxpayer land since the welfare of all is the most important factor to be considered. this plan in no way considers that. the trees must stay. global warming effects of this plan are far too substantial and negative to be permitted.

any act from 1897 being used here to cut trees in 2007 shows how out of touch the law is in what is permitted today. that law desperately needs review in the face of global warming. it is necessary to protect and keep trees growing to soak up carbon dioxide. the 1897 policy will destroy america in 2007 due to its failure to recognize the changes in america. it is time for private landowners to be responsible for tree cutting and for govt to protect the forests. political hacks working for profiteers are causing danger to all americans with a plan like this.

i object to this entire plan. the secretary of agriculture is in fact selling us all out with this plan to sell lumber so cheap and to thereby swindle the american taxpayers. Rico should be investigated here. this agency is misusing the laws and harming america.

BS-1

BS-2

BS-3

BS-4

BS-5

BS-6

BS-7

future timber market alleged "demand" should not be a primary factor in any plan to cut trees with the exacerbation of global warming caused by that alleged "demand". the public has to learn to reuse the lumber that we have already cut. we need to stop thinking forests are inexhaustable. global warming effects must be primary, not some local lumber barons demands to enrich himself, or some political hack looking to make some extra millions.

↑
BS-7,
con't.

this timber sale is not helping america. all of the lumber goes to japan, doesnt it?

b. sachau
15 elm st
florham park nj07932

B. SACHAU
15 ELM ST
FLORHAM PARK NJ07932

Appendix B

Forest Service Response to B. Sachau (BS) Comments:

BS-1

Response: The habitat for some species of wildlife and birds in this area will be affected by this project. Some of those species will be affected negatively (reduction of old-growth habitat, direct killing by tree felling and traffic, etc.). Some species will be affected positively (increases in habitat, more habitat for prey, etc.). Some species will not be affected at all. The document discusses and analyzes those effects. A Biological Assessment/Biological Evaluation (BABE) for plants and animals has been prepared and is located in the planning record. The effects to known rare plant populations are described in Chapter 3 under Botany. While some known populations in the areas that were surveyed may be affected 100 percent, similar habitat in the Navy project area that was not surveyed could support populations of these species.

BS-2

Response: Extensive site-specific measures have been put in place to control erosion and water quality impacts. Forest Plan best management practices (BMPs) and Standards and Guidelines are designed to minimize erosion. The Watershed and Fisheries section of Chapter 3 in the FEIS has been updated and discloses the impacts to water quality and erosion. This project tiers to the climate change analysis in the Forest Plan and Forest Plan FEIS. The effects of this project are similar in nature to the effects disclosed in the Forest Plan FEIS.

BS-3

Response: Please see the response to comment BS-1. The same response is applicable here. Fish and marine animals will be affected by this project, and the effects are discussed and analyzed in the document.

BS-4

Response: The impacts to wetlands have been displayed in the Wetlands section of Chapter 3 in the FEIS and in the Wetlands Resource Report located in the planning record. Roads have been located to avoid wetlands, where feasible. All laws, acts, and regulations have been followed to protect wetlands.

BS-5

Response: Please see the response to comment BS-1.

BS-6

Response: The references listed in Chapter 4 of the EIS show that the earliest document is from 1964 and the latest is from 2007. The vast majority of the references are from the last 15 years. Of over 90 documents referenced, almost half are from 2000 or later. Information or references are not obsolete as long as they are still valid and applicable to the resource.

BS-7

Response: The Organic Act of 1897 Organic Act illuminates Congress's understanding at this time that forest reservations were intended for managed use, not for wilderness preservation, and demonstrates lawmakers' recognition of the close connection between forest management and the management of other resources, especially water. Since then other legislation has supported this concept such as the Forest and Rangeland Resources Planning Act of 1974, the National Forest Management Act of 1976 and specific to Alaska, the Alaska National Interest Conservation Act of 1980 and Tongass Timber Reform Act of 1990.

The National Forest Management Act required each National Forest to complete a Forest Plan that analyzed the appropriate uses of that forest in specific areas. A discussion of the history of the Forest

Plan for the Tongass is located in Chapter 1 of the Tongass Land Management Amendment and discussion of the timber demand analysis is in Chapter 3 and Appendix G.

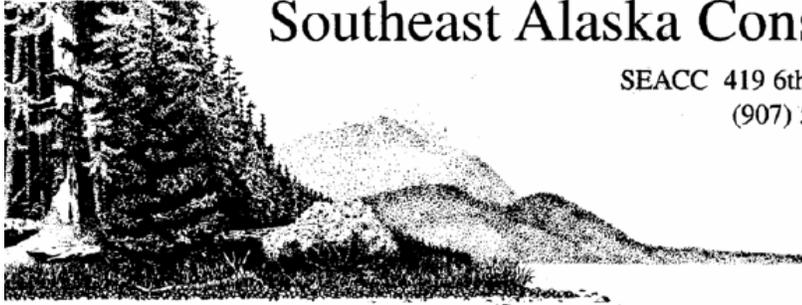
Project specific information on the selection of this location is in the Navy FEIS, Appendix A. See SCS-9 for a discussion of the updated analysis for the timber demand for the Tongass.

The EIS completed for the 2008 Tongass Forest Plan contains an extensive discussion of the climate change related to management activities (pgs. 3-11 to 3-17, 3-50, 3-77, 3-92, 3-116 to 3-125, 3-203, 3-250, 3-296, 3-340, 3-351, 3-401). It describes the current considerable variability and uncertainty of outcomes possible because models available for estimating climate change are designed to predict changes on regional scales, and are not detailed enough to predict changes to the Tongass National Forest. Existing models do not agree on how global warming will affect Southeast Alaska, and the variation and possibilities are discussed extensively in the 2008 Forest Plan EIS.

The 2008 Record of Decision for the Tongass Plan Amendment concludes that continued management of the Tongass for resiliency in the face of uncertain but anticipated change will be accomplished primarily by management of the Tongass as a mostly intact ecosystem with a robust monitoring plan that will allow for adaptive management intervention if and when effects of climate change are more certain. Important components of the 2008 Tongass Forest Plan include:

- A conservation strategy that includes an extensive reserve system in non-development land use designations, and standards and guidelines where active management is minimized that protect over 90 percent of the existing productive old-growth habitat.
- Standards and guidelines that include protection for soils, such as limits on harvest on steep slopes, limits on roads built across steep slopes, and limits on soil disturbance that will help retain carbon stored as organic material in soils where timber harvest and road building occur.

In addition to the Forest Plan's monitoring and evaluation provisions that have been updated to address the effects of climate change, there are Regional forest health program monitoring changes related to insects, disease, pathogens and windthrow and the long-term forest inventory system. If these efforts detect effects from climate changes, they will be addressed through existing planning procedures to determine whether changes in management are warranted (FEIS, Chapter 3, Introduction).



Southeast Alaska Conservation Council

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www.seacc.org • info@seacc.org

January 14, 2008

VIA EMAIL TO: comments-alaska-tongass-wrangell@fs.fed.us

Frank Roberts, Planning Staff
Wrangell Ranger District
PO Box 51
Wrangell, AK 99929

Re: Comments on Navy Timber Sale DEIS

Dear Mr. Roberts:

The following comments are submitted on behalf of the Southeast Alaska Conservation Council (SEACC) and the Wrangell Resource Council on the Draft Environmental Impact Statement (DEIS) for the Navy Timber Sale on Etolin Island. The DEIS describes the no action alternative and 5 action alternatives. The action alternatives propose logging between 18.7 and 97.9 million board feet (mmbf) from the project area, which encompasses about 77,500 acres, including construction of up to 31 miles of new, permanent roads in Inventoried Roadless Areas, such as the Navy watershed.

The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) ranked the Navy watershed as a Primary Salmon Producer, a Value Comparison Unit (VCU) with the Second Highest Community Use value, and one where subsistence use was of high sensitivity to disturbance. Comments on the 2007 Tongass Plan DEIS (SEACC, 2007) identified this watershed as a Tier 1 Special Area and deserving of permanent congressional protection because of its outstanding wilderness and community use values.

SEACC is a coalition of 15 volunteer citizen organizations including the Wrangell Resource Council, based in 13 Southeast Alaskan communities. SEACC's membership includes commercial fishermen, Alaska Natives, small-scale timber operators and value-added wood product manufacturers, tourism and recreation business owners, hunters and guides, and Alaskans from many other walks of life. SEACC is dedicated to preserving the integrity of Southeast Alaska's unsurpassed natural environment while providing for the balanced, sustainable use of our region's resources.

ALASKA SOCIETY OF AMERICAN FOREST DWELLERS, Point Baker • CHICHAGOF CONSERVATION COUNCIL, Tenakee •
CUSTOMARY & TRADITIONAL GATHERING COUNCIL OF KAKE • FRIENDS OF BERNERS BAY, Juneau • FRIENDS OF GLACIER BAY, Gustavus •
JUNEAU AUDUBON SOCIETY • LOWER CHATHAM CONSERVATION SOCIETY, Port Alexander • LYNN CANAL CONSERVATION, Haines •
NARROWS CONSERVATION COALITION, Petersburg • LISIANSKI INLET RESOURCE COUNCIL, Pelican • PRINCE OF WALES CONSERVATION LEAGUE, Craig •
SITKA CONSERVATION SOCIETY • TAKU CONSERVATION SOCIETY, Juneau • WRANGELL RESOURCE COUNCIL
•YAKUTAT RESOURCE CONSERVATION COUNCIL

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The Wrangell Resource Council is comprised of residents of Wrangell Island who work to make Wrangell a viable, livable community through sustainable use of all of the natural resources that we depend on in Southeast Alaska. Council members’ livelihoods include activities that range from commercial fishing and small timber mill operations to local business and health care.

Although SEACC and the Wrangell Resource Council support some level of logging in this project area, we find both the size and the timing of the proposal inappropriate. Managing this valuable project area for the obsolete purpose of “achieving the goals and objectives of the 1997 Forest Plan” is flawed because that plan was found arbitrary and invalid due to the fact that it relied upon a flawed view of market demand for Tongass timber. We continue to await the adoption of a Tongass Plan that will work in the 21st Century. Such a plan should look far different from past plans, including the 1997 Plan. It should protect the integrity of the Tongass and provide for truly balanced multiple use of all renewable forest resources. It should respect the forest as a renewable and renewing resource, respect the basic human dignity of all the people who depend on the Tongass for their way of life, and invest in maintaining and enhancing the incredible natural capital that supports an increasingly diversified economy in Southeast Alaska.

SEACC-1

Both SEACC and the Wrangell Resource Council are concerned that the site-specific and cumulative effects analysis in the DEIS is insufficient to fully inform agency decision makers and the public about this project’s environmental effects. One of many examples relates to the evaluation of environmental effects associated with use of the Anita Bay log dump. *See* DEIS at 3-122. The DEIS fails to provide any direct or cumulative effects analysis evaluating the effect of additional bark deposition on the affected marine environment associated with the historical practice of the dumping and rafting the logs directly into marine waters. While direct barge transfer of the logs is the best option for mitigating these impacts, the DEIS does not disclose and evaluate whether such mitigation is possible at the South Anita Bay dump. Although information is provided as to the amount of existing bark coverage from a dive survey nearly 8 years ago, the DEIS lacks any meaningful discussion of impacts from past or projected dumping activities on the marine environment at this site. We also find the agency explanation in Appendix A of the DEIS for why this volume of timber is being offered from this project area to be completely unsupported by the record and therefore, arbitrary.

SEACC-2

SEACC-3

Consequently, we urge the Forest Service to take a step back and consider the recently completed conservation assessment and resource synthesis for Southeast Alaska and the Tongass National Forest developed by Audubon Alaska and The Nature Conservancy for this project area.¹ We believe it is essential that the Forest Service incorporate key elements of this groundbreaking study into this project analysis.

SEACC-4

¹ Audubon Alaska & The Nature Conservancy: *The Coastal Forests And Mountains Ecoregion Of Southeastern Alaska And The Tongass National Forest: A Conservation Assessment And Resource Synthesis* (John Schoen & Erin Dovichin, eds. March 2007)(hereinafter “Schoen & Dovichin 2007”).

Appendix B

While we are pleased that the agency's preferred alternative falls significantly short of the overblown proposed action, we can not support this alternative or any of the action alternatives as proposed. Instead, we recommend an alternative that combines some of the attributes from Alternatives D, E, & F. Such changes are critical to avoid excessive loss of valuable deer winter habitat in the project area. We rely heavily on the core ecological values identified in Schoen & Dovichin 2007 for this project area.² Specifically, the new alternative should:

- Stay completely out of the Navy watershed.
- Adopt the recommendations of the interagency wildlife committee as provided in Alternative E. This is the only alternative that protects the remaining Productive Old Growth (POG) across the "Anita pinchpoint." As noted in the DEIS (at 3-17), "[t]his geographic bottleneck was identified by an interagency team of biologists as a critical component of the islands overall connectivity." This pinchpoint also contains "high-value deer winter range and complex structural components." *Id.* at 3-18. With so much of Etolin Island being alpine and given the extensive past logging, special care must be taken to maintain connectivity and provide wintering habitat for wildlife, particularly for deer. Please explain how the Forest Service intends to meet its obligations under the National Forest Management Act and Tongass Timber Reform Act to provide for diverse, well-distributed and sustainable deer on Etolin Island if it further compromises this critical pinchpoint.
- Avoid costly road construction and habitat loss by dropping proposed road #6547 and associated units in upper Burnett Inlet in Alternatives D and E. This portion of the project area is an important deer hunting area for Wrangell residents and readily accessible via Anita Bay. This area is also ranked high for core ecological values by Schoen & Dovichin 2007.
- Drop all the proposed units and new roads at the head of Mosman Inlet (36-38, 47-48) because of their incompatibility with core biological values identified in Schoen & Dovichin 2007. The unstable and steep slopes in this area further caution against proceeding with proposed road construction and logging here.
- Drop road #51421 and associated units in all 3 alternatives. Despite past cutting in this area, Schoen & Dovichin 2007 rank this part of the project area as supporting core biological values.
- Include units along road #51540, north of Anita Bay except proposed units 118, 119, and 122. According to Schoen & Dovichin 2007, logging is appropriate in this portion of the project area.
- Include units 140 & 141 along road #51270 east of the old growth reserve at the Anita pinchpoint. Please note that we found no site specific information relating to this road, including Road Management Objectives, in Appendix C to the DEIS.
- Include units 79, 80, 88, 90, 91, 93 from Alternative F in Kindergarten Bay (VCU 4650); drop all units along road #6540 because they conflict with core biological values identified in Schoen & Dovichin 2007.

SEACC-5

² See Audubon Alaska & The Nature Conservancy Integrated Conservation Area Design map for the Navy Timber Sale Planning Area, attached.

- Drop units 105-108 and associated roads in Kindergarten Bay because of conflicts with core biological values in this part of the project area.

↑ SEACC-5, con't.

The Forest Service identifies timber supply and economics as a significant issue in the DEIS (at 1-11). According to the DEIS, all of the alternatives will lose money and a “stable timber industry in Southeast Alaska depends on a steady flow of economic timber sales.” See DEIS, Table 3-4 at 3-11, 3-14. According to economic suitability information developed in the forest planning process, the value of the timber in this project area is marginal at best. See TotalValbyVCU_11-5-07.pdf. (http://tongass-fpadjust.net/FPA_Info_Requests.htm). A critical look at the most recent history of logging on Etolin Island is also illuminating. Despite receiving 5 separate market-related contract term and price adjustments, Silver Bay Logging ended up defaulting on the King George and Honey George timber offerings, leaving felled and bucked timber on the ground to waste.³ All of this information suggests that the best way to improve the economics for this project area is to substantially reduce its size and drop expensive new road construction.

SEACC-6

According to the DEIS, “[t]he Navy project is proposed to move the project area towards desired conditions described in the Forest Plan. . . . [including seeking] to provide a supply of timber sufficient to meet the annual market demand for Tongass timber.” DEIS at 1-4. Not only are the desired conditions adopted for an arbitrary forest plan invalid today, but it is premature to move “towards desired conditions” that have not been finalized for this project area in the new forest plan. More importantly, the volume projections driving this project decision are, like those adopted over the past 7 years, wildly inflated. As a result, the Forest Service gives logging timber unfair precedence over other forest uses in the project area, fails to fairly balance the competing uses of forest resources in the project area, and wastes increasingly scarce taxpayer dollars.

SEACC-7

SEACC-8

In particular, the DEIS relies on Morse 2000 and Brackley et al. 2006. DEIS, Appendix A at 6-7. As noted in extensive expert critiques by Crone (2007) and Morton et al. (2007) of the most recent planning cycle projections, the assumptions and methodology used in the Brackley et al. 2006 model grossly over-inflate projected demand for Tongass timber by “bas[ing] future demand on an assumption of robust markets that no longer exist and on an unjustified expansion within the timber industry.” Morton et al. (2007) at 4. In addition, the projections ignore the inherent competitive disadvantages facing Southeast Alaska because of geographic location, distance from markets, and high costs. *Id.* at 8 (Table 1).

SEACC-9

The use of the Morse methodology has also skewed the Forest Service’s annual market demand projections to justify unreasonably high timber targets.⁴ This results in inefficient allocation of agency resources to prepare unnecessary and uneconomic timber

↓ SEACC-10

³ See Final Change Analysis for Red Mountain Timber Sale (undated), attached.

⁴ See Lindekugel, SEACC to Alexander, USFS (Dec. 12, 2007)(comments on draft November 2007 Update of Timber Sale Procedures). By this reference we incorporate these comments into the planning record for this sale. For your convenience, we’ve attached a copy of those comments to the comments on this DEIS.

Appendix B

sales in areas more valuable for a variety of other multiple uses. A simple comparison of offering levels set by the Forest Service using the formulas from Morse 2000 with the amount actually sold on the Tongass between 2001 and 2006 is instructive. As shown below, the Forest Service has consistently calculated offering levels far in excess of what was actually sold. On average over these 6 years, the Forest Service overestimated actual demand (volume sold to industry) by 60 percent using the formulas provided in Morse.

↑ SEACC-10,
con't.

Tongass Timber Sale Procedures Consistently Miss the Mark

Fiscal Year	Offering Levels set under Morse formula*	Volume Sold	Volume Cut
2001	142**	50	48
2002	146	24	34
2003	151	36	51
2004	153	87	46
2005	143	65	50
2006	143	85	43

* Volume required to meet Volume Under Contract sell objectives for “Low Market” scenarios.

** Data rounded to the nearest million board feet (mmbf).

Use of the projections from Brackley et al. 2006 has failed to improve the accuracy of the annual timber offering levels. For fiscal year 2007, the Forest Service predicted an offering level of 116 mmbf. In reality, industry purchased 30 mmbf and cut only 18 mmbf.⁵ Although it is now fiscal year 2008, the Forest Service has not updated its annual market assessment for 2008.

SEACC-11

According to the DEIS, the Morse methodology “is self-correcting based on actual experience.” DEIS, Appendix A at 6. This statement is completely unsupported by the record. Please explain, for example, why the assessment for 2007 continues to include Wrangell sawmill’s mill capacity and utilization rates from previous years despite the fact that the Wrangell sawmill declared bankruptcy during its most recent Forest Service contract on Etolin Island (the King George & Honey George sales/offering).

SEACC-12

Additionally, this sawmill has relied completely on non-national forest timber for several years and has operated sporadically at best. Please explain what objectively verified data the Forest Service has collected to support the annual demand assessment used to rationalize this proposed sale.

SEACC-13

⁵ See USFS Cut & Sold Report for Fiscal Year 2007; available at: http://www.fs.fed.us/r10/ro/policy-reports/for_mgmt/cut_and_sold/cut_and_sold_fy2007_mbf.pdf

In conclusion, we recommend the Forest Service prepare a supplemental draft EIS that fills in the significant analytical gaps apparent in this DEIS and take a hard look at the science-based conservation assessment conducted by Audubon Alaska and The Nature Conservancy.

SEACC-14

Best Regards,



Buck Lindekugel
SEACC Conservation Director

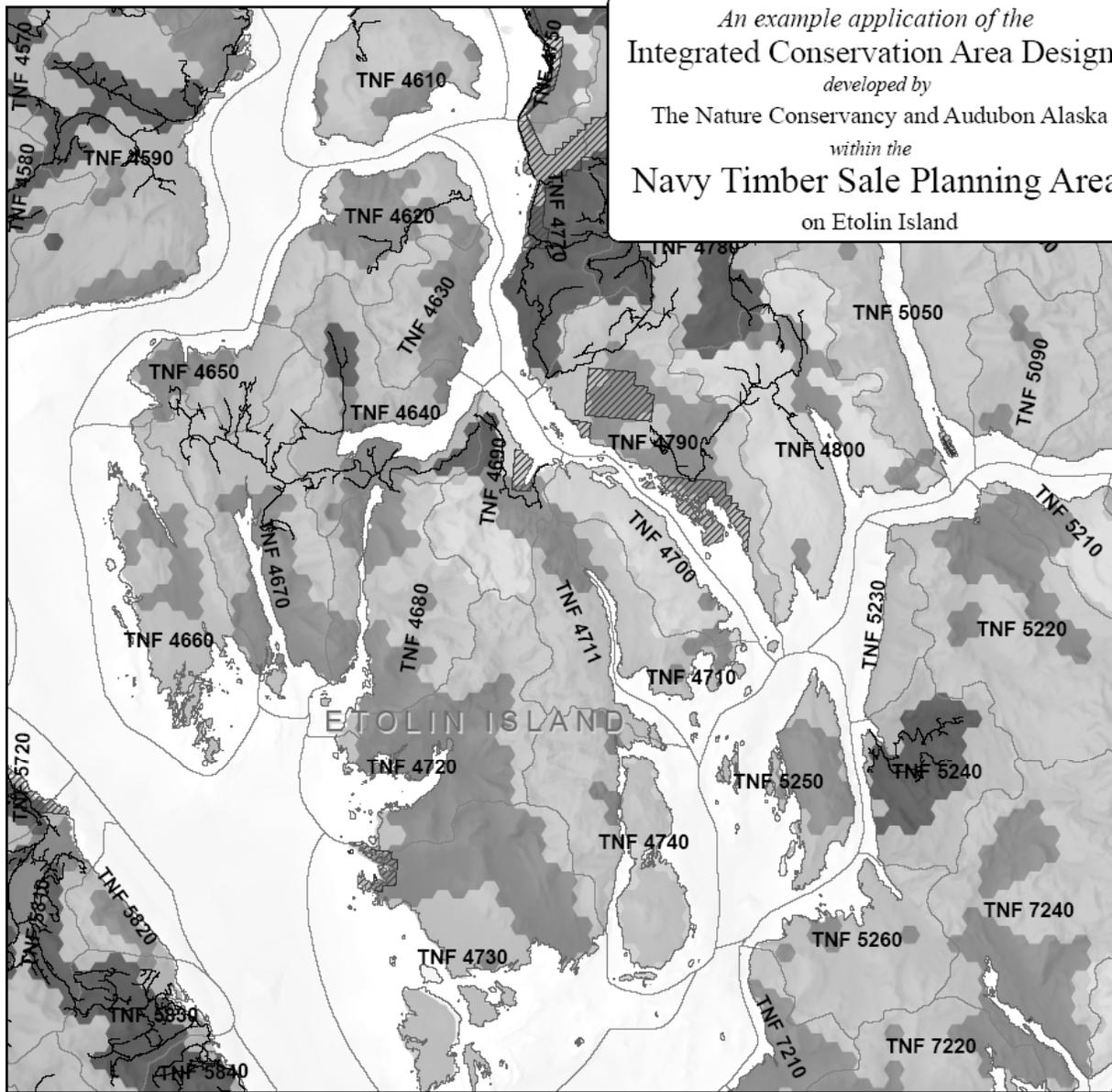


for

Stephen Todd
Wrangell Resource Council
P.O. Box 1844
Wrangell, AK 99929

Appendix B

An example application of the
 Integrated Conservation Area Design
 developed by
 The Nature Conservancy and Audubon Alaska
 within the
 Navy Timber Sale Planning Area
 on Etolin Island



Key to Symbols:

Conservation Priority Watersheds

High value watersheds in primarily intact condition. Managed for intact ecological values and habitat productivity.

- Core Areas of Biological Value
- High Value Watersheds

Integrated Management

- Core Areas of Biological Value (within modified watersheds)

Timber Production Watersheds

Watersheds with past harvest and existing infrastructure.

- Core Areas for Timber Production
- Lower Value - Modified Watershed

Protected by Congress

Wilderness and LUD II

- LUD II / Wilderness (core habitat)
- LUD II / Wilderness (other)



Lower Value - Intact Watersheds

- Lower Value - Intact Watersheds

Private or Other Lands

- Private and other lands within Tongass NF

Forest Service Response to SE Alaska Conservation Council (SEACC) Comments:

SEACC-1

Response: The Forest Service corrected the inadequacies identified by the U.S. Court of Appeals for the Ninth Circuit by completing the 2008 Tongass National Forest Land and Resource Management Plan (Forest Plan). As described in detail in the Final EIS and Record of Decision (available at <http://tongass-fpadjust.net/>) for the Forest Plan, a revised market demand analysis was done. This market demand analysis was used to determine the 2007 market demand as stated in the Navy DEIS Appendix A, and has been used to update the market demand for FY 2008 and FY 2009 (Navy FEIS Appendix A). The decision for the Forest Plan took into consideration multiple-use values. Many areas are allocated to non-development LUDs. Eighty percent of the Navy project area was allocated to the development LUDS (Timber Production, Modified Landscape and Scenic Viewshed).

The Navy project has been reviewed for consistency with the decision on the 2008 Forest Plan and follows the transition language in that decision (Forest Plan ROD p. 67 to 70) and the procedures in the Forest Service Handbook FSH 1909.15, section 18. Portions of this project have been adjusted as necessary to be consistent with the management direction in that decision. For more information, see the discussions in Chapter 1 about the Forest Plan and in Chapter 2 under the Changes Between Draft and Final.

See the response to comment SCS-1 for more information regarding the issue of demand.

SEACC-2

Response: There has been no timber rafted from either of the Anita Bay LTFs since 2000, so no additional bark accumulation would be present. Dive surveys found low species diversity and abundance in the vicinity of the LTF. Effects to marine organisms would be minimal at the current levels of bark accumulation. This project allows for either direct barge transfer, or water storage of logs. If logs are requested to be stored or placed in the water, the timber sale operator must obtain additional permits from the State before that activity can proceed.

SEACC-3

Response: The current 5-year timber sale plan has the most updated information on when and how much volume is planned from the Navy project. The information in Appendix A was after for the FEIS. The information in Appendix A is based on the estimated amount of market demand for FY 09. See response to comments SEACC- 9 to SEACC-13.

SEACC-4

Response: The recently completed conservation assessment and resource synthesis for Southeast Alaska and the Tongass National Forest developed by The Nature Conservancy and Audubon Alaska was considered but not directly used for the Navy FEIS. However, the Navy FEIS was adjusted as necessary to be consistent with the management direction from the revised Forest Plan and the information from the TNC-Audubon conservation assessment has been incorporated into the Forest Plan Final EIS as appropriate to strengthen the biodiversity analysis and in the modification of alternatives.

The Biodiversity section of the 2008 Forest Plan FEIS also provides more-extensive quantification of the existing levels of large-tree POG, high-volume POG, and intact watersheds by biogeographic province. It also makes projections for these measures into the future under each alternative, on NFS lands and, cumulatively, for all of Southeast Alaska. The alternatives considered in the Forest Plan Final EIS were not designed around the Albert and Schoen (2007) report, but Alternatives 1, 2, and 3 considered the information in that report. The Biodiversity section cites Albert and Schoen (2007)

Appendix B

throughout the subsection that describes the forest-wide distribution of old growth. The Audubon and TNC assessment provides a summary of recent literature related to individual wildlife species, and the Wildlife section incorporates information from individual studies, citing them directly (Forest Plan, Appendix H, p. H-132). The information from this assessment was also taken into account for ranking roadless areas during the review of public comments and as part of the decision-making process for the Forest Plan.

SEACC-5

Response: An alternative was designed around SEACC's recommendation following the TNC-Audubon conservation assessment that blended parts of Alternatives D, E, and F. The alternative included Units 40, 43, 44, 45, 46, 76, 77, 78, 79, 80, 83, 84, 88, 90, 91, 102, 103, 104, 112, 113, 114, 115, 117, 120, 121, 124, 125, 126, 128, 129, 131, 132, 133, 135, 136, 137, 138, 140 and 141. The total acres equal 2,956 and the volume would be approximately 30,818 MBF sawlog. The alternative would helicopter log 2,603 acres, harvesting 24,670 MBF with a single-tree selection silvicultural prescription. The alternative would cable log 280 acres, harvesting 5,737 MBF with an even-aged (clearcut) silvicultural prescription. The alternative would shovel log 73 acres, harvesting 411 MBF with 68 acres of single-tree selection and 5 acres of clearcuts.

Review of this alternative concluded that the effects were predicted to be very similar to Alternative E and it was eliminated from further detailed study. The major difference between the two alternatives was the SEACC alternative had no harvest in the Anita Bay pinch-point. The units that were proposed in or near the Anita Bay pinch-point have higher economical bid values due to their close proximity to the Anita Bay LTF and short haul distance. Alternative E was modified between Draft EIS and Final EIS by changing some of the silvicultural prescriptions to partial harvest based on this comment.

The Navy DEIS and FEIS did consider the pinch-point as an issue, but it was not identified as a significant issue because even prior to any timber harvest, there was no potential old-growth connectivity between the north and south half of Etolin Island, in this area. The terrestrial animals have used scrub forest and muskegs to travel between the two parts of the island. Some of this scrub forest is very dense and provides hiding cover and forage during period of no or low snow.

SEACC-6

Response: Silver Bay Logging, Inc. did not default on the King George or Honey George Timber Sales. The King George sale was turned back pursuant to a Mutual Cancellation Agreement made by and between the USDA and Silver Bay.

The King George Timber Sale contract met the requirements of Section 339 of the Act, outlined in the letter dated January 9, 2004 signed by Mark Rey, Under Secretary of Agriculture, and was cancelled.

All road building and conventional cable harvesting of the King George Timber Sale had been completed by the fall of 2004. There was helicopter volume remaining (including the volume already felled and bucked) at the time of the Mutual Cancellation Agreement. The remaining volume was estimated to be 5,883 MBF. This was offered for sale and purchased by Alcan Forest Products. This remaining volume was logged in 2006.

The Honey George Timber Sale was purchased and completely logged by Silver Bay in 2003. The volume under this contract was part of the King George FEIS. The volume logged was approximately 3 MMBF.

Your comment that the information regarding these two sales, “*suggests reducing the size of the project area and dropping expensive new road construction...*” does not seem directly applicable to the Navy project. While the King George sale was “on the books” for a number of years, it was not necessarily due to the size of the sale or the cost of road construction. The King George sale was purchased at a high stumpage rate. Silver Bay put a significant bid premium above the advertised total. The timber market subsequently declined and Silver Bay had difficulties financially. Also, the option to road the helicopter logging units was examined in order to reduce costs.

The Navy project could allow for smaller sales as well as large sales. A number of sales could be packaged in a variety of ways, depending on markets and demand. The IDT considered road construction in detail and developed alternatives that responded to resource concerns and economic concerns. All sales will be designed to be economical based on the current appraisal information at that time.

SEACC-7

Response: See response to comment SEACC-1.

SEACC-8

Response: The project area is mostly designated as Timber Production LUD, which does emphasize timber management and use of the forest for commercial wood products. Other areas on the Tongass are allocated with emphasis for other resources where timber harvest is not allowed, such as Old-growth habitat LUD, Semi-Remote Recreation LUD, Wilderness, and a myriad of Special Interest Areas with other resource values identified. These land allocations meet part of the multiple-use objectives of National Forest management.

The *Multiple Use and Sustained Yield Act* of 1960 declares that the purposes of the national forest include outdoor recreation, range, timber, watershed and fish and wildlife. The Act directs the Secretary of Agriculture to administer national forest renewable surface resources for multiple use and sustained yield. The policy of Congress is that national forests are established and administered for outdoor recreation, range, timber, watershed, and fish and wildlife purposes. This Act is intended to supplement these purposes. Multiple use can be defined as management of all the renewable surface resources of the national forests to meet the needs of the American people. Sustained yield can be defined as the achievement and maintenance of a high-level regular output of the renewable resources of the national forest without impairment of the land's productivity. The Secretary of Agriculture must develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of the various products and services obtained from these areas. The Secretary must give appropriate consideration to the relative values of the resources of particular areas. The Act authorizes the Secretary to cooperate with interested state and local governmental agencies and others in developing and managing the national forests.

SEACC-9

Response: The market demand analysis for the Forest Plan was completed by Brackley et al. (2006) as described in the Forest Plan FEIS, Volume II, Appendix G. The Forest Service is aware of the opposing views and has responded to these reports. See also the responses to comments in the Forest Plan, Volume 2, Appendix H, p. H-26 to H-36. However, this is a project-level analysis and just one part of the total Tongass timber program, the timber economic and supply issue tiers to the Forest Plan analysis, which this FEIS follows.

SEACC-10

Response: See response to comment SCS-9.

Appendix B

SEACC-11

Response: The FY 08 timber demand, which was completed after the signing of the decision of the 2008 Forest Plan, was estimated at 131 MMBF. The timber that could be actually offered was much less, because most of the timber volume previously cleared under NEPA, had the decisions withdrawn through the NRDC settlement. Other timber that was NEPA cleared could not be offered since it appraised deficit due to current market conditions. The amount offered in FY 08 was 32 MMBF. See response to comments SCS-1 and SCS-9.

SEACC-12

Response: The annual market demand for 2007 includes the Wrangell sawmill because the Wrangell sawmill was operating in 2007. Silver Bay Logging, Inc., sawmill owner, was logging and processing logs at the mill in 2007. Silver Bay Logging, Inc. filed for bankruptcy in 2003. However, Silver Bay has resumed logging and milling since then. National Forest timber from the Tongass has not been as available in recent years due to injunctions associated with the Roadless Rule, the Forest Plan and other lawsuits. The non-National Forest timber that Silver Bay purchased has been connected to the mill by the Wrangell Island road system, which made it economical due to the lack of barging costs. Silver Bay Logging, Inc. has been in negotiations to sell the Wrangell mill. However, prospective purchasers have voiced reluctance due to lack of a steady timber supply, which is one of the reasons that this is a significant issue for this project.

SEACC-13

Response: See response to comment SCS-9 and SEACC-9. The Appendix A of the Navy FEIS and the timber demand spreadsheet located in the project record lists the assumptions used for calculating the annual timber demand

SEACC-14

Response: The CEQ regulation 1502.9 (c) (1) states that agencies shall prepare supplements to either draft or final environmental impact statements if the agency makes substantial changes in the proposed action that are relevant to environmental concerns or there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. The deciding officer has determined that the changes between the Draft and Final EIS do not warrant a supplemental DEIS.

The Changes Between Draft and Final section of Chapter 2 discusses the changes to the EIS. Changes came as a result of the decision on the 2008 Forest Plan, internal review comments and public comments on the Navy DEIS. The effects of the revised alternatives are within the range of the effects of the previous alternative designs.

Many of your comments are concerned with the Tongass timber market demand, which cannot be analyzed further at the Navy project level. The discussion on the bark deposition has been clarified but there is no new information since there has been no new activity from that LTF since 2000.

See response to comment SEACC-4 for information on how the TNC-Audubon conservation assessment was incorporated.



ALASKA DIVISION OF OCEAN & COASTAL MANAGEMENT PROGRAM
07 DEC 18 AM 10:12

December 14, 2007

Wrangell Ranger District
USDA Forest Service
P. O. Box 51
Wrangell, AK 99929

Re: Navy Timber Sale DEIS

Sealaska Corporation has reviewed the Navy Timber Sale DEIS and is very concerned that the Forest Service has planned a series of alternatives that will not meet the requirements of TTRA. It appears that none of the alternatives are economically viable. It is very important that, in its planning phase, the Forest Service creates sale opportunities that potential bidders can purchase with the opportunity to profit from the sale of logs. In the DEIS the proposed and other action alternatives do not provide this opportunity.

SC-1

The result is that the No Harvest alternative becomes the plan for managing this portion of Etolin Island. This means that jobs will not be maintained or created and the area in question will not be modified into the variety of even-aged, two-aged, and uneven-aged stands as put forth in the Plan.

The Forest Service needs to plan for viable sales that meet its goals, TTRA and be a viable economic factor in Southeast Alaska. Units need to be easy to access. Harvest prescriptions must be implemented in a way that makes them economically viable. If some prescriptions cause deficits, then they need to be modified either by diminishing the number of acres or by modifying the cutting and leave prescriptions.

SC-2

Rural Alaska has been hard hit by the significant reduction in Forest Service sale volume in the last ten years and needs to have the Forest Service meet its obligations regarding contributing to quality jobs to the local economy.

SC-3

Thank you for giving Sealaska the opportunity to provide comment.

Sincerely,

SEALASKA CORPORATION

Michele Metz
Assistant Lands Manager

cc: Forrest Cole, TNF, USDA Forest Service
Joe Donohue, Alaska Division of Ocean & Coastal Management
Ron Wolfe, Natural Resources Manager, Sealaska

Sealaska Corporation One Sealaska Plaza, Suite 400, Juneau, Alaska 99801-1276 Tel: 907.586.1512 Fax: 907.586.2304

Appendix B

Forest Service Response to Sealaska Corporation (SC) Comments:

SC-1

Response: Current market conditions and timber sale costs have influenced the economic viability of this project. The alternatives are designed to split into one or more sales and included enough volume to be flexible in the future should the market conditions improve to harvest some of the less-economical units. There are smaller economic sales within the alternatives that can be offered in this market condition.

SC-2

Response: The Navy FEIS has analyzed the project area for viable timber sale options and at present, all action alternatives are showing deficit returns. However, the financial analysis method used - the NEPA Economic Analysis Tool-Residual Value, or NEAT-R program - is intended to show a comparison of alternatives and is used to highlight specific variables of alternatives. These variables include yarding methods, cutting prescriptions, transportation and infrastructure costs and timber value. Inputs into the NEAT-R program are rough estimates and the output is not intended to be used as a timber sale appraisal. By using various combinations of units, a viable sale, or sales, can be developed from all of the FEIS alternatives.

Silvicultural prescriptions were modified between Draft and Final EIS to be consistent with the decision on the Forest Plan. A number of units that formerly had reserve trees will now be clearcut, which should increase the financial efficiency of these units. The units to be helicopter logged had prescriptions designed to harvest the most economic timber from the stands, which is generally the sound mid-sized trees and leave the larger trees with high defect.

SC-3

Response: The timber supply available for offer on the Tongass has dwindled for a number of reasons in the past 8 years. First, an injunction on planning and offering timber in roadless areas in 2001 until the Forest Plan SEIS was complete shifted our analysis areas to only those areas classified as roaded. The amount of timber remaining in these areas is more difficult to access, sometimes lesser volume per acre, and included resource concerns that required more detailed analysis.

Projects within roadless areas had decisions to harvest timber but were litigated; most of the decisions on these projects were withdrawn as part of the settlement agreement to offer sales in FY 07 before the Forest Plan was signed. Many of these projects were planned at a time of better market conditions and lower timber operations cost and are no longer economically viable. The Tongass is looking for ways to develop the most economic timber sales by more effort into pre-planning, more-intensive management of the roaded areas and looking for opportunities for the lower-value wood products as discussed in the decision for the Forest Plan (ROD, p. 17, 29-39, and 64-67).

January 14, 2008

Frank Roberts
Wrangell Ranger District, Tongass NF
Box 51
Wrangell, Alaska 99929
comments-alaska-tongass-wrangell@fs.fed.us

Subj: Comments on the Navy Timber Sale DEIS

These are comments on the Navy Timber Sales DEIS prepared jointly by the **Sitka Conservation Society, Cascadia Wildlands Project, Tongass Conservation Society, Greenpeace, the Juneau Group of the Sierra Club and Gabriel Scott as an individual.** We have provided our contact information at the end of these comments.

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

Please include all documents cited herein in the planning record. We are submitting such documents for your retrieval at: ftp2.fs.fed.us//incoming/chugtong_r10/Navy_for_the_record. If there are any we have overlooked, please contact us for copies.

I. Introduction

Before we begin our detailed comments on the issues identified as driving the alternatives, we discuss four other general topics in the subsections below: (A) whether the conception and planning (to date) of this project under the current Forest Plan is arbitrary and unlawful in light of the decision in *NRDC v. U.S. Forest Service*; (B) our views regarding the range of alternatives; (C) our concern that cumulative effects analyses need to more thoroughly discuss the impacts of climate change and (D) our views on efforts to produce a more "streamlined" DEIS and why the information provided in this DEIS needs to be much more comprehensive in order to satisfy NEPA.

Also, although we have many specific concerns, we would like to emphasize that the revised market demand analysis (Brackley et al. 2006, PNW-GTR-677) used to support this sale implicates many of the same issues that led to the *NRDC v. U.S. Forest Service* lawsuit and the 2005 9th Circuit decision invalidating TLMP and requiring its currently on-going revision. In September of 2007, a federal district court judge halted another Tongass timber sale due to the lack of an updated market demand in analysis.¹ Because the Brackley

¹ *Organized Village of Kake v. U.S. Forest Serv.*, Case No. 1:04-cv-00029-JKS (D. Alaska, Sept. 26, 2007).

Appendix B

analysis is very controversial and complicated, we request that you cancel this project until appeals of the forthcoming Forest Plan adjustment have been resolved. In the alternative, we request that you revise this DEIS to include a fundamentally downsized alternative consisting entirely of micro-sales that timber operators can access from existing roads.

SCS-1

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

40 C.F.R. § 1506.1(c) governs actions proposed during a period when a federal agency is preparing a programmatic environmental impact statement. If an action is not covered by an existing program statement, “agencies shall not undertake in the interim any major Federal action ... unless such action: (1) [i]s justified independently of the program; (2) [i]s itself accompanied by an adequate environmental impact statement; and (3) [w]ill not prejudice the ultimate decision on the program.” 40 C.F.R. § 1506.1(c)(1)-(3). “Interim action prejudices the ultimate decision on the program when it tends to determine subsequent development or limit alternatives.” 40 C.F.R. § 1506.1(c)(3).

Because it has been planned under the invalidated 1997 TLMP, this timber sale would illegally settle the fate of Etolin Island by committing roadless areas to developed status, precluding options for preserving the related multiple uses through the court-mandated revision of the 1997 TLMP. This DEIS should be rescinded pending the release and review of the new Forest Plan.

SCS-2

B. Adequacy of Alternatives

Consideration of alternatives is the “heart” of an EIS and an important obligation under NEPA.² The Forest Service must “[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.”³ In scoping comments submitted jointly by Sitka Conservation Society, Natural Resources Defense Council, Juneau Group of the Sierra Club, and The Wilderness Society, we requested that there be multiple alternatives that call for no new road construction or incursions into the IRAs because of the environmental damage and significant taxpayer losses associated with road construction. We also requested the development of alternatives that only offer micro-sales.

The DEIS provides six alternatives. The proposed action, Alternative B, mainly responds to the timber supply and economics issue and emphasizes economics by taking the highest timber volume per mile of road. This alternative would harvest 61.7 MMBF and construct 18.1 miles of new NFS road and 8.4 miles temporary road. Alternative C is similar but emphasizes supply more than economics – this alternative would harvest 97.9 MMBF and construct 23.4 miles new NFS road and 17.5 miles temporary road. Alternative D is the preferred alternative and mainly responds to concerns about the Navy watershed by not proposing road construction or LTF construction in the Navy watershed. This alternative would take 36 MMBF and construct 5.7 miles of new NFS road and 5.3 miles of temporary roads – all in inventoried roadless areas. Alternative E purports to respond to wildlife issues but still proposes to take 48.9 MMBF and construct 14.4 miles of road with nearly all of the road construction occurring in inventoried roadless areas. As discussed in our economics section, the purpose and need for taking such large volumes relies on a flawed market demand analysis and there is no actual demand for sales of this size, particularly in view of the large backlog of unsold timber.⁴ Although we have many ecological concerns pertaining

² 40 C.F.R. § 1502.14; NRDC v. U.S. Forest Serv., 421 F.3d 797, 813 (9th Cir. 2005).

³ 40 C.F.R. § 1502.14(a).

⁴ See DEIS Appx. A at A-4, A-14.

to these alternatives, we emphasize that in our view, none of these alternatives are reasonable in large part because of the large volume and the lack of a market demand justification for that volume.

SCS-3

Even Alternative F, which mainly responds to concerns about roadless areas, would take 18.7 MMBF and construct 5.6 total miles of road. It contains multiple cutting units in the Anita Bay pinch-point as well as in other areas identified as priority areas in Albert and Schoen's Conservation Assessment.⁵

Significantly, this range of alternatives does not respond to our request to present multiple alternatives that avoid incursions into roadless areas and avoid new road construction. The DEIS gives two reasons for not offering these alternatives: (1) the only way to avoid roadless areas and new roads would be to do helicopter yarding in areas where it would be more economical to do cable yarding with temporary roads and (2) avoiding roadless areas would shift logging to sensitive watersheds. But our review of the alternatives maps shows that there are many proposed cutting units on the existing road system. Although we do have concerns about many of these cutting units because they occur in conservation priority areas or because the units appear to target red and yellow cedar, reasonable alternatives that would rely on timber only from within the existing road system could have been prepared for detailed evaluation.

Therefore, reasonable alternatives that we believe should have been considered probably would not approach even the 18 MMBF harvest level of the lowest volume alternative in the DEIS. But alternatives proposing such smaller volumes are not unreasonable — rather, what is unreasonable is the flawed market demand analysis that has driven overly large timber volumes for all of the DEIS alternatives, while causing smaller volume alternatives to be overlooked entirely. In our view, a realistic range of alternatives that responds to our scoping comments should replace the action alternatives of the DEIS. . If you decide to proceed with this project, we request a Revised DEIS to accomplish that.

SCS-4

Also, a reasonable range of alternatives should include a micro-sales alternative. 40 C.F.R. § 1502.14(a) directs federal agencies to discuss the reasons for eliminating alternatives from detailed study. But there was no discussion in the DEIS that explains the rejection of our suggested micro-sales alternative. In our view, a micro-sales alternative is not unreasonable – in part, the purpose of this sale is to offer road accessible timber for small mills in the area.⁶ Therefore, we request that you add a micro-sales alternative in a revised DEIS.

In sum, we have concerns about the range of alternatives in large part because the flawed market demand analysis has driven unreasonably large timber volumes in all alternatives for this ecologically valuable area. A revised DEIS that includes a micro-sales alternative and two others for small volumes and that avoid road construction and roadless areas would enable us to focus our comments more constructively on specific cutting units, rather than focusing on the broader issues as necessitated by the five larger scale alternatives in this DEIS.

⁵ Audubon/TNC Conservation Assessment (Albert & Schoen 2007) (hereinafter Conservation Assessment).

⁶ DEIS at 1-2.

Appendix B

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

We will address our concerns about climate change later in these comments as they pertain to specific issues. But we request that future environmental impact statements for this project contain a separate discussion in the Environment and Effects section analyzing the cumulative effects of the project in consideration of on-going changes to the regional climate.

We recognize that making forest management decisions in light of the uncertainties about the possible effects of climate change on the Tongass is fraught with uncertainty. But the uncertainties about the possible effects of climate change are less speculative than the assumptions underlying the market demand analysis. It is undisputed that global temperatures are warming and that the warming trend has occurred at a higher rate in northern climates during the winter.⁷ This warming is consistent with the models used by climate researchers.⁸ The models predict further temperature increases and increased precipitation for the Gulf of Alaska over the next hundred years.⁹ Alaska forestry scientists participating in a 1997 climate change workshop held at the University of Alaska-Fairbanks¹⁰ summarized the challenge posed by climate change: “[r]ecently a substantial amount of evidence has begun to accumulate that climate change in Alaska’s forest regions has surpassed the range of background variability and is changing systematically in ways that are posing significant challenges to several Alaska forest resources.”¹¹

In general, we believe that these systemic changes warrant a separate discussion about the cumulative effects of climate change in environmental impact statements. Our request for a detailed analysis of climate change conforms to policy concerns addressed in NFMA — the Secretary of Agriculture is to analyze the potential effects of climate change in the decennial Renewable Resource Assessments and once every five years there is to be an “account for the effects of global climate change on forest and rangeland conditions, including potential effects on the geographic range of species, and on forest and rangeland products.”¹² Even though these pronouncements may not impose any specific duties on regional forest planners, they provide policy guidance from Congress regarding the type of discussion that we believe should be included in NEPA analysis in order to ensure that the decisionmaker has taken the requisite “hard look” at the cumulative effects of the project.

We understand that analyzing the cumulative effects of climate change is an evolving issue. For this reason, we request that for the purposes of this project that you discuss climate change pertaining to specific issues highlighted in our comments in your subsequent NEPA documentation. To illustrate, the Fairbanks climate change workshop identified three climate change scenarios that pose risks to coastal forests: “(1) destructive winds; (2) tree mortality from insect outbreaks, and (3) changes in forest hydrology.”

40 C.F.R. § 1502.22(b)(1) to (4) provide appropriate guidance for addressing the uncertainties about climate change. When information is incomplete, the regulation provides

SCS-5

⁷ University of Alaska Fairbanks Climate Change Workshop (Weller and Anderson, eds. (1998)) at 16.

⁸ *Id.* at 16.

⁹ *Id.* at 20.

¹⁰ *Id.*

¹¹ *Id.* at 26.

¹² 16 U.S.C. § 1601(a)(5); 16 U.S.C. § 1601(5)(F).

a test that even if the probability of catastrophic consequences is low an EIS must: 1) disclose the relevance of the incomplete information, 2) provide a summary of existing credible scientific evidence relevant to possible impacts, and 3) provide an evaluation of the impacts based on generally accepted approaches or research methods. It is clear that the test of the probability of catastrophic consequences on the Tongass from climate change being “low” or greater is easily met. As an example, the IPCC Third Assessment Report says:

“Changes in disturbance regimes and shifts in the location of suitable climatically defined habitats may lead to abrupt breakdown of terrestrial and marine ecosystems with significant changes in composition and function and increased risk of extinctions.”¹³

Also, for Southeast Alaska there is “high confidence” in the increased risk of large-scale tree blowdown, increased tree windthrow around clearcuts, and damaging black-headed budworm outbreaks,¹⁴ and there is “some confidence” that there will be more high stream temperatures and low flow events that can cause anadromous fish mortality.¹⁵

Under 40 C.F.R. § 1502.9, the need for discussion of the project’s cumulative impacts that involve climate change warrants production of a revised DEIS because it is hard to meaningfully analyze the impacts of this project otherwise.

SCS-6

D. Deficiencies Resulting From Streamlining the DEIS

We appreciate efforts to improve the efficiency of the NEPA planning process. But in general, the information provided in this DEIS is inadequate for a project of this significance. NEPA requires federal agencies to prepare “a detailed statement” that considers the environmental impact of the proposed action “to the fullest extent possible.”¹⁶ In our view, this DEIS does not satisfy this standard.

Regulations explicitly direct that an EIS must take a “hard look” at the environmental consequences of a proposed action.¹⁷ “Conclusory statements which do not refer to scientific or objective data supporting them do not satisfy NEPA’s requirement for a ‘detailed statement.’”¹⁸ “The information in an EIS must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.¹⁹ “NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and actions are taken.”²⁰ The EIS must contain all pertinent information that is or should be part of the decision making process.²¹ The EIS must be “sufficient to enable those who did not have a part in its compilation to understand and consider meaningfully the facts involved.”²²

SCS-7

This DEIS asserts that it “provides sufficient site-specific information to demonstrate a reasoned consideration of the environmental impacts of the alternatives and ways to mitigate

¹³ IPCC Third Assessment Report at 2-33.

¹⁴ Weller and Anderson (1998) at 41, Figure 3.16.

¹⁵ Id.

¹⁶ 42 U.S.C. § 4332(2)(C).

¹⁷ Citizens Against Toxic Sprays v. Bergland, 428 F.Supp. 908 (D.Or. 1977).

¹⁸ Id.

¹⁹ 40 CFR §1500.1(b)

²⁰ 40 CFR §1500.1(b)

²¹ Trout Unlimited v. Morton, 509 F.2d 1276, 1282 (9th Cir. 1974).

²² Environmental Defense Fund v. Corps of Engineers, 492 F.2d 1123, 1136 (5th Cir. 1974).

Appendix B

the impacts. The project record contains documentation of the NEPA process and analysis.”²³

We disagree. In our view, this approach – an empty shell of a DEIS tiered to a detailed project record – does not satisfy this standard. For example, we have reviewed environmental assessments that contained more comprehensive analyses of effects on wildlife than this DEIS provides.²⁴ Here, even significant, alternative-driving issues are dealt with in a cursory way. For example, Issue 5, Road Construction in the Navy Watershed, takes up less than two pages, with no maps or illustrations. While reference to studies, field work and specialist reports is generally made, the substance of those things is not described. The DEIS is a shell – more of an index than a detailed statement.

It seems that the general public must request copies of this project’s planning record in order to find material that should be in the DEIS and that is necessary to understand the nature and impacts of the project. We have observed this trend in recent NEPA documents for other Tongass projects. In our view, this change does not make available sufficient information for the general public to make an informed evaluation. Requesting and reviewing a project file of thousands of pages and hundreds of documents spanning years in order to meaningfully comment on a DEIS is not reasonable. Regulations are clear that it is the EIS, not the planning record, that must compile the relevant information and make disclosures to the public. One of NEPA’s purposes is to ensure that “environmental information is available to public officials *and citizens*.”²⁵ Public review and comment is a benefit, not burden.

In the following comments , we highlight information that this DEIS should have provided as well as other analytic problems in the planning process that cause the DEIS to fail the requirements of NEPA and NFMA. For the reasons above and below, we request that the DEIS be withdrawn and redone and that you issue a new Notice of Availability when the revised DEIS is available. We believe that this procedure will save time in the long run.

SCS-7,
con’t.

II. Timber Supply and Economics

A. The DEIS Relies On A Misleading Demand Analysis

The Tongass Timber Reform Act (TTRA) provides that the Forest Service must provide a timber supply that (1) meets annual market demand for timber from the forest and (2) meets the annual market demand from the forest for the planning cycle. In August of 2005, the 9th Circuit Court of Appeals ruled that a previous error in calculating demand required the Forest Service to revise the Forest Plan. In response, new timber demand projections were completed and published in 2006.²⁶ As part of the justification for this large sale, the DEIS indicates that annual market demand for FY 2007 is 131 MMBF as calculated using the “expanded lumber scenario” which allows for sufficient volume for existing Southeast Alaska sawmills to operate efficiently.²⁷

As a matter of common sense, we think this figure is unrealistic. Since 1996 the backlog of uncut timber has exceeded the amount logged each year.²⁸ By 2001 the harvest volume was

²³ DEIS at 1-15.

²⁵ 40 C.F.R. § 1500.1(b)(emphasis added).

²⁶ Brackley et al., 2006.

²⁷ Navy Timber Sale DEIS at A-7.

²⁸ Crone 2007.

less than an eighth of the volume under contract.²⁹ At no time during the last six years has the volume sold or cut even approached the 131 MMBF proposed as the annual demand for FY 2007. Instead, recent logging levels have ranged from 33.8 to 50.8 MMBF during the last five years. Notably, 39.8 MMBF from the nearby Baht sale are available after being cleared through the NEPA process. If part of the justification for this sale is to supply small and medium sized local sawmill, please discuss whether there is a realistic need for more than 39 MMBF from the Zarembo/Etolin/Wrangell biogeographic province. Moreover, the DEIS acknowledges the forest products employment in Southeast Alaska dropped from 2002 people in 1995 to 499 people in 2005 - a regionwide drop of 300% drop in timber industry employment over the past decade, suggesting a significant decline in demand for Tongass timber.³⁰

SCS-8

The DEIS arrives at the 131 MMBF figure using Dr. Allen Brackley's 2006 harvest projections.³¹ The new model contains four scenarios that project a turn-around in market demand from the long-term decline that began in the 1970s.³² The four scenarios are: (1) a limited lumber scenario; (2) an expanded lumber scenario; (3) a medium integrated scenario and (4) a highly integrated scenario.³³ The DEIS explains that the limited scenario represented the situation at the time Brackley developed the model and expanded lumber production represents current industry operation with some kind of demand stimulation.³⁴ The expanded lumber scenario involved a demand for 61.9 MMBF and the limited lumber scenario establishes a demand for 49.8 MMBF.³⁵

We believe that this optimistic assessment depends on three unrealistic assumptions - the same flawed assumptions as the model rejected by the 9th Circuit in NRDC v. U.S. Forest Service. More recently, a 9th Circuit District Court enjoined the Forest Service from offering the Threemile Timber Harvest Sale because of the need to update long-term market projections.³⁶ Because the market demand analysis used to justify the sale here suffers from the same defects, this sale is also a likely candidate for an injunction should it proceed.

SCS-9

We incorporate by reference the April 30, 2007 comments of The Wilderness Society on the Tongass Forest Plan Revision DEIS. We will download a copy to your website. We also cite the recent critique of the analysis by Morton et al.³⁷ We will summarize the key points in the following discussion.

First, the Brackley model assumes that Pacific Rim markets remain viable and that those markets determine domestic (lower 48) demand for Tongass forest products. At one time this assumption made sense because Japan was the dominant market for softwood lumber sawn from Tongass timber. But economic factors internal to Japan as well as a shift in demand from green lumber to kiln-dried lumber and engineered wood products have reduced the interest in

SCS-9a

²⁹ *Id.*

³⁰ DEIS at 3-37.

³¹ Appx A-7; *see also* TLMP DEIS (Jan. 2007).

³² Brackley et al. 2006 at Table 3.

³³ DEIS at A-9.

³⁴ DEIS at A-8.

³⁵ Appx. A-9, Table A-1 (also showing an increase in demand up to 66.4 MMBF for FY 2007).

³⁶ *Organized Village of Kake et al. v. U.S. Forest Service*, Case No. 1:04-cv-00029 (JKS) (D. Alaska, September 26, 2007).

³⁷ Morton, P., S. Phillips, and A. Gore. 2007. *Déjà vu on the Tongass: How Overestimating Timber Demand Prevents Responsible Stewardship*. Washington, D.C.: The Wilderness Society.

Appendix B

Alaskan timber.³⁸ Exports from Alaska to Japan have declined from 400 mmbf in 1973 to less than 25 mmbf in recent years.³⁹ Nor is there any basis to assume that market demand in other Pacific Rim countries would be similar to the bygone Japanese market.

↑
SCS-9a,
con't.

Also, this drop has corresponded to a decline in market share – North American lumber shipments dropped from 88% to 49% of Pacific Rim lumber imports from 1990 to 2004.⁴⁰ But the scenarios in Brackley's new model rely on the assumption that the market share will either remain constant or that Alaska's market share will increase.⁴¹ Given the high costs of production in Alaska, this assumption seems questionable because Alaskan products must compete against logs produced in British Columbia and the Pacific Northwest at a lower cost.

This inaccuracy is multiplied because Brackley's model also assumes that Pacific Rim demand dictates domestic demand. This is another curious assumption because in recent years the majority of softwood lumber produced in Southeast Alaska has gone to domestic markets - over the past four years, 78% of the wood products have gone to domestic markets and only 15% have gone to Pacific Rim markets. In future NEPA documentation, please explain why a small export share would drive demand for the majority of the wood going to domestic markets. It would be more appropriate to reconsider demand based on a model that accurately represents the domestic lumber market.

The failure to calculate demand based on the domestic market implicates the second major mistaken assumption – that Southeast Alaska's forest products industry is competitive. The model assumes that overall domestic demand for Alaskan lumber will increase or that Alaska's market share will increase. But Southeast Alaska shares an integrated market with British Columbia and the Pacific Northwest.⁴² And Southeast Alaska has a number of competitive disadvantages – a large proportion of low-value tree species, higher labor, operating, manufacturing and transportation costs, less efficient mills and weak local markets. As Robertson and Brooks noted: "With the highest total production cost of the three regions and a substantially lower stumpage value, the marginal position of Alaska as a high cost producer is evident."⁴³

SCS-9b

The third flawed assumption contained in the model is that new, large mills will soon begin operating in Southeast Alaska. It seems premature to design a large sale based on a demand analysis that relies on events which have not yet come to fruition.

SCS-9c

The figures contained in Table A-2 demonstrate how this flawed demand analysis has resulted in the development of this sale. Multiplying the 61.9 MMBF demand projected under the expanded lumber scenario by 4.5 attains the goal for volume under analysis in Timber Pool 1: 279 MMBF.⁴⁴ But there is already 385 MMBF under analysis.⁴⁵

Because the range of scenarios in the model is unreasonably restricted to overly optimistic estimates of demand that run counter to the evidence, the purpose and need for this large sale are based on an over-inflated calculation of demand. The consequences of inflating ASQ are

³⁸ See Crone 2007.

³⁹ Brackley et al., 2006.

⁴⁰ *Id.* at Table 5A.

⁴¹ *Id.*

⁴² See Stevens and Brooks (2003).

⁴³ Robertson and Brooks (2001).

⁴⁴ Appx. A at A-14.

⁴⁵ Appx. A at A-14, Table A-2.

particularly evident in this sale: (1) continued highgrading of the most ecologically significant forests; (2) continued exports with few jobs for local wood processors; (3) high value intact watersheds will be degraded in the name of generating a small amount of local economic activity; (4) local economic activity continues to be highly subsidized by American taxpayers and (5) new road construction will continue for the purpose of accessing timber even though it is unlikely that road construction costs will ever be recovered.

For these reasons, the market demand analysis in the Brackley model should not be used to justify this sale. The analysis has not fulfilled the requirements of the 9th Circuit’s ruling and has fatally infected this DEIS. If the Forest Service continues to proceed with this sale, there should be a SEIS that uses a new model that is based on realistic demand projections. With more accurate information, the agency can develop alternatives that achieve realistic objectives: (1) restoration; (2) focus on harvesting areas that already have roads; (3) shift support for regional industry from road building to value added manufacturing (technical and financial assistance) to meet more local needs and (4) allocate land and management effort toward broad forest values and the true economic engines of SE AK: nature based recreational and tour industries, commercial fishing and amenity based developments.

SCS-10

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

SCS-11

Small sales can be financially successful even though our process indicates uneconomic situations for the “normal” timber industry. Small timber operators have the ability to sell smaller amounts of forest products in the local area, have less capital outlays, lower overhead, and have been able to develop niche markets for their products. The small and very small family owned businesses that currently constitute the Southeast Alaska woods products industry are adjusting to take advantage of these more specialized markets. This is likely a normal phenomenon that is part of the transition occurring in the Southeast Alaska timber industry.⁴⁶

B. The DEIS Must Disclose Public Costs of Subsidizing Road Construction

In planning a timber sale project, the Forest Service must compare the public money it will spend administering a project with the prospective returns to the agency. That analysis, which “compares estimated Forest Service expenditures with estimated financial revenues,” allows the decision maker and the public to gain some understanding of “the future financial position of the program if the project is implemented.”⁴⁷ Part of the purpose of this analysis is to fulfill NEPA’s requirement to “balance a project’s economic benefits against its adverse effects.”⁴⁸

SCS-12

As noted in the Sierra Club’s TLUMP DEIS comments, failing to give an accurate accounting of the costs associated with a timber program prevents the public and the decision maker from assessing the worth of that timber program. When weighing benefits against the impacts to the Federal Treasury, the impacts to the environment, and with the loss of benefits that derive from the un-cut forest, accurate costs must be revealed. Independent audits have shown the annual losses associated with the Tongass timber program to be staggering, particularly when compared with output. The table below shows recent losses as derived from Forest Service data (See “Tongass Timber Truths” Taxpayer For

⁴⁶ Couverden Timber Sales ROD at R-9.

⁴⁷ Forest Service Handbook § 2400.18_30.

⁴⁸ Hughes River Watershed Conservancy v. Glickman, 81 F.3d 437, 446 (4th Cir. 1996).

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common Sense 2005 and Excel Spreadsheet “*Cut and Sold Graphs and Tables*” 2006, which is attached to the Sierra Club’s TLUMP comments).

Year	2006	2005	2004	2003	2002	2001
Loss in Million S	37.7	44.7	47.2	41.5	34.9	35.5
Logged in mmbf	43	50	46	51	34	48

Most importantly in regards to the Navy Timber Sale Program DEIS the Forest Service has not informed the public that a positive economic appraisal for the project is contingent on a public road contract. As brought forth in the Sierra Club’s TLUMP DEIS comments a large portion of the total timber program subsidy is directly attributable to taxpayer funded road construction. This also now includes the specific Navy Timber Sale Program. As in the TLUMP DEIS, the Navy DEIS never discloses these costs or the pervasiveness of the practice of having American Taxpayers pay for timber sale road construction for the overall Tongass timber sale program. Indeed nearly every large sale has been and will be dependent on pre-reading contracts being let. The table below is from the SC’s TLUMP comments and lists examples of Tongass wide sales that have been and were being pre-roaded at the time of the TLUMP DEIS’s comment period (a more updated list of SOPA scheduled timber sale programs contingent on public road works contracts will be put forward later in our economic comments for the Navy DEIS). The cost numbers were derived from actual contracts issued and from solicitations for vendors to bid on road construction contracts. (See also “*Public Works Road Projects*” R10 Forest Service 2006, attached to the Sierra Club’s TLUMP DEIS comments)

SCS-13

Sale Name	Date of Sale	Purchaser	Road Cost	Sale Cost	Loss to Taxpayer
Midway	11/3/04	Icy Straits	\$2,500,000	\$52,467	\$2,447,533
Summore Change	1/22/03	Viking	\$2,539,000	\$443,524	\$2,095,476
Fusion	5/26/04	Viking	\$1,405,853	\$277,772	\$1,128,081
Kogish-Shinaku	1/14/05	Viking	\$875,923	\$96,001	\$779,922
Finger Point	9/3/04	Viking	\$680,991	\$67,561	\$613,430
Luc Lac II	9/1/05	Viking	\$224,627	\$121,817	\$102,810
Upper Carroll II	12/9/05	Pacific	\$1,555,000	\$179,952	\$1,375,048
Skipping Cow	4/06	Alcan	\$1,300,000	\$143,196	\$1,156,804
Lindenberg	12/21/05	Viking	\$391,000	\$231,295	\$159,705
Buckdance-Madder	4/06	Pacific	\$2,877,000	\$106,926	\$2,770,074
Future Projects	N/A	N/A	Est. Cost		

w/ known cost est.					
Orion North			>\$1,000,000		
Tuxekan			>\$1,000,000 <\$5,000,000		
Boundary			>\$100,000 <\$250,000		

SCS-13,
con't.

Nearly all future timber sale projects not classified as small sales will at least require pre-reading to be successfully offered and in some cases even this will not be enough to provide a positive appraisal. From conversations with the Forest Service and from Forest Service documents these potential sales include Crane/Rowan, Finger Mountain, Canal Hoya, Madan, Woodpecker, Emerald Bay, Three Mile, North, and Mad-Buck II. Other sales are having extensive preparatory roadwork done on old logging roads under maintenance contracts. This work often has no other purpose then to facilitate planned timber sales at taxpayer expense. Often these sales have not reached their final decision stage when the roadwork is done. Examples of these sales include Kuiu, Overlook, Logjam, Francis Cove, Rockfish, S.W. Neets, and Baht. Several of these contracts were recently successfully challenged in the courts for violating NEPA's requirement that impacts be revealed before a decision is made that commits resources to a timber sale project.

SCS-14

In regards to the Navy project specifically we have calculated the estimated cost per alternative. The Navy DEIS only provided a cost per mbf estimate and there by avoided providing a full road cost estimate for the public review of the DEIS. Our calculations based on the mbf costs are presented in the table below.

SCS-15

Alt B	Alt C	Alt D	Alt E	Alt F
\$3,527,339.50	\$4,923,846.30	\$1,322,184.60	\$1,758,474.30	\$359,492.52

The Forest Service may maintain that it is not known at this time whether a public road contract is necessary in regards to the Navy timber sale program. However the Forest Service's own September 19th 2006 critical path analysis states that the Navy timber sale project is contingent on a public works road contract along with many other timber sale programs. These scheduled or already offered projects include, as noted above, Mad-Buck II, Orion North, Three Mile, North, Emerald Bay, Woodpecker(1), Madan, Canal Hoya, Finger Mt., Crain/Rowen, Scratchings, Tuxekan, Traitors, Scott Peak/Bocephus/ Todahl, Dolomi, Gravina, Staney, North Thorne, Iyouktug 2, and of course Navy (see Forest Service's Critical_Path_Visual_09_19_2006.xls document attached to this set of Navy DEIS comments). And in regards to Navy it is quite obvious that the Forest Service has know for a least a year and a half that a extensive road cost, using taxpayers money, will be necessary for the Navy timber sale project to move forward. Apparently the F.S. has just decided to not include the public road costs in the DEIS's economic analysis.

SCS-16

Balancing costs and benefits is not only a central function of a Forest Plan but is also a necessary part of the economic analysis of specific timber sale programs. Every DEIS alternative should have a display of the benefits that are expected to be derived from the level of timber harvest associated with it. Without an accurate corresponding display of costs and

Appendix B

harms, informed decision making is not possible. It is also misleading to the reviewing public.

When analyzing individual timber sales the Forest Service has been relying on erroneous and misleading information in their cost benefit analysis, specifically a cost per board foot estimate that seriously under estimates the expenditures necessary for carrying out timber sale projects. The Navy timber sale program DEIS repeats the use of this information with the same result, the production of a skewed and faulty analysis of the costs needed to implement the timber sale program. Part of the faulty analysis lies in the fact that many planned timber sale projects are never offered, and many more, if offered, never receive a bid. Yet the cost figures the Forest Service puts forward is a per board foot cost estimate for timber harvest output that does not account for the planning and offering of sales that are never logged. This figure, derived from budget allocations, assumes that everything being planned will be offered and cut. Furthermore, the \$101.00 per mbf figure is based on an un-documented estimate that has been in use since the 1990's. (See *"Plaintiff's Reply to Federal Defendants' Opposition Brief on Count IV" Case No. J04-010 CV (JKS), NRDC vs. The Forest Service*, which we incorporate in full here by reference). As shown by any examination of expenditures in relation to outputs over the last decade, this number wildly under estimates the cost associated with "getting the cut out". Even if this number were accurate, it would only be so if all the timber planned for was actually was offered and logged. But the Forest Service actually plans for much more volume than is actually cut. Furthermore this FS practice was one of the core issues in the NRDC vs. the F.S. litigation that resulted in the court's decision that a new forest plan had to be put forward. Yet the Forest Service is still using the same erroneous calculation of costs for the Navy timber sale program (see Table 3-5- TM-5: Estimated Forest Service Costs and Revenues, Chapter 3, page 12 of the Navy DEIS).

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SCS-16,
con't.

SCS-17

C. The DEIS Overestimates Annualized Local Jobs Because of the Failure to Account for the Effects of Export Policy

Some of the cutting units seem designed to meet the needs of large timber operators who ship unprocessed yellow cedar overseas and up to 50% of the less valuable sawlogs to mills in the lower 48. Thank you for discussing the existence of the new export policy in this DEIS. We note that there was no NEPA analysis of this policy and its impacts on the economics of this sale – the DEIS discloses that it may lead to a positive appraisal under current market conditions. But this policy also seems to make it likely that all of the highest value trees (AYC and WRC) and large sawlogs will escape Alaska without any processing in this state. The DEIS should disclose this likelihood and analyze the economics of this sale in terms of the amount of timber that will actually be exported versus the amount of timber likely to reach local mills. For example, rumor has it that a large processor from the lower 48 obtained a significant amount of timber from the Backline sale after the new export policy became effective – if the policy is increasing export rates, the DEIS should disclose this.

SCS-18

SCS-19

Also, because of this high rate of exports, the column in Table 3-2 on mill jobs is misleading. The table provides an upper range of jobs that assumes that all of the timber sold, including Alaska Yellow Cedar (AYC) is processed in Southeast Alaska. The DEIS states that "[t]he number of jobs and related income will likely fall somewhere between the high end and low end of this calculated range." This statement suggests that there will be somewhere between 27 and 483 annualized mill jobs, 65 and 483 annualized total jobs and between \$2.5 and \$11.4 million in direct income. We believe that the table mischaracterizes the total annualized jobs and total income by suggesting an upper range without providing any basis for the assumption that all the timber sold would ever be processed locally in Southeast Alaska.

It is undisputed that it is more profitable to export raw logs than to process them in Southeast Alaska.⁴⁹ The annual appropriations riders in the Department of Interior and Related Agencies Appropriation Acts effectively exempt Alaska Yellow Cedar from the domestic processing requirement, ensuring the export of the most valuable trees. Although the amount of cedar sold between 2001-2005 was less than 20% of the volume of spruce and hemlock sold during the same period, the stumpage value was similar: \$3.3 million for the spruce and hemlock and \$ 2.8 million for the cedar.⁵⁰ Therefore, the analysis in the DEIS should reflect the fact that if there is to be a large sale, the high value trees will be exported pursuant the domestic processing exception contained in the annual appropriations rider.

SCS-20

Also, 36 C.F.R. § 223.201 grants the Regional Forester the authority to approve other raw log exports upon application from the timber sale purchaser.⁵¹ This procedure seems to be nearly automatic – all but 4 of the 117 applications from 2001-2005 were approved. And as of March 14, 2007, the Regional Forester has authorized timber sale purchasers to ship unprocessed spruce and hemlocks to states in the lower 48 up to a maximum of 50 percent of total sawlog contract volume of all species.⁵²

Because of the above legislation, regulations and policies, we do not believe that Table 3-2 accurately depicts projected Alaskan employment and income. Please provide analysis in your future NEPA documentation that incorporates a realistic depiction of the amount of timber from this sale that will most likely be exported without any prior domestic processing. The upper end of the range relies on the mistaken assumption that all the timber could be processed locally and therefore the entire table is misleading as to the actual range of jobs and income generated by the project.

SCS-21

D. The DEIS Must Provide More Thorough Analysis of Eco-System Benefits

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

SCS-22

The undersigned organizations have repeatedly emphasized the need to take ecosystem values into consideration. We have also repeatedly pointed out the fallacy behind the assumption provided in your “Timber Financial Efficiency Analysis” - that there need not be quantitative analysis for other resource uses because “non-market values are difficult to represent by appropriate dollar figures.”⁵³

⁴⁹ See e.g. Alaska Dept. of Commerce and Economic Development, Southeast Alaska Wood Products at 8 (2003) *available at* http://www.dced.state.ak.us/dca/AEIS/Statewide/Timber/Statewide_Timber_SE.html (hereinafter AK DCED Wood Products Report).

⁵⁰ See e.g. USDA Forest Service Region 10, Timber Cut and Sold on National Forests, 2001-2005, *available at* http://www.fs.fed.us/r10/ro/policy-reports/for_mgmt/index.shtml.

⁵¹ 36 C.F.R. § 223.201.

⁵² Memorandum from Dennis E. Bschor, Regional Forester, Re: Limited Interstate Shipments of Sitka Spruce and Western Hemlock Timber (March 14, 2007).

⁵³ DEIS at 3-40.

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Nowhere in the DEIS are the more easily quantifiable eco-system values, for which data exists, actually quantified. These values include the values of subsistence take, outfitter guide revenues, trapping, sport hunting and fish production for both commercial and recreational takes. Without taking readily available data and using it to put a number to these values, the DEIS does not fulfill its obligation to inform the public and the decision maker. We request that you seek out readily available information that is necessary to quantify other multiple economic uses of the Tongass – tourism, fisheries and subsistence - in order to make a fully informed decision.

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SCS-22,
con't.

We will discuss these issues in two separate sections to fully illustrate our concern. The first section repeats comments that were filed on past timber sales and on the Sierra Club's TLUMP DEIS comments. The second section discusses the types of ecosystem values that should be quantified and analyzed in this DEIS.

1. Legal Standards Mandating Consideration of Eco-system Values and Means of Quantifying Those Values

The comments pasted below in apply fully to the Navy timber sale project as well the Emerald Bay project and the TLUMP comments. This is because the Forest Service has continued to ignore what they call unquantifiable eco-system benefits in the Navy DEIS, and in the Tongass Land Management Plan which makes the decision whether a timber sale program such as the Navy project is a appropriate timber sale offer. The citations in the argument pasted below are documented in the Sierra Club comments on the Emerald Bay Timber Sale Project (See "Emerald Bay SDEIS Comments" Sierra Club et al. 2004).

SCS-23

"The National Environmental Policy Act (NEPA), the Multiple-Use Sustained Yield Act (MUSYA), the Resource Planning Act (RPA), and the NFMA all include provisions requiring due consideration of non-market goods and services when evaluating management alternatives. Planning regulations developed by the Forest Service in response to the 1976 National Forest Management Act (NFMA) included an explicit management objective for the national forest to maximize net public benefits. See Loomis and Walsh (1992); Swanson and Loomis (1996). Net public benefits are defined as "the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not." See Forest Service (1982). Thus, the legislative mandate is quite clear on the importance of conserving non-market resources.

Estimating net public benefits requires an economic analysis that accounts for the net economic benefits and costs generated by both the active and passive use of public resources. This analysis should be conducted from society's perspective and considers non-market goods and services, in addition to marketable commodities. Non-market benefits such as ecological services, recreation and passive use benefits have been recognized in the economic literature and as a result, the concept of the total economic value has evolved. See, e.g., Randall and Stoll (1983); Peterson and Sorg (1987); Loomis and Walsh (1992); Costanza et al. (1997). Evaluating management alternatives using a total economic valuation framework is an appropriate endeavor for the agency to pursue. Unfortunately the economic analysis included in the DEIS is inadequate and therefore the DEIS is as well.

SCS-24

Section 102(B) of NEPA requires the Federal Government to "identify and develop methods and procedures . . . which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations." One method for examining the impact of a proposed action on environmental amenities and values is a cost benefit analysis.

Title 40, Code of Federal Regulations for NEPA (40 C.F.R. § 1502.23) indicates that “[f]or purposes of complying with the Act, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations.” (40 C.F.R. § 1502.23). However, Title 40 does NOT relieve the agency from completing an economic analysis that fully accounts for the impacts of proposed management alternative on non-commodity values because many of these impacts are quantifiable. *See* Morton (2000). The NEPA compliance manual describes quantitative impacts as impacts that can be measured. *See* Freeman et al. (1994). Economists have made great advances in developing methods to estimate the economic benefits generated from the production and conservation of non-commodity resources. Therefore, in addition to qualitative descriptions of all non-commodity benefits and costs, the decision documents must quantitatively estimate the benefits (costs) of conserving (damaging) non-market resources. Since many impacts can now be quantitatively estimated, they should be internalized into the economic analysis evaluating management alternatives as required by NEPA.

Haynes and Horne (1997) provide the following direction on non-commodity valuation for managers of public resources:

[Timber values must be compared with societal values of other outputs from that same eco-region. An eco-region with high timber values relative to other eco-regions may also have recreation values that exceed its timber value. Thus, the appropriate course for managers is to plan actions with the total market basket of values for a given eco-region in mind.

The economic benefits of wildland range from the tangible and immediate, such as the enhanced value of real estate in proximity to protected areas, to the esoteric and the distant, such as the value of preserving species for the potential use and enjoyment of future generations. Some of these benefits are reflected in markets and can be quantified as prices. Others are not traded in formal markets and have no price. That does not mean, however, that they have no value, and all such values must be considered in assessing the economic importance of wild land.

Ecosystem Service Values:

Ecosystem services are those things provided by nature that man would otherwise need to provide for himself. They include air and water filtration, climate regulation, and maintenance of biodiversity, scenic beauty and other benefits.

- *High quality water is just one example of the services we get "for free" from protected landscapes. High quality water is particularly valuable in Alaska for fisheries. Indeed, one of the principal purposes of the National Forests is to protect water supplies. The U.S Forest Service estimates that the National Forests supply 6% of the runoff east of the Mississippi River and 33% of the runoff in the west. At a very minimum, this water is worth \$3.7 billion annually (Sedell, et al, 2000).*

- *Carbon Sequestration is another. Mature fully stocked forests sequester carbon to help slow the process of global warming. With carbon credits already exchanging for between \$1 and \$20 per ton around the world, carbon credits could be worth \$300 to \$600 per acre (Walls 1999).*

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- *In a more recent study focused on wilderness in the lower 48 states, Loomis and Richardson estimate \$150 per acre per year for carbon storage, climate regulation and waste treatment (filtering air and water).*

Passive Use Values: Passive use values include option value (what it's worth to preserve the option of future use), bequest value (what it's worth to pass a resource unimpaired to future generations) and existence value (what it's worth to preserve a resource that one has no expectation of using in the future). For example, Loomis and Richardson estimate the passive use value of wilderness in the eastern U.S. as about \$4/acre/year. Again, this value is produced before the first hiker puts on her backpack. In their economic assessment of the Interior Columbia River Basin, Haynes and Horne estimated that the existence of roadless areas accounts for 47% of the value to society provided by public lands in the Columbia Basin, while recreation provides 41%, timber 11%, and range 1%.

In order for the Forest Service to complete a legitimate cost/benefit analysis of the timber sale program, the Forest Service needs to consider the full range of economic benefits of unlogged forests or wildlands. Issues such as effects of wildlands on ecosystem service values and passive use, and recreation values, among others, must be included in an analysis. “

SCS-25

2. Concerning Tongass-Specific Ecosystem Values

Planning regulations require forest plans to “describe and analyze ... the range and estimated long-term value of market and non-market goods, uses, services and amenities that can be provided [by national forests] consistent with the requirements of ecological sustainability.⁵⁴ The DEIS broadly discloses the affected environment for timber economies by noting that Southeast Alaska’s 74,000 residents work in commercial fishing, timber harvest and processing, tourism and mining, recreation and subsistence related economies. The DEIS should measure the economic effects for sectors other than timber by using the jobs or personal income (wages and proprietor income) realized in those communities as a result of continued preservation of natural environments - this is consistent with how the local economic effects of logging or mining are calculated. From this viewpoint, a portion of the visitors’ expenditures becomes direct income to business owners and workers in recreation-related industries (e.g., gas stations, grocery stores, outfitters). Those individuals spend a portion of their income in the local area to replenish inventories or to purchase consumer services (i.e. retail spending). Such indirect and induced effects also generate income to other individuals in the community, who may not appear to have an obvious direct connection to the natural area.⁵⁵ The following discussion describes the types of economic factors that need more thorough analysis.

SCS-26

First, we cite these comments from over 100 businesses, including 17 Alaska businesses, that addressed Congress regarding the outdoor recreation industry’s concerns about logging of roadless areas:

While the timber industry in Southeast Alaska continues a sharp decline, primarily due to changing global timber markets, the recreation and visitor industry continues to grow. Using U.S. Forest Service data, a 1997 comparison between the value of logging Tongass old-growth forest and recreation and tourism use of these lands showed that tourism was

⁵⁴ 36 C.F.R. § 219.21.

⁵⁵ Loomis, J.B. and Richardson, R. 2000. Economic Values of Protecting Roadless Areas in the United States. Fort Collins, Colorado, Department of Agricultural and Resource Economics, Colorado State University. Prepared for The Wilderness Society and Heritage Forests Campaign at 3.

nine times more valuable than logging. By 2000, recreation and tourism on the Tongass contributed 30 times the value of clearcutting the forest. There are particularly interesting facts when considering that the failing Tongass timber program cost taxpayers \$35 million in subsidies that same year. The estimated number of summer visitors to Southeast Alaska slightly more than doubled between 1993 and 2001, increasing from 502,800 in 1993 to 1,010,352 in 2001. Clearly, trees left standing for recreation and tourism contribute substantially more logging to Southeast Alaska's long-term economy.⁵⁶

Second, subsistence resource harvesters use the project area. The value of this wild food has been quantified – wild food harvests provide 115% of the protein requirements for Southeast Alaska residents and the total value of wild food harvests to Southeast Alaska's 73,000 plus residents in 1999 was \$15,193,527 at \$3 per pound and \$25,322,545 at \$5 per pound.⁵⁷

Third, the value of the salmon fishery requires discussion, particularly in view of the productive potential of the watersheds in the project area. Chartered sport fishing is a growing industry and the economic value of commercial salmon fishing has rebounded dramatically in the past few years. The American Sport Fishing Association conducted a national survey in 2001 finding that U.S. residents over the age of 16 spent an estimated \$537 million on fishing trips in Alaska in 2001.⁵⁸ These expenditures generated 11,064 jobs and \$238 million in wages and salaries with a \$960 million ripple effect.⁵⁹ Updated figures in 2003 showed that jobs and expenditures increased approximately 9% in these categories.⁶⁰

Similarly, statewide commercial salmon fisheries in 2007 generated more than \$374 million in ex-vessel value alone (meaning that processing jobs, transportation jobs and other economic ripple effects are not factored in).⁶¹ Fisheries in Southeast Alaska had an ex-vessel value of over \$98 million, or more than one-fourth of the statewide total.⁶² Based on this figure, we believe it is reasonable to assume that at a minimum, sport fisheries in Southeast Alaska also comprise roughly one-fourth of statewide values in 2000 - \$125 million in direct expenditures, 2,500 jobs worth over \$50 million in wages with \$250 million in ripple effects. In view of the negative appraisal value of this sale, we do not believe the precise numbers are necessary to make our point: that other uses are highly profitable, and the proposed sale is not.

Based on the above economic statistics, there are ample means to quantify other forest values. In addition to the points about quantification of these values raised in the previous section, we would like to point out that government agencies have accepted two methods for measuring the value of recreation to visitors: the travel cost method (TCM) and the contingent valuation method (CVM).⁶³ The Forest Service has used the IMPLAN input/output model to estimate the effects of agency actions on income and employment.⁶⁴

⁵⁶ Outdoor Industry Supports Efforts to Safeguard Tongass National Forest for Sake of Customers and U.S. Taxpayers (September 29, 2004).

⁵⁷ Robert J. Wolfe, (Alaska Dept. of Fish and Game, Division of Subsistence Research Director), Subsistence in Alaska: A Year 2000 Update (March 2000).

⁵⁸ Alaska Dept. of Fish and Game, Economic Impact of Sport Fishing in Alaska, [available at](http://www.sf.adfg.state.ak.us/statewide/economics/) www.sf.adfg.state.ak.us/statewide/economics/ (last visited November 19, 2007).

⁵⁹ Id.

⁶⁰ Id.

⁶¹ Alaska Department of Fish and Game, 2007 Alaska Commercial Salmon Harvests and Exvessel Values, [available at](http://www.cf.adfg.state.ak.us) www.cf.adfg.state.ak.us (last visited November 19, 2007).

⁶² Id.

⁶³ Loomis, J.B. and Richardson, R. 2000 at 5 (explaining that TCM is quite capable of measuring the value of all types of non-motorized recreation, including hunting, fishing, wildlife viewing,

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A holistic cost/benefit approach to measuring forest values would make abundantly clear that logging areas like the Navy project area now would constitute an immediate economic loss and would unjustifiably compromise the economic future of the Tongass. By emphasizing timber harvest over other economic uses in the area, the proposed project ignores economic trends in the region. We expect a cost/benefit analysis that does more than simply state that these other economic uses are hard to quantify. A full accounting of wildland values should be provided in order to satisfy NEPA's mandate to disclose significant effects.

SCS-27

E. Conclusion

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

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[I]n the absence of significant increases in national forest timber sales (and the market to support them), the ability of forest policy to impact the regional economy via the timber sector will be small. Thus, the focus should shift to ways in which forest policy can affect the new drivers of economic activity in the region – tourism and unearned income. Forest policies that attract both visitors and new residents and keep existing residents from leaving will contribute to economic growth in the region.⁶⁵

Crone's research indicated that efforts to improve the competitiveness of Alaska wood products could contribute to economic diversity in some communities but it was unlikely that wood products production and employment will ever return to their previous levels in southeast Alaska. Her conclusion about economic viability and uses of the Tongass is quoted here:

Although timber from the Tongass continues to play a role and efforts to assist the wood products industry restructure should continue, timber is not likely to be the most important contributor to future socioeconomic well-being in the area. Based on regional, national and international economic and demographic trends, the roles the Tongass plays as a provider of tourism and recreation opportunities and as the custodian of many of the unique natural amenities and ecosystem values that both attract tourists and enhance the quality of life for existing and potential residents, is likely to be of more importance to the economic vitality of the region.⁶⁶

canoeing, backpacking etc. and that CVM is capable of quantifying the economic value of non-motorized recreation as well as passive use values and that the U.S. Water Resources Council has recommended both methods as appropriate for valuing outdoor recreation in federal benefit-cost analyses and the Department of Interior has endorsed both methods for estimating the value of non-market natural resources damaged by oil spills and other toxic events).

⁶⁴ *Id.* at 6.

⁶⁵ Lisa K. Crone, Southeast Alaska economics: A resource-abundant region competing in a global marketplace at 22 (2005). (or *Landscape and Urban Planning* 72 (2005) 215-233; *see also* Loomis, J.B. and Richardson, R. 2000 at 14-15 (summarizing Lorah (2000) study of rural counties and finding that there was a positive association between land preservation and economic growth and that wildlands play a role in transforming extractive-based economies into amenity based economies and that because of this transition, many communities face an array of challenges to address the inevitable cultural change but suggesting that this transition offers western economies many opportunities for sustainable development.

⁶⁶ Crone (2005) at 231.

III. Old Growth Reserves:

First, we strongly recommend that you adopt the inter-agency biologically preferred option for the Anita Bay pinchpoint. Because of the ecological significance of this area, the IDT option that is present in nearly all of the action alternative undermines the point of the OGRs. Because of the potential for higher harvest deer and furbearer harvest rates and increased fragmentation that would result from this project, the biologically preferred OGR may be critical to the long-term health of wildlife populations. Moreover, the IDT option seems to suggest that the South Etolin Wilderness Area can somehow compensate for the failure to adopt the biologists' option. If you proceed with an alternative that includes the IDT option OGR for this area, please compare the habitat values contained in the OGR, including connectivity, with the habitat values of the Wilderness Area.

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Also, if you proceed with this sale despite our concerns with the demand analysis and other issues, we strongly recommend that you adopt the biologically preferred option for all OGRs. Further timber take will remove valuable wildlife habitat and, as the DEIS points out, the biologically preferred OGRs best meet the intent of the Appendix K small reserve criteria.

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IV. Fragmentation, Connectivity & Coarse Canopy

The related topics of fragmentation, connectivity and coarse canopy forest are considered a significant issue for this project, yet there is no significant analysis.

In the DEIS, one of the three measures of fragmentation is the amount of coarse canopy (TimTyp Class 6 & 7) forest. We note, however, from the planning record that "(r)eductions in coarse canopy due to partial harvest are unknown at this time."⁶⁷ This important fact was not disclosed in the DEIS, in violation of NEPA. We also note that in each action alternative there is a large acreage and proportion of partial cutting. The acreages range from 696 to 4,838 acres and the proportions range from *one-half* to *three-quarters* of the total unit acreage. Because the reductions of coarse canopy forest in partial cut units are not known and the amount of partial cutting is significant, we believe that adequate analyses of effects on fragmentation, connectivity, and coarse canopy forest have not been conducted.

SCS-31

We believe that there is so little coarse canopy forest remaining (see DEIS Fig. HF-2) that further losses of such forest should be avoided entirely. In addition, smaller pockets of coarse canopy forest that do not show up in GIS should be protected whenever found during field work.

The DEIS notes that "connectivity is defined as a measure of the extent that forest areas between or outside reserves provide habitat for breeding, feeding, dispersal, and movement." It lists old-growth reserves, non-development LUDs, and riparian, beach and estuary buffers as providing these functions. But the DEIS does not discuss the number and nature of connections between these elements, and it does not discuss the adequacy of those that are connections themselves. There is no map showing important connections. There is no discussion of how adequate or marginal those connections may be, or of how project development will affect them. Corridor width, habitat type, and degree of continuity of interior old-growth forest are important factors, and must be considered in view of the connectivity needs of a spectrum of species.

SCS-32

We find the treatment of these topics to be wholly unsatisfactory and not adequate for satisfying the requirements of NEPA and of public participation.

SCS-33

⁶⁷ See the "Readme" tab of the file pog2.xls (dated 10/24/07) in planning record.

Appendix B

V. Impacts to Inventoried Roadless Areas (IRAs) are Unjustified

We believe that the North Etolin, Mosman and South Etolin IRAs should be preserved in their natural state. This is the most valuable use of these areas from an ecological, aesthetic and economic standpoint. The uniqueness of these areas creates economic value and an economy based on those who come to see, live close to, study or otherwise benefit from that uniqueness. And these areas provide ecological benefits to wildlife that are unavailable in developed areas. 136 scientists had the following comments about roadless areas in their 1997 letter to President Clinton that mirror our general concerns:

A substantial amount of scientific information collected from both aquatic and terrestrial environments has demonstrated the importance of roadless areas in protecting the nation's wildlife, fisheries and water resources. ... [T]hey act as de facto refuges for numerous sensitive plant and animal species, reservoirs of genetic material, and benchmarks for experimental restoration efforts in intensively managed landscapes. [...] The ecological risks associated with developing these areas are extremely high, and may jeopardize the flow of goods and services that the national forests currently provide to human society.⁶⁸

For these reasons, and also because of the high profile debate over the management of roadless areas in recent years, particularly on the Tongass, we can see no valid reason for moving forward with any project that directly or indirectly degrades roadless areas and associated resources. There is strong public support for protecting roadless areas in the Tongass. Further, in view of the strong scientific support for protecting Tongass roadless areas, we request that you remove any cutting units from the IRAs if you decide to proceed with this project.⁶⁹

SCS-34

We have identified several specific concerns in the discussion below. Our first concern is that in general, we believe that the DEIS should provide more analysis about the impacts of logging on these roadless areas – the discussion provided was minimal in view of the fact that this was an alternative driving issue. Second, we believe that the economics of logging in the roadless areas should receive independent consideration. Third, the roadless areas in this project area have unique ecological values and there should be more thorough analysis of possible impacts to these resources. Finally, the undersigned organizations are all active in pursuing wilderness protections for public lands on the Tongass and this project would affect the viability of these areas for future wilderness designation.

SCS-35

A. The DEIS Should Contain A More Comprehensive Analysis of Impacts to Roadless Areas

The brevity of the discussion pertaining to roadless area impacts in this DEIS was surprising. Because of the special values that roadless areas have for wildlife and primitive recreation opportunities, we expected more detailed analysis. This DEIS only used two measurements to analyze the effects of this project: affected IRA acreage and miles of road. The DEIS then relegated the rest of the information to the Resource Reports. Furthermore, most of the material in the Roadless Resource Report was a summary of the 2003 Roadless Area Evaluation FSEIS. The report did not analyze the impacts of this project on specific roadless areas values.

SCS-35a

⁶⁸ Loomis, J.B. and Richardson, R. 2000 at ii.

⁶⁹ *See e.g.*, Powell, R.A. et al. (Oct. 1996): "Joint Statement of Members of the Peer Review Committee Concerning the Inadequacy of Conservation Measures for Old-growth Associated Wildlife Species"; Powell, R.A., et al. (Sept. 1997): "Joint Statement of Members of the Peer Review Committee Concerning the Inadequacy of Conservation Measures for Vertebrate Species in the Tongass National Forest Land Management Plan of Record."

Given the significance of this issue, NEPA demands more detailed analysis in order to ensure that the public and the reviewing agency are fully informed about the impacts this sale may have on roadless areas. As an example, we would point to the recent Iyouktug Timber Sales DEIS. That DEIS provided site-specific information about impacts to roadless resource characteristics – wildlife habitat uses, recreational uses, karst and fish habitat. It also measured impacts in terms of degrees of influence on high value fish and wildlife habitat in each IRA and degrees of influence on ecological, cultural and geological special values in each IRA. Also, it measured these impacts in terms of each alternative. If you proceed with this sale, we request that you review the Iyouktug DEIS as a model for improving your discussion of impacts to the IRAs.

B. The DEIS Should Analyze Economic Costs and Benefits Specific to the Roadless Areas.

We request that you also analyze the economics of logging in the roadless areas separately from the economics of logging the project area as a whole. Alternatives B, C and E impact the largest amounts of roadless acreage.⁷⁰ These harvests also have the highest logging costs per MBF.⁷¹ And most significantly, the road construction costs per MBF for Alternative F (no roadless entry) are between a third and a half of the costs per MBF in comparison to the alternatives that propose logging in the roadless areas.⁷² These facts suggest that the economic efficiency of the sale decreases in proportion to the increase in impacts to roadless areas. If you proceed with a sale that authorizes logging in the roadless areas, please include the information in Tables 3-2, 3-3, 3-4 and 3-5 in a format that allows the public and the reviewing agency the opportunity to compare the economics of the sale in terms of roaded and roadless areas. A fully informed decision maker should be aware of the exact benefit accruing from a decision that would severely compromise these areas.

We also think that a fully informed decision about authorizing logging in the roadless areas should consider existing benefits that are reliant on roadless character and that may be compromised by further development. The first concern pertains to the growing recreational industry. We cite these comments from over 100 businesses, including 17 Alaska businesses that addressed Congress regarding the outdoor recreation industry's concerns about logging of roadless areas:

While the timber industry in Southeast Alaska continues a sharp decline, primarily due to changing global timber markets, the recreation and visitor industry continues to grow. Using U.S. Forest Service data, a 1997 comparison between the value of logging Tongass old-growth forest and recreation and tourism use of these lands showed that tourism was nine times more valuable than logging. By 2000, recreation and tourism on the Tongass contributed 30 times the value of clearcutting the forest. There are particularly interesting facts when considering that the failing Tongass timber program cost taxpayers \$35 million in subsidies that same year. The estimated number of summer visitors to Southeast Alaska slightly more than doubled between 1993 and 2001, increasing from 502,800 in 1993 to 1,010,352 in 2001. Clearly, trees left standing for recreation and tourism contribute substantially more logging to Southeast Alaska's long-term economy.⁷³

⁷⁰ Roadless Resources Report, at 11.

⁷¹ DEIS at 3-11, Table 3-4.

⁷² DEIS at 3-11, Table 3-4.

⁷³ Outdoor Industry Supports Efforts to Safeguard Tongass National Forest for Sake of Customers and U.S. Taxpayers (September 29, 2004).

Appendix B

In 2000, two economists studied the economic values associated with leaving roadless areas intact. They found that the average value of a recreation visitor day (RVD) in a roadless area is nearly \$42.00 per day and that roadless recreational expenditures flowed to other economic sectors and supported economic development outside the roadless areas.⁷⁴ The economists also concluded that there was a dramatic growth in recreational visitor days to areas where there were wilderness recreation opportunities.⁷⁵

The recreational resource report indicates that overall recreational use of the project area has mirrored this trend and that some of this use occurs in the roadless areas that may be impacted by this sale, particularly around Mosman Inlet.⁷⁶ There are fifteen inventoried recreation places which make up seventeen percent of the Mosman IRA.⁷⁷ The nearby community of Wrangell has made ongoing efforts to diversify its economic base and roadless recreation opportunities are critical to a growing guide/outfitter economic sector that holds promise for alleviating the harsh impacts that declining timber markets have had on this community. The DEIS should analyze the growth of roadless recreation in your discussion of this issue. We would add that the discussion of other forest values should also be included in this discussion – fishery resources, subsistence resources and amenity values. The absence of this information makes it difficult to fully consider the costs and benefits of logging in the roadless areas.

SCS-35b,
con't.

C. Roadless Areas Are Critical to Biodiversity and Species Viability

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

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

We add the following general comments about the impact of roads and road maintenance on natural environments:

[r]oads and the maintenance of roads impact natural environments in many ways. Roads increase air and water pollution, promote the spread of invasive exotics, reduce watershed integrity, compromise fish and fish habitat, increase surface erosion and landslide potential, and are associated with declines in wildlife numbers.⁷⁸

⁷⁴ Loomis, J.B. and Richardson, R. 2000 at iv, 13.

⁷⁵ *Id.* at 9.

⁷⁶ Recreational Resource Report at 7.

⁷⁷ Roadless FSEIS at C1-300.

⁷⁸ Dominick A. Dellasala & James Strittholt, Impact of Inventoried Roadless Areas and Unroaded Lands to Oregon’s Natural Heritage (Comments on Oregon’s Roadless Petition to the Bush Administration (2006) (citing Andrews, A. 1990. Fragmentation of habitat by roads and utility corridors: A review. *Australian Zoology* 26:130-141; Furniss, M.J., T.D. Roelofs, and C.S. Yee (1991). Road Construction and maintenance. In W.R. Meehan, ed. Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society Special Publication 19. Bethesda, MD.; Reed, R.A., J. Johnson-Barnard, and W.L. Baker. 1996. Contribution of roads to forest fragmentation in the Rocky Mountains. *Conservation Biology* 10:1098-1106; Spellerberg, I.F. 1998. Ecological effects of roads and traffic: a literature review. *Global Ecology and Biogeography Letters* 7:317-333 and Trombulak, S.C., and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic communities. *Conservation Biology* 14:18-30.

All of these scientific concerns bear on the analysis of impacts to Etolin Island’s roadless areas - there are many species in the project area that depend on the roadless area for a portion of their habitat needs. For example, the Queen Charlotte goshawk is known or suspected to occur in each of the project area IRAs – this type of information should be disclosed in NEPA documentation.⁷⁹ Also, the Mosman IRA contains some of the highest quality fish habitat in the Wrangell Ranger District and much of the highest quality bear habitat that remains in the project area.⁸⁰ More specific analysis of this information is necessary to consider impacts on generalist predators such as black bear and marten as well as on anadromous fish species. Roadless areas have unique values for these species because of their particular susceptibility to human disturbance and road construction. Finally, road construction will likely introduce invasive plants to the roadless areas – based on the botany resources report, it seems likely that the reed canary grass in particular will colonize the roadless areas through increased vehicle traffic. We emphasize that these examples are meant to be illustrative rather than comprehensive.

In view of these concerns and the recommendation to conservatively manage roadless areas and maintain them as a buffer to maintain biodiversity and species viability, please omit the roadless areas from any final decision if you elect to proceed with this sale. In any case we request that you thoroughly discuss the impacts of the action alternatives to the ecological values in much greater detail and conduct additional surveys as necessary. Without this information, it is difficult to make a fully informed decision regarding whether the incursions into the roadless areas are justifiable.

SCS-35c

As a final matter, leaving the roadless areas intact would be an important precautionary measure to address possible negative impacts of climate change on wildlife – because intact ecosystems provide a certain amount of resilience and recovery potential, a high proportion of undeveloped reserves is the most effective mitigation of climate change effects.

D. Concerns About Loss of Potential Wilderness Areas

We are concerned about the continual loss of potential Wilderness areas on the Tongass and the impacts these losses will have on local economies as well as fish and wildlife. This DEIS does not disclose that development activities in roadless areas will compromise each IRA’s value under the Wilderness Attribute Rating System (WARS). This is particularly significant for the South Etolin and Mosman IRAs, which both rank in the top third of Tongass IRAs in terms of WARS ratings.⁸¹ Notably, the Mosman IRA once had a higher rating but development activities reduced the value of the middle lobe.⁸² There has been support for recommending these IRAs for wilderness designation and there has been some Congressional interest in designating these areas as wilderness and adding them to the South Etolin Wilderness.⁸³ Because the South Etolin Wilderness is composed mostly of unproductive granite, the addition of the Mosman IRA would greatly enhance the ecological value of this Wilderness area because nearly half of the IRA is productive old growth (POG) and substantial portions of that POG acreage are high volume POG and high volume coarse canopy POG.⁸⁴

SCS-36

⁷⁹ Roadless FSEIS at C-1-290, 301, 312.

⁸⁰ Id. at C-1-301 and Conservation Assessment at

⁸¹ Roadless FSEIS Appx C at C1-306, 316.

⁸² Roadless FSEIS Appx C. at C-1-301

⁸³ Roadless FSEIS Appx C at C1-304, 314.

⁸⁴ Roadless FSEIS Appx C at C1-298.

Appendix B

This addition of the Mosman and South EtoLin IRAs to the South EtoLin Wilderness would be particularly significant in view of the extreme variability of the habitat quality and landform variability of the Tongass – only a small portion of the total area provides high quality habitat. Please evaluate impacts on the wilderness qualities of the roadless areas in terms of whether the remaining acreage is sufficient to maintain ecosystem integrity, wildlife habitat and primitive recreation opportunities in productive old growth forests. The undersigned organizations actively promote wilderness designations and the DEIS should provide sufficient information for the public to review the extent to which development in these IRAs may impact WARS ratings.

↑
SCS-36,
con't.

E. Conclusion

If you decide to proceed with this project despite the unsettled status of the market demand analysis, we believe that there are compelling economic and ecological reasons to eliminate the proposed incursions into the roadless areas. We would add that in scoping comments, a local group that has supported past projects in the Wrangell Ranger District (Wrangell Resource Council) requested that you stick to the existing road system as much as possible. Please eliminate the roadless areas from this project.

SCS-37

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

SCS-38

VI. Road Construction in the Navy Watershed

Road construction and logging in the Navy Watershed should be dropped from this analysis. There is no reason we need to cause damage to such a pristine, productive and sensitive place.

The DEIS consideration of this issue is totally inadequate. The entire analysis occupies less than two pages. It is a sketch that does not reveal enough substance to allow meaningful comment by the public, or consideration by a decision-maker. The first sentence offers the unhelpful and circular logic, "[c]oncerns were expressed about the construction of a remote independent road system and associated LTF in the Navy Watershed which has recreation and water quality concerns."⁸⁵ What were these concerns? Who expressed them? The public reviewers should be able to meaningfully engage the issue, not just be re-assured that somebody else has.

SCS-39

The three measurements for this issue— road miles, recreation/ subsistence analysis, and miles of road on slopes over 67%⁸⁶— seem arbitrary. Why not use road density in watersheds, as is used in the scientific literature?⁸⁷ Why a 67% slope, rather than 70%, or some other number? Again, without information about the nature of the concerns, finding the right measurement for them is pure guesswork.

Please include some description of the results of the field work the DEIS says was conducted, "to determine resource concerns associated with road building and timber harvest."⁸⁸ Please also describe and map which areas were removed from further

⁸⁵ DEIS at 3-35.

⁸⁶ Id.

⁸⁷ See for example NMFS 1996.

⁸⁸ DEIS at 3-35.

consideration due to road building concerns. If road construction beyond the lower half of the lake was considered impracticable now, then that area should be put into a conservation-oriented LUD. We'd recommend managing it for old-growth habitat. Also, the fact that road construction beyond the lower half of the lake is considered unacceptably harmful, begs the question of why that boundary is drawn. Why isn't road construction in the lower watershed also harmful, given that it encroaches on a stream buffer just below the outlet of the lake, and includes building on hazardous soils on slopes over 67% above the lake, which the DEIS says "is a concern for downstream spawning habitats?"⁸⁹ What exactly is the threshold for "unacceptable" impacts?

The DEIS includes no analysis of possible impacts to the adjacent Wilderness area, other than to make a note of its existence. Yet logging is being proposed on the very boundary of the South Etolin Wilderness Area. As mentioned above, this is bound to have significant impacts to Wilderness interests, in particular for recreation users, and wildlife.

Please provide more detail regarding the sedimentation concern for downstream spawning habitats.

- What and where are the spawning habitats?
- What species of fish use them?
- What is the fish population like in the watershed?
- How much sediment could be released into spawning areas? What is the importance of that?

The discussion of subsistence here⁹⁰ is informative, but insufficient for several reasons. Please supplement this analysis. The DEIS consideration is limited only to whether or not there is a significant possibility of a significant restriction on subsistence under ANILCA, based on increased competition for deer. There are other important factors, however. First, the loss of an old-growth refuge for deer is a critical factor. But for the proposed logging, this area could provide important refuge habitat that would help stabilize populations. If a road system and LTF are constructed, however, the area is almost certain to be hunted and trapped. Second, the DEIS fails to consider the difference between existing hunting opportunities based from the beach, versus those that would be available with an LTF and road system. The difference is large, it seems to us, and could potentially mean the difference between a sustainably hunted area at Navy Creek, and one that could be hard hit. Third, the DEIS entirely fails to consider impacts to bear here, as a result of the new road system. Construction of the road opens the possibility of an unsustainable bear harvest. Nothing in existing ADF&G management formula could be expected to prevent this.

VII. Botany and Geology

Given the growing problem with invasive plant species, globally and on the Tongass, we were surprised that there was no mention of invasive plant species in the DEIS. The botany resources report indicates that invasive plants have colonized the area around Starfish Cove. Because road construction can spread these species, particularly reed canarygrass, the DEIS should discuss potential impacts of invasive plant species on sensitive plants. Otherwise, the project could run afoul of Forest Service directives that mandate the preservation of viable populations of native plants. Also, it appears that there is no plan to reduce the spread of invasive plants. We request that you discuss potential measures that would be

SCS-39,
con't.

SCS-40

⁸⁹ Id at 36.

⁹⁰ DEIS at 3-36

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used to mitigate this spread in further NEPA documentation. Eradication measures should use mechanical rather than chemical approaches to invasive plants.

↑ SCS-40,
con't.

VIII. Silviculture

A. Maintaining Species Diversity In Regards to Alaska Yellow Cedar

Alaskan Yellow-Cedar (AYC) is the most valuable species on the Tongass National Forest. AYC and Western Red Cedar (WRC) together make up 8% of the forest's tree species. In past years the Forest Service's cut and sold reports have revealed a disproportionate harvest AYC and WRC. The Sierra Club commented on this issue in its comments on the Emerald Bay timber sale project (See "*Forest Wide concerns About the Highgrading of Cedar*" excerpt from Sierra club comments on Emerald Bay Timber Sale Project, 2004), and on its comments on the TLUMP management plan DEIS. For these comments we calculated the percentage of the total AYC and WRC volume cut during fiscal years 2001 through 2006. This calculation is presented in the chart below.

	Fy 2006	fy 2005	fy 2004	fy 2003	fy 2002	fy 2001
AYC cut	5,125 mmbf	3,180 mmbf	3,348 mmbf	5,237 mmbf	3,110 mmbf	6,290 mmbf
% of total	13.3 %	8.2 %	9.1 %	11.8 %	10.3 %	15.7 %
WRC cut	3,788 mmbf	3,333 mmbf	3,922 mmbf	1,869 mmbf	2,127 mmbf	2,872 mmbf
% of Total	9.8 %	8.6 %	10.6 %	4.2 %	7.0 %	7.1 %
Total Cedar	8,913 mmbf	6,513 mmbf	7,271 mmbf	7,107 mmbf	5,238 mmbf	9162 mmbf
% of Total	23.1 %	16.8 %	19.8 %	16.1 %	17.4 %	22.9 %
Total Sawlog	38,528 mmb	38,612 mmb	36,699 mmb	44,102 mmb	29,987 mmb	39,999 mmb

For our comments on the Navy timber sale project we have added a % calculation of the AYC and WRC sold (not cut) for 2007. The calculation is based on the combined 4 quarterly cut and sold data documents of 2007. The calculation is 7.74% for AYC and a 10.19% for WRC. Combined the total cedar cut is 17.93% of the timber sold in 2007.

In regards to the specific timber sale project we are commenting on now it is obvious that unit by unit in the proposed Navy timber sale project, there is a disproportionate highgrading of AYC taking place. Because AYC is the most valuable species and WRC the 2nd most valuable it is not surprising that cedar appears to be driving the layout of many sales including the Navy timber sale project (See SCS comment on the Forest Plan Amendment DEIS and "*Ground-truthing Report 2005*"). This highgrading is of a great concern given the continued decline of AYC (most likely do to climate change) in the Tongass National Forest and a full examination of this issue should have been included in the Navy DEIS. And as noted below, the highgrading of AYC combined with its decline may very well violate the diversity regulations of the National Forest System Land and Resource Management Planning Regulations (NFMA), (36 CFR 219. 27 (g)).

SCS-41

The National Forest System Land and Resource Management Planning Regulations on diversity states:

“Diversity. Management prescriptions, where appropriate and to the extent practicable, shall preserve and enhance the diversity of plant and animal communities, including endemic and desirable naturalized plant and animal species, so that it is at least as great as that which would be expected in a natural forest and the diversity of tree species similar to that existing in the planning area. Reductions in diversity of plant and animal communities and tree species from that which would be expected in a natural forest, or from that similar to the existing diversity in the planning area, may be prescribed only to meet overall multiple use objectives. Planned type conversion shall be justified by an analysis showing biological, economic, social, and environmental design consequences, and the relation of such conversions to the process of natural change.”

As noted above the cut and sold reports show that the F.S. is cutting AYC out of proportion to its existence on the forest. In responding to our previous comments the Forest Service has claimed that the logging of cedar is not out of proportion with the prevalence of the species in the Bio-Geographical Province in which the sales take place or the project area of the timber sales. Even if this were true it ignores the fact that the inventories they base their calculations on are for suitable timber lands alone. These inventories did not sample in non-suitable lands and to our knowledge there is no inventory of species composition that reflects the conditions on the total land base (See, “Chatham, Stikine, and Ketchikan POG species composition inventories”, Willem V.S. van Hees, Pacific Northwest Research station, 1998). Additionally the Forest Service needs to consider the logging carried out on non-federal lands when considering whether NFMA’s diversity requirements are being adhered to. Highgrading on non-federal lands, whether its big trees in general, or species specific highgrading, is an issue that the 9th Circuit Court of Appeals has required the Forest Service to address under the NRDC v. Forest service decision. This issue should also have been fully examined in the Navy DEIS. As stated in the Sierra Club’s TLUMP DEIS comments (pasted below) the issue of AYC decline must be taken into account when the Forest Service designs timber sales.

“Yellow-cedar decline is a well know phenomena that for years was poorly understood. Recent research has helped to resolve the issues regarding its cause (See “Yellow-cedar decline in the north coast forest of British Columbia” 2005, “Evaluation of soil saturation, soil chemistry, and early spring soil and air temperatures as risk factors in yellow-cedar decline” 2005, and “Seasonal differences in freezing tolerance of yellow-cedar and western hemlock trees at a site affected by yellow-cedar decline” 2005, by Hennon, D’Amore et al.). The indications from these three papers are that AYC decline is a result of the long term trend of warmer and shorter winters in S.E. Alaska. Warmer winters, particularly in spring have resulted in snow packs insufficient to protect the root systems of AYC from being damaged by freeze thaw cycles. Global warming may be a condition that is beyond the ability of the Forest Service to control by itself, but it needs to be taken into account when the Forest Service designs timber sales and designates forest lands for timber development.

Continued highgrading of AYC, coupled with yellow-cedar decline, coupled with continued global warming, coupled with the poor regeneration of the species in logged areas, coupled with NFMA’s viability and diversity requirements, requires the Forest Service to address the issue of how the Forest Service will maintain this valuable and rare component of the forest mix in light of the threats that exist for it. Also of note is that there is a lack of information in the literature on the ecology of big cedar tree forest types and the contributions they make to other species’ viability, even as highgrading of big cedar trees is going on. A complete analysis of AYC’s continued future distribution, viability, and its importance to the overall forest ecology needs to be undertaken. Cedar highgrading needs to cease. Consideration for protections specific to AYC needs to given.”

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With yellow cedar decline, these magnificent trees are becoming rare.⁹¹ We fear that the cumulative effects of logging will be extirpation of large cedars from the area entirely. Please consider cedar decline as more than a curiosity, and recognize that there is special reason to conserve healthy stands of Alaska yellow cedar.

SCS-42,
con't.

B. The Need to Consider Cumulative Effects of Climate Change

The silvicultural section is one of the areas where we think that the cumulative effects analysis needs to incorporate a discussion about climate change - please review climatological data related to the intensity of windstorms in the project area. There is ample evidence to suggest that climate change is affecting the intensity of storms on a large scale:

In the mid 1970s temperatures in Alaska coastal stations increased abruptly to the highest level of the 20th century; even the low period in the temperature cycle that followed was markedly warmer than any similar period in the instrument-based record. Storm frequency and intensity increased at the same time as the recent rise in temperature. The number of days with gale-force winds at coastal locations more than doubled in the late 1970s compared to the previous two decades.⁹²

Also:

Recent forest mapping in the Tongass National Forest has identified large areas composed of trees that reproduced after the previous forest was flattened by single windstorms in the past. The dramatic increase in gale wind in coastal Alaska since the 1970s suggests that the risk of windthrow of trees will be much greater. To date, the increased frequency of storm [sic] does not correspond to an increase in the rate of formation of large-scale blowdowns in Southeast Alaska. However, it is possible that canopy gap formation or expansion rates have increased as the number of days with storm winds increased. Additionally, the rate of blowdown around timber harvest units in the Tongass National Forest may have increased, but historic record-keeping systems are not sufficient to produce a reliable long-term time series. For 10 to 15 years following timber harvest, trees along clearcut edges in productive, low-elevation forests are more susceptible to wind disturbance compared to trees in closed canopy forest. To date, a relationship between increased days with storm winds and increased formation of small forest canopy gaps or disturbance around the edges of cutting units has not been documented.⁹³

SCS-43

Please consider the additional risks posed by increasing high-intensity storms in your cumulative effects analysis and evaluate whether Reasonable Assurance of Windfirmness standards and guidelines adequately address this evolving issue.

Another reason that climate change should be incorporated into the cumulative effects analysis here is that growing season temperatures may be key factor in controlling the populations of black-headed budworms in coastal Alaska.⁹⁴ According to an aerial survey of major forest damage done in 1996, there is an ongoing and "exceptional, if not historically unprecedented, level of damage."⁹⁵

As climate warming occurs, insect populations that were previously restrained by marginal climatic conditions can increase rapidly. Insects can increase much more

⁹¹ Pacific Northwest Research Station May, 2007. *Science Findings*.; Hennnon, P.E., D'Amore, D., Zeglen, S., Grainger, M. 2005 *Yellow-cedar decline in the North Coast District of British Columbia*. Res. Note RN-549. Portland OR: USDA Forest Service, Pacific Northwest Research Station. 16 p.

⁹² Weller and Anderson (1998) at 27 (internal citations omitted); *see also id.* at 36 (explaining that the winds that are most damaging to coastal Alaska occur because of the mix of cold polar air with warmer North Pacific air and that the warmer sea surface intensifies the storm system).

⁹³ *Id.* at 38-39 (internal citations omitted).

⁹⁴ *Id.* at 36.

⁹⁵ *Id.* at 36.

rapidly than the forest can respond, for example by adjusting the age or species distribution of trees. A transition period of increased tree mortality from insect outbreaks is a distinct probability in the Alaska coastal forest.⁹⁶

↑
SCS-43,
con't.

IX. Soils

The DEIS description of logging impacts to soil productivity is inaccurate.⁹⁷ It only includes a biased presentation of the positive aspects of logging. It neglects the negative impacts, including the impacts of removing nutrients, disrupting mycorrhizal systems, compaction, and erosion.

SCS-44

The DEIS fails to describe the direct and indirect effects of the project on soils, in favor of an expose on standard BMPs dealing with soils. This information is not helpful and, in the absence of description of the negative effects that these BMPs are designed to mitigate, makes the DEIS a plainly biased document. Reviewers are told only that mitigation measures are being taken, without being told what the ultimate impact of the project will be. The sole impacts of harvest that the DEIS evaluates is a “slight increase in soil wetness...”, and percentage area of detrimental soil disturbance.⁹⁸ The DEIS methodology for predicting detrimental soil disturbance is unclear, however. We are not comfortable taking it on faith that soil disturbance will not exceed the 15% standard. There are site-specific factors and unique silvicultural prescriptions to consider.

Please explain why temporary roads are considered to be detrimental soil disturbance, whereas NFS system roads are not. Since the physical impact is identical we are confused by the distinction. Please consider the full amount of adverse soil disturbance caused by this sale.

SCS-45

We are concerned by the proposed harvest on slopes over 72%. That’s an awfully extreme measure, and the information in the DEIS is not sufficient to support a decision to log these areas. Just saying risks were considered and there’s a file on that topic is not a detailed statement, as NEPA requires. Please include a more detailed statement of the impacts to soils, including the results of the risk analysis and a description of the methodology in the EIS. Please include a map of steep areas, and hazardous soils. From the limited information before us now, we do not see that the benefit is anywhere close to worth the risk of logging such steep slopes. Also, we are not aware of any specific literature or support for the assumption that the partial-cut prescription will protect slope stability. This is an experimental harvest prescription in this region, let alone on such marginal slopes, and an equally probable result would be that logging and roading-caused slides take down residual stands as well, negating the whole purpose of the partial cut. Second and third entries into these steep areas could also become increasingly marginal.

SCS-46

Thanks for recognizing that road building is a long-term, even permanent, negative impact to soils.⁹⁹ Even temporary roads will be more-or-less permanently removed from the old-growth timber base, and will have impacts to wildlife for decades. This truth does not seem to have been fully applied to consideration of effects on watersheds and wildlife, however.

⁹⁶ *Id.* at 39.

⁹⁷ DEIS at 3-91

⁹⁸ *Id.* at 3-91

⁹⁹ *Id.* at 3-92.

Appendix B

X. Transportation

We recognize and thank the Forest Service for doing a better job on transportation management in this project area than it has in the past. Specifically, we are pleased that specific problem areas are being identified, that the Roads Analysis has been done, and that the Wrangell Ranger District ATM EA is done. We also support the road storage strategy as a way to mitigate impacts. We have several comments and concerns with regard to transportation, and hope they will be addressed. The transportation system clearly is an immense burden on the taxpayer, timber purchasers and the environment. If road management is made a high priority, however, this system also presents unmatched opportunities for restoration, and mitigation of environmental harm.

Please include a transportation map in the FEIS.

← SCS-47

One disappointment of the DEIS analysis is the total lack of consideration for alternative transportation options. Harvest units and volume appear to be the driving force, with roads plugged in only as an afterthought. Please consider alternative transportation options the same way you consider alternative logging options, early in the process and in a meaningful way. This is consistent with NEPA's requirement to consider all reasonable alternatives¹⁰⁰, federal transportation policy at 36 CFR 212, the TLMP S&Gs at TRAN23, and TRAN122.I.A.1. Specific alternatives we'd love to see the DEIS include road obliteration, restoration on decommissioned roads, additional road closures, motorized and non-motorized trails, and making roads open only for subsistence use.

SCS-48

Please close all roads that intrude on old-growth reserves. Please completely restore these roads. Where access for subsistence or recreation is a major priority, please explore alternative routes that could allow access, while restoring at least some watershed and habitat functions.

SCS-49

Please consider road obliteration, rather than simple storage. Especially where roads cross wetlands, or are within floodplains, we expect there is good work that could be done to restore biological functions.

SCS-50

Please consider the use of the road that will be caused by them being built and opened. Traffic projections would seem to be relatively easy to estimate. This is an important factor for watersheds, wildlife, and road maintenance impacts.

SCS-51

The distinctions being made between "system" and "temporary" roads are not at all clear to us. An NFS and temporary road under this sale will look and be managed the same. The distinctions seem to be purely administrative. We are troubled by several aspects of the way these terms are being applied:

- The difference is arbitrarily applied. There is no apparent rhyme or reason to which roads are permanent, and which are called temporary.
- "temporary" roads are not mapped in the Forest Atlas, and are likely to become future "ghost roads."
- "temporary" roads do not get maintenance money, so they will not be monitored or maintained long-term.
- "temporary" roads are not counted in determining road density impacts

SCS-52

¹⁰⁰ 40 CFR 1502.14; 40 CFR 1500.2(e); 40 CFR 1502.14(a); 40 CFR 1501(e).

- “temporary” roads are permanent.¹⁰¹
- Alternatives are not presented or considered.

↑
SCS-52,
con’t.

It is our view that a true temporary road is more like a skid trail than the shotrock roads being proposed here. A temporary road would meet the Corps of Engineers standard for temporary fill, which is removal of the road, not just a “closed” sign and pulled bridges.¹⁰² Yet even wetland segments of temporary road in this sale are proposed to be left permanently in place. Please consider more thorough restoration of closed road surfaces. If the project does ultimately move forward, we recommend that all roads needed to access timber for this timber sale be considered system roads, or “forest roads,” even if they are ultimately closed. This designation is the only way to insure they are tracked, monitored and maintained through time. Even if they are decommissioned under a storage prescription, a road is still a road for the foreseeable future. Any road built today won’t be restored for a generation, at least. If the Forest Service knows of a faster method of restoration, we’d love to hear about it.

SCS-53

The EIS should not rely on storage and decommissioning of roads occurring after the sale, when considering road effects. There are a thousand things that could intervene between the time the road is built, and the time storage is proposed. Forestry, administration, recreation, subsistence, trapping, hunting, fishing and mining users will become a constituency who use and rely on these roads. Funding shortfalls for road work are chronic and worsening. There is no guarantee these roads will qualify as a high enough priority at the time to win maintenance funding and staff power. And if they do qualify for funding, then necessarily some other maintenance chore will go unfinished as a result. Especially given the partial-cut, short-rotation harvest prescriptions, roads will have to open and close over and over again, every thirty years or so. That kind of rotation does not allow time for storage to become fully effective at restoring biological values. In fact, this very sale is re-opening old “temporary” roads.¹⁰³

SCS-54

Even assuming storage is accomplished, as we all hope, there is not sufficient evidence to support relying on it to mitigate negative effects to fish, wildlife and soils. Impacts to plants, wetlands, silviculture, habitat fragmentation, and soils are still present, even on fully “restored” roads. Storage/ Decommissioning is a good long-term restoration strategy, but a poor short-term mitigation strategy. Pulses of sediment during construction, use, and decommissioning could be very substantial, especially on unstable, steep slopes such as these. The cumulative result may actually be worse than just keeping and maintaining a permanent road. Scientific literature does not support the EIS reliance on BMPs.

SCS-55

"It is perhaps widely accepted that "Best Management Practices" (BMPs) can reduce damage to aquatic environments from roads. However, time trends in aquatic habitat indicators indicate that BMPs failed to protect salmonid habitats from cumulative degradation by roads and logging (Espinosa et al. 1997). Ziemer and Lisle (1993) noted a lack of reliable data showing that BMPs are cumulatively effective in protecting aquatic resources from damage. Although road location, design, construction, and maintenance may have improved over the years, many tens of thousands of kilometers of roads remain on public and private lands that were constructed with relatively low concern for their environmental consequences (e.g., see Figure 2). Until problem "legacy roads" are improved (e.g., surfaced, stabilized, obliterated) they will continue to

¹⁰¹ Clear evidence of this is by experience. The DEIS says, “[i]n some cases, old temporary roads that have been decommissioned have a discernable road prism. These road beds will be reused...” DEIS at 3-107.

¹⁰² 40 CFR 232.3(c)(6)(xv).

¹⁰³ DEIS at 3-107.

Appendix B

degrade water quality and aquatic systems for many years. Furthermore, the assumption that road obliteration or BMPs will offset the negative impacts of new road and landing construction and use is unsound since road construction has immediate negative impacts and benefits of obliteration accrue slowly."¹⁰⁴

Thank you for Table 3-33 - T-1, disclosing issues from the Roads Analysis that are pertinent to this sale.

The DEIS in general fails to disclose the effects of the proposed action on transportation. Alternatives are compared only by the amount of road miles. This is not adequate detail, and fails to capture effects of specific roads, or their costs.

The section on "Proposed Road Concerns," is totally inadequate. This consists only of a smattering of mitigation measures, and does not allow meaningful public comment. Road cards are great for discussing mitigation measures, but do not reveal any kind of comprehensive picture of the situation for a decision-maker.

SCS-56

We are concerned with the long-term, indirect effects that new roads will have. Punching a road into a new place is one of the most permanent decisions you could make for it. The DEIS says that the proposed additional 6546 road system "would enable substantial harvest along the east side of Mosman Inlet."¹⁰⁵ Similar indirect effects are predicted at the 6547, 6556, 51009 roads. This is a significant and regrettable impact that we hope you will avoid by not building new roads. However, if you do go ahead with this new roadbuilding, then please integrate RMOs and management planning with those predictions that roads will be targeted for future timber harvest. If a road is likely to be used for harvest every fifteen years, for example, then storage is not the cheapest or least damaging option. It cannot be true both that roads will be closed and restored, and that they will be used again in the future for logging. Please clarify the anticipated uses of each road. The most likely result of the sale seems to us to be that roads will no be stored, but will be used for timber sales again and again.

SCS-57

We are concerned with the impact of high road densities on bear, marten, wolves, and watersheds. Additional concerns are specified in the respective sections. The DEIS shows that road densities stay below 0.7 mi/sq mi for wolves only if proposed temporary roads are not counted.¹⁰⁶ As their effects on the ground will be essentially identical, the correct open road density for purposes of TLMP S&Gs is the complete road density during the timber sale operation. Please use peak and complete road density in considering effects of roads, whether on wildlife, watersheds, soils, or anything else. Please be careful to apply road density figures at meaningful scales, and site to the specific science relied on for predicting any effects.

SCS-58

Please give a figure for the maintenance obligation incurred as a result of the proposed action. There are established methodologies for doing this¹⁰⁷, and it is a salient factor that should be considered in the EIS. We are concerned that the road reconditioning, construction, storage and maintenance proposed in this action will detract from higher

SCS-59

¹⁰⁴ Beschta et. al. 2004

¹⁰⁵ DEIS at 3-109.

¹⁰⁶ Id at 3-150.

¹⁰⁷ Various resource reports in past EISs, for most recently for the Baht Timber Sale, were easily able to at least partially estimate maintenance obligations of alternatives. Another methodology is available in Anderson, A.E., J.D. Nelson & R.G. D'Eon. 2006. "Determining optimal road class and road deactivation strategies using dynamic programming" *Canadian Journal of Forest Resources*. 36:1509—1518.

priority restoration opportunities. Maintenance money is a zero-sum game. Money spent in one place will not be spent in another.

Deferred maintenance is a major problem on this road system, as it is across the forest. The DEIS notes that “the Wrangell District has also seen a dramatic decrease in available road maintenance funds...”¹⁰⁸ In theory, the ATM EA is supposed to bring the road system in line with budgets. However, that process is not complete, and a decision to log this timber sale would delay its completion even further. Currently and for the foreseeable future, roads are not being maintained up to standard. It is not reasonable, given the huge maintenance backlog and shrinking budgets, to anticipate that maintenance funds will be adequate to accomplish everything in the EIS. This funding shortage raises a host of other problems as well. Mitigation won’t be as effective as is being anticipated in the EIS, which will cause resource impacts to be greater. Clean Water Act violations will result from the improper BMP implementation. The Wrangell ATM EA won’t be fully implemented. Developing problems will go unmonitored. Continuing on this course leaves causing even more future maintenance burdens. Future opportunities for road work will have to be foregone.

SCS-60

It is not clear that connected actions are being correctly included in this NEPA analysis, and/or tiered with the Wrangell ATM EA. Pre-roading is built into this sale in a way that could mask the full cost of the Decision. The DEIS says that maintenance and reconditioning is done for a variety of purposes, including “...maintain the existing infrastructure for the proposed timber sale...,” and that this work is not considered part of the project, but is included under cumulative effects analysis.¹⁰⁹ This masks the fact that the Decision on this sale will have real and fairly direct impacts on what maintenance work is prioritized and ultimately accomplished.

SCS-61

We are concerned that the Wrangell ATM EA is being superseded by the proposed action. The DEIS says, “[t]he ATM EA does not stipulate exactly when roads will be closed, this allows for use of the roads during the Navy Timber Sale.”¹¹⁰ It sounds pretty clear that an action decision would delay implementation of the ATM EA, because it would be using and expanding on the road system, which the ATM EA proposes to put into storage.

SCS-62

How much of the projected road work is being done? Are they in this year’s annual maintenance plan? Please give a timetable for completion of all deferred maintenance chores in Table 3-33.

SCS-63

The DEIS says, “Any effects from the road maintenance and reconditioning work are included in the cumulative effects analysis for this project.”¹¹¹ We don’t see how that can be the case, since details, such as a timeline, for the work aren’t included in the EIS.

SCS-64

Totally missing from the Transportation section is any discussion or consideration of helicopters. Please incorporate copters into the transportation discussion, including roads analysis and access-travel management. An important impact of the proposed action is that the area is being set up, through silvicultural prescriptions and road management decisions, to use helicopters as a central part of the transportation system. This requires additional fuel storage and landing areas, and a different sort of road system.

SCS-65

Please clarify what the purchaser obligation will be for transportation system construction and maintenance.

SCS-66

¹⁰⁸ DEIS at 3-106.

¹⁰⁹ DEIS at 3-111.

¹¹⁰ DEIS at 3-107.

¹¹¹ DEIS at 3-111

Appendix B

The DEIS indicates Road Condition Surveys were last done in 2004. Why aren't annual road condition surveys being done?

SCS-66

Road-specific comments

6539—this timber sale seems to be the cause of this road staying open through 2013. Please consider this as an indirect effect of the proposed action.

6540—this road is riddled with problems. Please fix them before using the road for anything.

6541—please fix the several problems on this road, including the red pipe, before deciding to use it for anything. This is a very destructive road biologically. Making it an ATV trail would be a big improvement.

6541A

6544—Unit 79 would require this road be kept open beyond 2017. It already has problems

6546—This road is through an OGR. Please either close the road or move the OGR. New proposed units in the midst of this OGR, including units 47, 48, 38, 37, and 36, will require this road be kept open. Reed canary grass infestation along the roadway is also much more likely to spread as a result of use, and nearby logging.

6547—Three goshawk nests within ½ -mile of this road, among other factors, make it a high priority road to close. This sale, and future administration seem to be the direct cause of at least portions of this road being kept open

6548—keeping this road open beyond 2015 appears to be an indirect effect of this timber sale.

6558— please close this road now, not later. Erosion problems would be better repaired by full restoration and road obliteration, or at least storage. This approach is also best for the habitat values. [how can this area be high value marten habitat, when it is all past clearcut?]

SCS-67

51009—why is this road being kept open? Keeping this road open appears to be a direct effect of this timber sale, with the new proposed road, and units 106, 107, and 108.

51011—please consider obliterating this road, especially wetland sections.

51401—please urgently address reed canary grass. Keeping this road open appears to be a direct effect of units 41, 42, and 43. If those units are dropped, this road could be considered for obliteration.

51402—please consider obliterating this road.

51421—please consider obliterating this road.

51441—This road would appear to be a high priority for obliteration.

51540—the proposed action makes a long-term commitment to this road. Please consider the long-term effects of keeping it open, in particular given goshawk nests, deferred maintenance and watershed problems. If units 115-126 were dropped, this road could be obliterated.

51541—please consider obliterating this road.

51543—please consider obliterating this road.

51544—please consider obliterating this road.

51581—please consider obliterating this road.

51720—please consider obliterating this road. The proposed action makes a long-term commitment to this road. Please consider those effects.

↑ SCS-67,
con't.

51723—please consider obliterating this road.

XI. Watersheds and Fisheries

In general, the analysis in your watershed section was more thorough than in other sections where we have pointed to significant information deficiencies. Thank you for providing much of the information that was in the planning record in the DEIS – especially your description of project area watersheds. That information is helpful so that the public can review areas proposed for logging in terms of specific watershed values. The DEIS also disclosed where watershed impacts could be cause for concern – it identified red culvert problems, high road density watersheds and watershed with high levels of past riparian harvest.

But because road construction and other logging activities increase sediment load and stream flows, thereby compromising spawning and rearing habitat, we question whether a sale of this scale is justifiable in view of watershed impacts and existing problems that are still in need of correction. The DEIS relies extensively on mitigation measures, proposed culvert replacement and BMP’s in concluding that the project will not worsen watershed problems. But as we discussed in our transportation section (XI), it seems that many of these measures do not come to fruition and prompt mitigation is essential given the short spawning cycles of anadromous species. If the DEIS is to rely on mitigation measures, it should disclose when the proposed mitigation will happen and identify the funding sources that will pay for this mitigation. We applaud the Forest Service’s ongoing efforts to improve its watershed restoration programs but it is not appropriate to rely speculative measures to justify the risk assessment conclusions set forth in Table 3-40. Because of existing damage to watersheds in the project area, further compromise of fish habitat is unjustifiable.

SCS-68
SCS-69
SCS-70

As an initial matter, we note that many of the action alternatives propose cumulative harvest levels that approach or exceed the 20% threshold for effects on water yield. Because the large scale of this project is unwarranted, there is no reason to risk detrimentally impacting water yield. This concern is further justified by one of the cumulative effects of climate change: changes in precipitation patterns and freezing levels. The DEIS should disclose updated information about how climate change may affect water yield in the cumulative effects discussion.

SCS-71
SCS-72

A. Water Quality, Stream Buffers and Climate Change

Timber harvests affect stream temperatures due to a loss of shading with its consequential temperature increases and decreases in the amount of dissolved oxygen. Fish streams should have temperatures of less than 15 degrees Celsius for migrating and rearing areas and temperatures should be less than 15 degrees Celsius for spawning, egg and fry incubation areas. Higher stream temperatures reduce egg and fry survival, reduce growth rates due to increased rates of respiration and metabolism, cause premature smolting and shifts in emigration timing reducing marine survival, increase vulnerability to pollution by increasing the toxicity of organic chemicals and metals and increase risks of predation and disease.¹¹²

The planning record relies on data from Prince of Wales Island watersheds as establishing that there is “no predictive relationship between harvest and high stream temperature.”¹¹³ This

¹¹² Richter, A. and S.A. Kolmes. 2005. Maximum Temperature Limits for Chinook, Coho, and Chum Salmon and Steelhead Trout in the Pacific Northwest. *Reviews in Fisheries Science*, 13:23-49.

¹¹³ DEIS at 3-152.

Appendix B

data was collected at least 15 years after harvest occurred. We question relying on the Prince of Wales study because the effects of timber harvest on stream temperatures can be specific to the character of the riparian buffer. As an initial matter, timber harvest is correlated with increases in stream temperature but it seems to be agreed that the most critical problem is the removal of riparian vegetation.¹¹⁴ Therefore, stream buffers do seem to be one of the most effective tools for addressing stream temperature increases.

SCS-73

But we have two concerns about stream buffers in the project area and request that you provide additional analysis in subsequent NEPA documentation. First, studies show that even though buffer width is the simplest means of minimizing effects on stream temperatures, the maximum benefit would be achieved by designing riparian buffers that maintain a desired angular canopy density.¹¹⁵ Please discuss the quality of riparian vegetation and angular canopy density.

SCS-74

Finally, we recognize that in a general sense, riparian buffers may have once been adequate to ensure adequate stream temperatures in Tongass watersheds. But the concerns noted above are more compelling in view of rising global temperatures. A recent stream monitoring study by Cook Inlet Keeper and Homer Soil and Water Conservation District showed that in 2005 there were more days than ever before that exceeded temperature limits considered healthy for salmon.¹¹⁶ In Southeast Alaska, the 2006 pink salmon run was nearly 80% less than predicted.¹¹⁷ The management director of the Alaska Department of Fish and Game's commercial fisheries division attributed the poor run in large part to the warm temperatures that occurred during the parent year, 2004.¹¹⁸ Scientific data taken from the Yukon River indicates that salmon are already suffering from the effects on rising stream temperatures in Alaska: "[e]xamination of historic temperature data suggests that rising average water temperatures during the past three decades appear to be associated with the increase in disease and potential pre-spawning mortality among Yukon River Chinook salmon."¹¹⁹ Stream temperature monitoring data indicates that stream temperatures are rising, implicating cumulative effects on anadromous fish habitat.¹²⁰ Also:

Most of the forest streams of coastal Alaska have short and steep watershed resulting from the recent geologic uplift that characterizes most of the area. Precipitation has been so abundant and reliable that many streams with small watershed areas are important salmon producers or municipal or industrial water supplies. As the climate warms, the forest vegetation demands and moves more soil moisture into the atmosphere, reducing groundwater storage available for stream

¹¹⁴ Teti, P.. 1998 The Effects of Forest Practices on Stream Temperature: A Review of the Literature.

¹¹⁵ Id.

¹¹⁶ See Mager, S. 2007. Changes in Alaska Salmon Stream Habitat Due to Climate Warming (October 10, 2007).

¹¹⁷ Williams, D. 2007. The Evidence in Alaska – 2004/2005/2006: The Epicenter for Global Warming in the Nation (compiling and summarizing news articles about the various effects of global warming in Alaska).

¹¹⁸ Id.

¹¹⁹ Koran, R., P. Hershberger and J. Winton. 2003. Effects of Ichthyophonous on Survival and Reproductive Success of Yukon River Chinook Salmon. Federal Subsistence Fishery Monitoring Program, Final Project Report No. FIS 01-200. U.S. Fish and Wildlife Service, Office of Subsistence Management, Fishery Information Services Division, Anchorage, Alaska.

¹²⁰ Mager, 2007.

flows. An increase in the number of warm, dry weather intervals can make the problem acute.¹²¹

Because of the economic, cultural and recreational value of salmon, we request that you incorporate a discussion of climate change and rising stream temperatures in your cumulative effects analysis. The assumption that stream temperatures will be fine because of a fifteen year old study done on Prince of Wales Island ignores the differences between the two islands and more importantly ignores the very real possibility that stream temperatures in the project area have already been affected by climate change. Alaska based studies anticipate a predicted water temperature change of 3 degrees Celsius or more in non-glacial systems.¹²² The cumulative effects analysis is incomplete without that discussion. Also, in order to ensure that the cumulative effects analysis and your discussion of existing watershed conditions are informed by the best available data, please collect current stream temperature and stream flow data in project area watersheds.

SCS-75

B. Clean Water Act Compliance

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

SCS-76

We disagree and provide the quote from the State of Alaska’s 1998 general scoping comments on the material that should be provided in timber sale NEPA documents: “[p]lease note that neither the proposed nor actual implementation of BMP’s is sufficient to conclude that State Water Quality Standards will be met. A program to monitor the effectiveness of BMPs ... must be in place in order to draw that conclusion.”

SCS-77

For streams classified for all fresh water uses under 18 AAC 70.020, such the turbidity standard is:

May not exceed 5 nephelometric turbidity units (NTU) above natural conditions when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU.¹²³

As the most recent monitoring data indicates, the turbidity standard is often violated following the commencement of construction activities.¹²⁴ This data suggests that activities associated with this project will violate the water quality standard for turbidity.¹²⁵

SCS-78

¹²¹ Weller and Anderson (1998) at 39.

¹²² Kyle, R.E. and T.B. Brabets, 2001. Water temperature of streams in the cook Inlet basin, Alaska, and implications of climate change. U.S. Geological Survey Water Resources Investigation Report 01-4109.

¹²³ 18 AAC 70.020(b)(12).

¹²⁴ Forest Service’s Annual Monitoring & Evaluation Report – 2004, Soil and Water at 21.

¹²⁵ According to the monitoring report, “[a]dditional data will be collected to evaluate turbidity during timber hauling and eventually, road storage activities.” Has there been data collected on turbidity exceedances from the use of forest roads?

Appendix B

The sediment standard for streams classified for water-supply uses is: “No measurable increase in concentration of settleable solids above natural conditions, as measured by the volumetric Imhoff cone method.”¹²⁶ The sediment standard for streams classified for growth and propagation of fish does not permit increases more than 5% by weight above natural conditions.¹²⁷ The Forest Service’s own studies show that logging and road building activities violate the sediment standard. For example, a 1987 report by Steven Paustian which concluded that “[s]ome short term degradation of water quality from increased turbidity and suspended particulates is unavoidable, particularly during road building.” Consequently, this project will result in violations of the sediment standard.¹²⁸

For these reasons, the DEIS should disclose that the project will result in water quality violations. Furthermore, the DEIS should discuss specific plans for monitoring, culvert repair or replacement and set forth specific timelines for road closures so that the agency and reviewing public can be fully informed about potential impacts on streams and fish. As we emphasized in Section XI’s discussion on transportation, the maintenance backlog undercuts the assertion that BMPs and mitigation measures reduce risks to aquatic species.

SCS-79

C. Fisheries Values Should Be Included In This Section

A critical factor missing from the DEIS are the commercial area fisheries that depend on anadromous habitats in the project area. Alaska fisheries and tourism are the backbone of our economy here—by the numbers those industries are much more significant than logging.¹²⁹ The project area contains 376 miles of mapped streams, including 44 miles of which support salmon. This is substantial, but the DEIS offers no information about fish populations or escapement, or quantification of area fisheries.

SCS-80

Thank you for recognizing that roads are a primary negative impact on area watersheds. But the DEIS discussion seems cursory and incomplete, given the importance of this issue, and the amount of literature and experience that is out there.¹³⁰ Keeping that system open for a longer period of time, and even expanding it, will have noticeable and negative impacts to fisheries.

SCS-81

We are concerned that a number of area watersheds have road problems far in excess of what should be allowed. Section 404(f) of the Clean Water Act states, “the design,

↓ SCS-82

¹²⁶ 18 AAC 70.020(b)(9).

¹²⁷ 18 AAC 70.020(b)(9).

¹²⁸ The Forest Service has previously acknowledged that sediment, turbidity, and temperature “are the most likely water quality parameters to be affected by activities implemented under the Forest Plan” and that sediment “is the most important of these.” 2003 Annual Monitoring & Evaluation Report at 9. Yet, the Forest Service has not monitored sediment loading in streams since the 1980s “because it is very difficult and costly to directly measure sediment transport rates with reliability.” Id. at 10. The Forest Service is thus in violation of the Forest Plan’s monitoring requirements. 1997 TLMP at 6-10. Given the Forest Service’s admission that short-term degradation of water quality from sediment loading is unavoidable, the Forest Service should explore cost-effective ways to monitor sediment loading in streams from logging and road construction activities.

¹²⁹ See Section III.D.2 of the Timber Economics section for a quantification of Tongass-wide salmon harvests.

¹³⁰ See for example Trombulak, S.C. & C.A. Frissell. 2000. “Review of Ecological Effects of Roads on Terrestrial and Aquatic Communities.” *Conservation Biology*. February 2000. 14(1):18—30. Gucinski, H., M.J. Furniss, R.R. Ziemer, and M.H. Brookes. 2001. Forest roads: a synthesis of scientific information. General Technical Report PNW-GTR-509. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 103p. Available online at: http://www.fs.fed.us/eng/road_mgt/science.pdf

construction and maintenance of the road crossing shall not disrupt the migration or other movement of those species of aquatic life inhabiting the water body.”¹³¹ Any of the red culverts which are being allowed to remain in place violate this standard. We are concerned that even closed roads will continue to cause resource damage, particularly if not properly restored.¹³²

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SCS-82,
con't.

In addition to the amount of road, an important measure of road impacts to watersheds are the actual number and extent of problematic features, such as red culverts, chronic erosion, wetlands, steep and/or hazardous soils. These features could be laid out on a map, and would allow identification of concentrations of problems in watersheds of interest. The DEIS does not allow for consideration of these cumulative effects.

SCS-83

As discussed in more detail in Section XI where we discuss transportation, we feel there are abundant opportunities to do good restoration work on the existing road system, and that this work should be prioritized above building new roads.

SCS-84

XII. Wildlife, Except Deer & Wolves

This section discusses our concerns about wildlife except for deer and wolves which we cover in later sections. In general, the wildlife section did not provide adequate information about potential impacts to wildlife – the analysis discussed only four management indicator species (MIS) and entirely omitted the section on threatened, endangered and sensitive species (TES). This DEIS generally neglects to thoroughly analyze MIS and TES on the ground that TLMP standards protect population viability. This rationale misses the point of MIS and fails to satisfy NEPA’s hard look standard. The following sections focus on goshawks, marten and bear. But the concerns pertaining to these species apply to other omitted MIS as well - please prepare a more comprehensive analysis of impacts to wildlife in a revised DEIS.

SCS-85

A. The Ambiguous “Uneven-Aged” Silvicultural Prescription Confounds the Wildlife Analysis.

The action alternatives for the Navy project would log substantial acreages with what is variously referred to in the DEIS and planning record as an uneven-aged, single tree selection, or partial cut “prescription.” We use the term “partial cut” for the prescription. **Among the alternatives the acreage to be logged under this prescription ranges from 696 to 4,838 acres, amounting to between one-half to three-quarters of the total acreage of units.**¹³³ In wildlife analysis, especially modeling for marten and deer, proper consideration of the implications of this prescription is important because of such heavy reliance on it.

In our review we found faults with the loose definition of the partial cut prescription and inconsistent used terminology to refer to it. The consequent ambiguity confounds analysis of effects on wildlife, and in addition some of the analysis methods that were used are questionable at best. We discuss the topic generally here, and in more detail in later wildlife subsections.

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SCS-86

¹³¹ 33 CFR 323.3(b)

¹³² See Beschta, R.L., Rhodes, J.J., Kauffman, J.B., Gresswell, R.E., Minshall, G.W., Karr, J.R., Perry, D.A., Hauer, F.R., Frissell, C.A., 2004. Postfire management on forested public lands of the Western USA. *Conservation Biology*, 18: 957-967; also Johnson, P.A. 2002. “Incorporating Road Crossings into Stream and River Restoration Projects.” *Ecological Restoration* 20:4.

¹³³ See total acres to be cut and uneven-aged acres to be cut in DEIS Table 2-2.

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For the Navy project the partial cut prescription was described in these ways:

- 70% retention of basal area, with at least 50 percent retention of spruce and cedar, as shown in the DEIS Silviculture section, the Silviculture Report, and the unit cards.¹³⁴
- The 30% removal will be entirely from the overstory.¹³⁵
- The method to be used is defined as single-tree selection in which trees to be cut are either individually marked or designated by description.^{136,137}
- Although not disclosed in the DEIS or Silviculture Report, the Forest Plan defines single-tree selection as a method “in which individual trees of all size classes are removed more-or-less uniformly throughout the stand to achieve desired stand structural characteristics.”¹³⁸
- In contrast, the Silviculture Report states: “The goal of this prescription is to economically harvest a percentage of the stand while retaining timber for future economically viable and sustainable entries.”¹³⁹

↑
**SCS-86,
con't.**

This emphasis on economics and the above focus on overstory removal are not consistent with the Forest Plan’s intent of removal across “all size classes” and the focus on “desired structural characteristics.” The goal must focus on retaining structural characteristics that are important to wildlife, otherwise there is little point in using single-tree selection. Whether or not this method is economic should be tested by evaluating alternatives constructed to meet such a wildlife goal. To instead make economics the goal is to turn a primary reason for considering single-tree selection on its head.

SCS-87

It is unclear to use whether, with the prescription above as it is described in the DEIS, the Forest Service intends to remove trees uniformly throughout each unit, or if in practice the removals may more resemble group selection, with openings of undetermined size. What the DEIS calls a “prescription” is really only the barest beginning of a prescription. The reader has no way of knowing what the end result is likely to be. Will removal be truly uniform, or may it include gaps? And if the latter, how big can the gaps be and how will the number of gaps whose size is toward the larger end of the scale be regulated?

SCS-88

The concern with this is that if openings are more than about 0.1 or 0.2 hectares (*one-quarter* to *one-half* acre), the opening needs to be treated as small clearcuts, at least for purposes of deer modeling.¹⁴⁰ If uniform tree removal is used, a concern whose possible long-term wildlife consequences needs evaluation is that this has led to a far higher rate of

SCS-89

¹³⁴ DEIS at 3-86, Silviculture Report at 25 and 35, and unit cards.

¹³⁵ Silviculture Report at 29.

¹³⁶ DEIS at 3-86.

¹³⁷ We also note that the more general terms “even-aged management” or “partial harvest” are used throughout the DEIS Wildlife and Silviculture sections and in the Wildlife Report. Common terminology (single-tree selection) should be used throughout, and the location of the specification for that prescription should be referenced. Further, the Wildlife Report refers to prescription as “<35% removal,” a prescription that does not exist in the DEIS or unit cards.

¹³⁸ 1997 Tongass Land Management Plan at G-36.

¹³⁹ Silviculture Report at 25.

¹⁴⁰ This topic is discussed further in the deer section. One-quarter and one-half acres are squares about 65’ and 90’ on a side.

wounding of residual trees than where cutting was done in groups.¹⁴¹ Also, selection logging can eliminate Sitka spruce from stands that have few of them to begin with, and this may have ecological implications.¹⁴²

Partial cuts must be accounted for properly when using habitat capability models, especially when they comprise such large proportion of the project.

We believe that the Forest Service needs to rapidly phase out old-growth logging on the Tongass and that clearcutting is a practice best relegated to the past with a very few, small-scale exceptions.

SCS-90

For this reason, partial cuts are preferable to clearcuts provided that they are much smaller in scope than the Navy project. We find the large scale of the Navy project action alternatives to be a throwback to the large timber volume sales of the past rather than a move forward that is in step with a rational view of Tongass market demand and conservation of resources. The concept of committing a project of this scale largely to partial cutting does not adequately alleviate the problems with clearcut timber sales that the public has found objectionable. It is not only a matter of method, but also of scale. For a large project, a move largely to partial cutting simply multiplies the project's logging and impacts to wildlife and other resources over substantially more acres than otherwise, including a consummate increase in road-building.

SCS-91

B. Threatened, Endangered and Sensitive Species: Queen Charlotte Goshawk

The Regional Forester has identified the Queen Charlotte goshawk as a sensitive species, meaning that it is a species for which population viability is a concern on the Tongass. This raptor is the rarest and most old-growth dependent of all the North American goshawks, has been virtually extirpated from Washington and Oregon and is listed as a threatened species in Canada. The extinction risks are all due to extensive logging of old growth forests in those areas.¹⁴³

The Forest Plan Standards and Guidelines mandate that “[s]pecial consideration should be given to the possible adverse impacts on habitat of sensitive, threatened and endangered species.”¹⁴⁴ We expected that this DEIS would adhere to the standard practice of Tongass ranger districts by describing impacts on Queen Charlotte goshawks in greater detail because, as one recent DEIS explained, this species has additional management concerns.¹⁴⁵ The need for this analysis is particularly compelling because there are three known goshawk nest territories on Etolin Island and one of the most active goshawk territories in the Tongass National Forest lies within the project area.¹⁴⁶

SCS-92

But this DEIS does not contain a section that discusses threatened, endangered or sensitive species (TES). This is the first DEIS we have reviewed recently that omits a TES section. This omission is particularly significant here because of the biological status of the

SCS-93

¹⁴¹ McClellan (2005), Recent research on the management of hemlock-spruce forests in southeast Alaska for multiple values. *Landscape & Urban Planning* 72:65-78.

¹⁴² *Id.*

¹⁴³ *See e.g.* U.S. FWS 2007. Queen Charlotte Goshawk Status Review. Juneau, Alaska: U.S. Fish and Wildlife Service, Alaska Region. April 25, 2007.

¹⁴⁴ TLMP at 4-112.

¹⁴⁵ *See e.g.* Iyouktug DEIS at 3-135 (September 2007); Baht DEIS at 3-147 (October 2006).

¹⁴⁶

Appendix B

Queen Charlotte goshawk. But the only discussion contained in the DEIS was in the old growth reserve section. The wildlife resource report in the planning record also omitted any discussion of impacts to the Queen Charlotte goshawk. There is some reference to the Biological Assessment but we did not find that document in the planning record. In any event, the DEIS should provide the information. Because of the concerns for this species, we request that you revise and redo this DEIS and provide a TES section that fully analyzes impacts to this raptor. As an initial matter, the DEIS should discuss the inventories conducted to determine the presence of nesting goshawks pursuant to the Standards and Guidelines.¹⁴⁷

SCS-94

1. Biological Status of the Queen Charlotte Goshawk

The Sitka Conservation Society has actively worked to petition the U.S. Fish and Wildlife Service (FWS) to list the Queen Charlotte Goshawk for protection under the Endangered Species Act (ESA). FWS recently concluded that the Queen Charlotte goshawk warrants protection as an endangered species in Canada but not in Alaska.¹⁴⁸ The FWS determined that logging has eliminated roughly half of the species' rangewide habitat and expects continued habitat declines.¹⁴⁹ The FWS based its determination that Alaska populations did not merit listing on two conclusions: 1) the 1997 forest plan provides adequate protections for the goshawk and 2) the Canadian and Alaskan populations constitute two distinct population segments (DPS) so that the agency could consider each DPS separately in its listing decisions. Because of controversy over the agency's interpretation of the DPS language, because of the possibility that the new forest plan may weaken protections for the goshawk and because there is an ongoing Congressional and legal investigation into whether numerous recent FWS listing decisions were tainted by unlawful interference from a Department of Interior official, we urge you to interpret the listing decision with an abundance of caution and fully consider additional measures to protect this raptor's habitat. Protecting more habitat now may stave off the need for more costly measures later when federal courts review and possibly reverse the listing decision.

SCS-95

2. Application of Forest Plan Standards and Guidelines That Affect Goshawks

In this section, we discuss the information that we expect to see in a DEIS analyzing impacts to the Queen Charlotte Goshawk. The TES section should discuss how Forest Plan standards and guidelines will be applied in the project area. Also, please evaluate the effectiveness of these standards in light of ongoing discussions about these protections – even though they have some merit, ADF & G biologists have noted that application of these standards will not ensure conservation of the species absent a more comprehensive landscape approach.¹⁵⁰ The Forest Plan requires ongoing identification of research and information needs for sensitive species and programs (such as through the Tongass Conservation Strategy Review Workshop) to find approaches that can better preclude the need to protect this species under the ESA.¹⁵¹ Our specific concerns follow.

First, please discuss the adequacy of the nest buffers mandated by the forest plan in light of the more recent research pertaining to the raptor's habitat needs. Current protections are

SCS-96

¹⁴⁷ TLMP at 4-91.

¹⁴⁸ Greenwald, N. 2007. Queen Charlotte Goshawk Granted Protection as Endangered Species in Canada, But Not Alaska. Portland, OR: Center for Biological Diversity, November 8, 2007.

¹⁴⁹ *Id.*

¹⁵⁰ Tetra Tech at 39.

¹⁵¹ TLMP at 4-88, 89.

nest-based.¹⁵² Goshawks in the Tongass use large tracts of old growth forest and home ranges can be as large as 1,987 acres.¹⁵³ Recent research indicates that if protecting nesting areas is to be the primary approach to goshawk conservation, the buffers need to be much bigger than TLMP's requirement for 100 acres of productive old growth forest centered on a nest tree or probable nest tree.¹⁵⁴ One of the reasons for the larger buffer is that breeding pairs will utilize nests outside of the buffer in following years more than half of the time.¹⁵⁵ Therefore, the TLMP guidelines do not provide the important habitat feature of alternative nesting sites. Forest Service scientists have also expressed the concern that the guidelines do not adequately protect foraging habitat.¹⁵⁶ Because of the small size of the Tongass goshawk population, please incorporate the best available science and expand the size of the nest buffers – we recommend 2,000 acre buffers.

SCS-97

SCS-98

Second, please discuss the impact of planned rotations on the population viability of the goshawks. In a 300 year rotation scenario, one-third of the managed forest would consist of productive old-growth habitat at any point in time.¹⁵⁷ But shorter harvest rates could result in exceeding the 33% guideline in half of the Tongass biogeographic provinces over the long-term, creating a conservation risk and implicating NFMA's mandate to preserve population viability.¹⁵⁸

SCS-99

Finally, it was pointed out at the Tongass Conservation Strategy Workshop that an emphasis of future research points to prey availability as the key to ensuring goshawk population viability, particularly as prey availability relates to the second growth component and dynamics across the landscape.¹⁵⁹ We add that the omission of analysis of MIS that serve as prey species from the DEIS compounds the lack of information about prey availability for goshawk and marten.

SCS-100

There should be discussion about goshawk use for activities besides nesting, including for foraging and winter habitat use (reliance for winter prey availability) which are limiting factors for goshawks in S.E. Alaska. The information regarding present forest structure as well as post-project and stem-exclusion should make it possible to evaluate the impacts on goshawk habitat. The DEIS should also discuss the impacts of road construction and logging, which can deter goshawk nesting and foraging in impacted areas. Because impacts to this species are particularly controversial in light of the FWS listing decision, because there is updated research showing that the standards and guidelines may not be adequate in ensuring population viability and because the DEIS omits the TES section where the public has notice of impact to this species, we request that you prepare a revised DEIS analyzing impacts to the Queen Charlotte goshawk.

SCS-101

¹⁵² Hanley, T., Smith, W. and Gende, S. 2005. Maintaining wildlife habitat in southeastern Alaska: implications of new knowledge for forest management and research. *Landscape and Urban Planning* 72 (2005) 113-133.

¹⁵³ Conservation Assessment, Ch. 7.1

¹⁵⁴ Flatten, C., K. Titus, and R. Lowell, 2001. Northern goshawk population monitoring, population ecology and diet on the Tongass National Forest. Alaska Dept. of Fish and Game, Juneau Alaska.

¹⁵⁵ Flatten 2001.

¹⁵⁶ Hanley, T., Smith, W. and Gende, S. 2005.

¹⁵⁷ Conservation Assessment, Ch. 7.1

¹⁵⁸ *Id.*

¹⁵⁹ Tetra Tech at 39.

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3. Marbled Murrelet

We have similar concerns about the lack of analysis pertaining to another species of management concern -the marbled murrelet. The Tongass supports 60 – 70 % of the global population - marbled murrelets are vulnerable to loss of old growth forest habitat and are listed as a threatened species in the Pacific Northwest. Logging is cited as the primary reason for the substantial population declines and we have particular concerns about this species because recent surveys suggest that this species has suffered a 79% population decline in the Tongass during the past twenty years.¹⁶⁰

Please discuss project impacts to this species in light of updated research about its habitat needs. In order to better protect this sensitive species, some recent recommendations have included: (1) removing the current standards and guidelines that buffer nests and replace those with protections for occupied stands; (2) consider deferring timber take from rare, large-tree stands between .3 and 19 miles from shore except where rigorous surveys show that a stand is unoccupied and (3) move or enlarge OGRs to include important habitat identified by the marbled murrelet habitat suitability model. Please review these suggested protections and other literature pertaining to marbled murrelets that cited in Chapter 7.3 the Audubon/TNC Conservation Assessment. Also, please discuss the impact of proposed timber rotations in the project area – short (100 year) rotations will permanently reduce murrelet nesting habitat. Again, taking extra precautionary measures to protect this species now complies with the Forest Plan’s mandate to keep species off the Endangered Species list and will save costs in the long run.

SCS-102

B. MIS: Marten

The project area is high-risk biogeographic province for marten and more roads would increase trapping effort for this increasingly valuable furbearer. Under TLMP, timber harvest units containing high value marten habitat must meet Forest Plan standards and guidelines which require retention of portions of the original stand structure, trees for future snag recruitment as well as decadent trees and downed material. Also, although the standards and guidelines will help retain some forest features relevant to marten population viability, we have several concerns regarding whether the DEIS gives sufficient consideration to other factors impacting marten populations.

SCS-103

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

The DEIS relies on the interagency habitat capability model (Suring et al. 1992) that calculates a Habitat Suitability Index (HSI) based on timber volume strata, elevation and typical snowfall. There are three factors controlling marten population densities: habitat conditions, prey densities and trapping pressure.¹⁶¹ But the marten model only considers one of these factors – habitat conditions and the habitat conditions evaluated in the model do not consider fragmentation.

SCS-104

In scoping comments submitted by several of the undersigned organizations, we requested that the DEIS explicitly explain how you applied the road factor in the marten model and whether closed roads were included in the model calculations. We would also like to point out that a model that uses TimTyp or Size-Density data should replace a model that uses volume strata data. Finally, although the DEIS discusses road density, it does not appear that the habitat suitability index contains a straightforward application of the road density adjustment. Without an adjustment for road density, the habitat suitability figures can be misleading as to potential impacts on marten populations.

SCS-105

¹⁶⁰ Conservation Assessment, ch. 7.3.

¹⁶¹ Flynn et al. 2004.

Also, because marten prefer habitat patches over 180 acres in size and do not use patches of less than 10 acres and because the project is within a high-risk biogeographic province, analysis of patch size and fragmentation is of great concern. Please provide analysis in your subsequent NEPA documentation regarding the availability of large habitat patches left available for marten. We would point to the Traitor's Cove Timber Sale FEIS as providing an example of the type of patch size analysis that would be helpful in providing information to a decisionmaker that would remedy the shortcomings of the habitat capability model.¹⁶²

SCS-106

This analysis is particularly critical in light of the discussion at the 2006 Tongass Conservation Strategy Workshop where it was noted that road density was not the best method of assessing marten vulnerability.¹⁶³ Instead, it was suggested that a more effective means of addressing marten vulnerability would be to develop an area wide assessment of areas large enough to contain marten home ranges that are free from trapping – that is, to identify the de facto trapping refugia.¹⁶⁴ A trapping refugia model could then be useful in evaluating new roads and determining to what degree they could expose marten to new trapping pressure.¹⁶⁵

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

SCS-107

Also, we are concerned about the absence of discussion about prey availability. The DEIS indicates that there has been reduced take of marten in recent years but does not acknowledge that there is little information that explains whether this reflects a decline in population due to habitat loss, reduced prey availability or a decline in trapping effort. For this reason the need for a discussion of prey availability is particularly significant. The multi-scaled study on Chichagof Island conducted between 1991 and 1998 indicates that populations fluctuate greatly in response to food availability and trapping.¹⁶⁶ Marten on Chichagof Island utilize winter-killed deer carcasses during the spring.¹⁶⁷ Another primary prey species is the long-tailed vole.¹⁶⁸ When long-tailed vole numbers are low, marten prefer salmon over other small mammals.¹⁶⁹ Please include an analysis about prey availability in future NEPA documentation and discuss the role of deer in marten population viability and whether areas designated as high value marten habitat contain salmon-bearing streams.

SCS-108

¹⁶² See Traitor's Cove Timber Sale FEIS at 3-195- 3-197.

¹⁶³ Tetra Tech 2006 at 12.

¹⁶⁴ Id.

¹⁶⁵ Tetra Tech 2006 at 12.

¹⁶⁶ Flynn 2004.

¹⁶⁷ Ben-David et al (1997, pp. 288-289).

¹⁶⁸ Tetra Tech at 28.

¹⁶⁹ Id.

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2. The DEIS Should Include Updated Information About Trapping Effort

Marten are particularly vulnerable to trapping effort – one study demonstrated that all martens with roads in their home ranges were caught by trappers during the first month of winter.¹⁷⁰ The DEIS assumes that trapping pressure would decline in the long-term even if trapping pressure increases during the active phases of the project because Etolin Island is uninhabited.¹⁷¹ But even if the absence of a hard link to road system might reduce risks, there is ample evidence that destructive harvests can occur without direct road access – trappers and hunters transport ATVs and even trucks to pursue wildlife along remote road systems in Southeast Alaska.¹⁷² We point out that there was a dramatic increase in prices for marten pelts in between the 2004-2005 trapping season and the 2005-2006 trapping season – pelt prices increased from \$30-\$40 each to \$80 each.¹⁷³ Moreover, this trend is expected to continue based in large part on the entry of China into the global marten pelt market.¹⁷⁴ Because price is one of the most critical variables affecting trapping pressure, please include updated harvest statistics and price information in subsequent NEPA documentation. The hard look required by NEPA mandates an accurate analysis of the factors motivating trapping effort.

SCS-109

C. Omitted MIS: Bear

The DEIS did not select bear management indicator species (MIS) for analysis. Both brown and black bears occupy Etolin Island and the DEIS should address these species separately to account for behavioral differences. We question whether it is appropriate to omit MIS analysis on the supposition that Forest Plan Standards and Guidelines adequately protect critical habitat components. In this section we discuss three concerns pertaining to the omission of this analysis: 1) NFMA requires more detailed analysis of impacts on bears, 2) the DEIS should contain a road density impact analysis for bears and 3) updated scientific research indicates that Forest Plan Standards and Guidelines should be amended to better ensure black bear population viability. In our view, these concerns warrant production of a revised DEIS.

SCS-110

1. Consideration of Bears as a Management Indicator Species

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

¹⁷⁰ *Id.* at 32.

¹⁷¹ DEIS at 3-155-156.

¹⁷² We reference here the similar discussion in our section discussing wolves.

¹⁷³ Lowell, R. 2006.

¹⁷⁴ Opportunities North at B-12, June 2007.

Because black and brown bears are an MIS that stands in for other species and their habitat needs, more rigorous analysis was required in the DEIS. Bears in particular “represent an important umbrella species for maintaining ecosystem integrity throughout their range” because of large area requirements and varied habitat use.¹⁷⁵ The approach in this DEIS misinterprets the MIS concept by relying on Standards and Guidelines to omit the analysis. But the required analysis should provide sufficient information that allows the public and reviewing agency to look at the impacts of each alternative on bear populations. Even if standards and guidelines are diligently applied, we think that there is a substantial difference between a 97.9 MMBF alternative that includes multiple incursions into roadless areas (which provide substantially more protection to the more secretive black bears) and an alternative that takes 18 MMBF and omits take in roadless areas. Because this DEIS did not provide such analysis, the reader and the decisionmaker have no way to distinguish between the impacts resulting from each alternative. Please provide more detailed analysis in your subsequent NEPA documentation.

2. Road Density and Bears

Please discuss the impacts of this harvest in more detail in terms of human caused disturbances to bears, particularly those related to roads. The planning record indicates that analysis of road density effects on bears was omitted because road density analyses were done for wolf and marten.¹⁷⁶ Reliance on wolf and marten road density analyses is particularly confusing in light of the planning record disclosure: “road density is above the levels recommended for wolves and marten.”¹⁷⁷ We think that there should be a separate discussion for bears – bear ecology differs from these other species and there is a significant difference between the factors motivating sport or subsistence take of a big game species and commercial take of furbearing species.

The DEIS should specifically analyze impacts to black bears. The 2007 Audubon/TNC Conservation Assessment indicates that there is a reported increase in black bear hunting in nearly all areas of Southeast Alaska.¹⁷⁸ This increased take “is compounded by the increasing density of roads that are being constructed concurrently with logging in the southern islands.”¹⁷⁹ This concern also implicates our interest in the ecological values associated with roadless areas – “[t]he construction of roads into roadless black bear habitat will increase human access, which will likely increase the direct mortality of bears through legal hunting kills in defense of life and property, illegal killing and road kills.”¹⁸⁰

3. Increase Riparian Buffers for Bear

In scoping, we requested that you consider and discuss all new scientific information available since the 1997 TLMP regarding wildlife and their habitat on the Tongass. Please incorporate the recommendations of the recent studies on the importance of riparian buffers to bear in this area.¹⁸¹ Our first concern is whether there should be larger riparian buffers in

¹⁷⁵ Conservation Assessment, Ch. 6.3.

¹⁷⁶ Wildlife Resources Report at 7.

¹⁷⁷ *Id.* at 5.

¹⁷⁸ Audubon/TNC Conservation Assessment (Albert & Schoen 2007) Ch. 6.3.

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ Flynn, R.W.; S.B. Lewis; R.B. LaVern & G.W. Pendleton (2007). “Brown bear use of riparian & beach zones of N.E. Chichagof Island: Implications for Streamside Management in Coastal Alaska.” Alaska Dept. of Fish & Game, Douglas, Alaska.

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bear foraging areas. The availability of spawning salmon as a food resource is a major influence on bear habitat quality.¹⁸² Bears have the highest vulnerability to human activities in low elevation riparian areas during the summer.¹⁸³

The TLMP does not delineate specific riparian buffers for black bear but does direct that riparian buffers be increased from the standard buffer to 500 feet in important brown bear foraging areas. Black bear are even more secretive than brown bear and should receive additional protection. Please disclose whether you will apply riparian standards and guidelines that require only a 100 foot minimum riparian buffer along class I streams. We believe that 500 foot buffers should be on both sides of class I streams regardless of whether there have been project field observations of an absence of anadromous fish. This recommendation conforms to the recommendations made based on the most recent studies.¹⁸⁴ The use of only a 100 foot buffer ignores the best available science. Riparian vegetation is perhaps the most important habitat element for bears, and it ought to be insulated from logging.

D. Other wildlife concerns

1. Cavity Nesters

The DEIS dismisses the need to analyze impacts on hairy woodpeckers, brown creepers, red-breasted sapsucker and red squirrel on the ground that Forest Plan Old Growth Reserves (OGRs) and marten and cavity-nester standards and guidelines adequately protect habitat for this species. The planning record refers to field surveys, GIS analysis and professional judgment as the primary means of determining impacts to these MIS but does not discuss the results of the surveys or disclose how professional judgment was used.

SCS-111

As we discussed in section C.1 above, the MIS concept requires analysis for these species in terms of habitat and populations. For example, the brown creeper's and hairy woodpecker's association with old growth habitat means that population trends can serve as an indicator of old growth forest health and declining population trends can foreshadow declines in other avian species.¹⁸⁵ A revised DEIS should more thoroughly analyze impacts these other MIS. The DEIS should also discuss the impact of short timber take rotations on the long term viability of these species.

An additional concern pertains the assumption that an OGR will adequately protect cavity nester habitat. Please discuss this assumption in analyzing project impacts on cavity nesters. All action alternatives except Alternative E do not incorporate the interagency biologist's recommended option for an OGR at the Anita Bay pinchpoint. Rather, the IDT option present in most of the action alternatives may have this effect: "for small and/or less mobile species, and for those species that do not tolerate open habitats, Etohin Island could eventually function as two isolated populations if the pinchpoint is harvested."¹⁸⁶ Also, this isolation "typically makes these isolated populations more vulnerable to population declines or local extinction."¹⁸⁷ Because it appears that the adopted OGR design seems to focus more on meeting minimum acreage requirements in a way that leaves the area open to further

¹⁸² Conservation Assessment at Ch. 6.3

¹⁸³ Id.

¹⁸⁴ Id.

¹⁸⁵ Conservation Assessment, Ch. 7.4.

¹⁸⁶ DEIS at 3-18.

¹⁸⁷ DEIS at 3-18.

development, please reevaluate the assumption that the OGR reserve design adequately protects habitat necessary to support viable populations.

2. Endemism

The Forest Plan specifically recognizes that the loss of unique species on the island system of the Tongass is an issue of concern. Standards and Guidelines for endemic mammals require the Forest Service to “maintain habitat to support viable populations and improve knowledge of habitat relationships of rare or endemic terrestrial mammals that may represent unique populations with restricted ranges.”¹⁸⁸ Endemic taxa have been identified on Etolin Island.¹⁸⁹ Please include an analysis of project impacts on endemic mammals in subsequent NEPA documentation.

SCS-112

XIII. Regarding Impacts to Deer, Wolf Viability & Deer Hunting: Errors, Omissions, and Lack of a Hard Look Violate NEPA, NFMA & ANILCA.

The *Alexander Archipelago Wolf* standard and guideline in the 1997 Forest Plan¹⁹⁰ provides a numeric standard for the minimum amount of deer carrying capacity that is needed in wolf territory in order to provide for wolf viability and some measure of human deer harvest demand. The standard, as updated,¹⁹¹ is a carrying capacity of 18 deer per square mile, and it directs that the carrying capacity of an area be estimated by the deer winter habitat capability model.¹⁹² The model in current use is referred to variously as the 1997 Forest Plan deer model or DeGayner (1997), after the Forest Service biologist who largely created it.

The DEIS and Wildlife Report note that both the 1996 Wolf Conservation Assessment¹⁹³ and the Forest Plan “agreed that maintaining long-term deer habitat capability is the most important consideration for wolf population viability.” In its attempts assess the project’s effect on that capability (carrying capacity), however, the project’s NEPA analysis has been unreasonably constrained by applying too strictly a 2005 Forest directive¹⁹⁴ to run the deer model with particular restrictions. One of those restrictions conflicts with the best available

SCS-113

¹⁸⁸ TLMP at _

¹⁸⁹ Macdonald, S. and Cook, J. 1996. The Land Mammal Fauna of Southeast Alaska. *Canadian Field Naturalist* 110(4): 571-598.

¹⁹⁰ See standard and guideline WILD XI *Alexander Archipelago Wolf*, Tongass Forest Plan at 4-116 (print version) or 4-114 (pdf version). As later updated it reads: “Provide sufficient deer habitat capability to first maintain sustainable wolf populations, and then to consider meeting estimated human deer harvest demands. This is generally considered 18 deer/square mile in biogeographic provinces where deer are the primary prey of wolves. Use the most recent version of the interagency deer habitat capability model and field validation of local deer populations to estimate deer habitat capability.”

¹⁹¹ Tongass FY-2000 Monitoring and Evaluation report at 2-155 (USFS April 2001), as implemented by directives of Forest Supervisors Puchlerz and Cole on August 6, 2002 and May 25, 2005, respectively.

¹⁹² The standard and guideline directs use of “the interagency deer habitat capability model.” This has generally been interpreted by the Forest Service and others to mean the 1997 Forest Plan deer model, which is not truly an *interagency model*. The prior deer model (Suring et al. 1992) was created by an interagency task force, and meets that description. The 1997 model was primarily a creation of the Forest Service, and although it did have some interagency review it has remained controversial among the other agencies involved. The 1997 model is sometimes referred to as DeGayner (1997).

¹⁹³ Person et al. (1996).

¹⁹⁴ Directive by TNF Supervisor Forrest Cole, May 25, 2005, cited at DEIS 3-142 and Wildlife Report page 9.

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science.¹⁹⁵ However, even though the planning team must run the model in that way, the directive does not preclude also running the model in a way that follows the underlying science and disclosing and discussing the conflicting results. In addition, the DEIS has not disclosed and evaluated a number of factors that can be expected to cause the model to overestimate carrying capacity. Forest Service statistical studies of the vegetative dataset underlying the deer model show that it is uncorrelated to habitat quality because it considers timber volume irrespective of tree size. Also, the simplified nature of the model causes it to overlook habitat complexities that generally would reduce scores, especially as habitat fragmentation increases as a result of logging. Because of its failures to run the model in accordance with the best science and to disclose, analyze and discuss shortcomings in the model and its data, the Navy DEIS violates NEPA.¹⁹⁶ As a consequence, NFMA are also violated because “the most important consideration for wolf population viability” has not been adequately assessed. ANILCA is also violated because the availability of deer to hunters is accommodated in the above standard, being intertwined with protecting wolf viability.

SCS-113

A. Errors in the 1997 Deer Model & Standard — Corrections To Date & Remaining Errors.

In the 1997 Forest Plan there were four errors¹⁹⁷ with the deer model and its application. The Plan’s wolf standard and guideline for deer habitat capability contained an additional error. Of these five errors, two still remain uncorrected in deer modeling done at the project-level, including for the Navy project.

Line-1 of Table I-A (below) shows the 1995 deer carrying capacities of Etolin Island and its two Wildlife Analysis Areas (WAAs), as presented in the 1997 Forest Plan FEIS.¹⁹⁸ In 2002 Forest Supervisor Tom Puchlerz issued a directive that: corrected the wolf standard and guideline from 13 to the above mentioned 18 deer/sq-mile; called for the model’s *wolf factor*¹⁹⁹ to no longer be used for estimating deer availability for wolves; and corrected the *deer multiplier*²⁰⁰ from 125 to 100 deer/sq-mile. These corrections were needed to properly implement the underlying science, but unfortunately the multiplier change failed in that purpose. Line-2 shows the effect of the two modeling changes on the Etolin Island carrying capacities that were published in the 1997 Forest Plan. (The standards change does not affect the modeling.)

SCS-114

The directive to change the multiplier did not account for the fact that the adopted multiplier value of 100 deer/sq-mile was derived for best quality habitat as it is represented in an older deer model. Applying that multiplier value by rote to the current deer model causes the multiplier to instead represent habitat of much lower quality. The older model

¹⁹⁵ The specification for applying the “deer multiplier” is in conflict.

¹⁹⁶ See *Lands Council v. Powell* (379 F.3d 738, 9th Cir. 2004).

¹⁹⁷ In summary the errors were: 1) Incorrect *deer multiplier* value; 2) Incorrect application of that multiplier within the model’s range of habitat values (a subset of the previous error); 3) use of the *wolf factor*; and 4) use of a vegetation dataset that is uncorrelated to habitat quality.

¹⁹⁸ See Table 3-112, in the 1997 Forest Plan FEIS at 3-378. We have calculated the whole-island carrying capacity from data in the table for the two WAAs.

¹⁹⁹ The *wolf factor* was a 36% reduction in habitat capability to account for wolf predation itself. ADF&G recommended it not be used, as a calculation method not supported by science.

²⁰⁰ The output of the deer model is a unitless number representing habitat quality (Habitat Suitability Index, or HSI) on a scale of zero to 1.3, with 1.3 representing best quality habitat. The *deer multiplier* is supposed to represent the carrying capacity of best quality habitat, in deer per square mile.

(Suring et al. 1992) represents habitat quality on a scale of zero to 1.0, and the 1997 Forest Plan model uses a scale of zero to 1.3. In following Puchlerz' 2002 directive, the Forest Service has been applying the multiplier at an HSI of 1.0 in the newer model, and that is wrong because the multiplier then does not represent the carrying capacity of the best quality habitat for which it was derived.²⁰¹

In Line-3 we have corrected that error.²⁰² While Line-3 indicates only slightly lower carrying capacities than the original 1997 results in Line-1, we discuss later concerning Table 1-C. another significant error that remains, the correction of which shows that existing carrying capacity is significantly below the 18 deer/sq-mile standard.

Table 1-A — Deer Habitat Capability in 1995, from 1997 TLMP and Showing Corrections

<i>Units = deer per square mile</i>	WAA 1901 N. Etolin	WAA 1910 S. Etolin	whole island
1. 1995 Condition (1997 TLMP)	23	25	24
2. 1995 Condition (1997 TLMP, with USFS 2002 corrections)	29	31	30
3. 1995 Condition (1997 TLMP, if multiplier were corrected)	22	24	23

B. 2007 Etolin Deer Carrying Capacity in the Navy DEIS — Another Error .

SCS-115

At the project-level Tongass-wide, the Forest Service is still calculating deer carrying capacity by the methods represented in Line-2 of Table 1-A. As we show later, these methods cause a large over-estimation of carrying capacity. The analysis for the Navy DEIS indicates²⁰³ deer carrying capacities in 2006 of 18 deer/sq-mile both for WAA 1901 (north Etolin) and for the island as a whole, as shown on Line-4 of Table 1-B.²⁰⁴ Line 4, however, was mistakenly based on aggregated habitat values below 1500 feet elevation divided by the land area for all elevations. No land above 1500 feet should have been considered, since land above 1500 feet is not considered deer winter habitat, and it scores zero in the habitat model.

²⁰¹ See Fig. A1 in the wolf population viability assessment (Person & Bowyer 2005), Fig. 1 Person et al. (18-Aug-97), and Fig. A1 of Person et al. (19-Sept-97). These documents present the derivation of the deer multiplier, based on field data, and the x-axis of the figures clearly show that the derivation was for the Suring et al. (1992) deer model, which had a maximum Habitat Suitability Index of 1.0, representing best habitat. Accordingly, the derived multiplier of 100 deer/sq-mile must apply to the current model's maximum HSI of 1.3. Because, arithmetically, when a multiplier is used it necessarily applies to an HSI of 1.0, an equivalent multiplier must be calculated for use with the current model. The equivalent multiplier is 77 deer/sq-mile. The incorrect useage in the Navy DEIS causes a 30% over-estimation of carrying capacity. Also, we note citation of the Person et al. (1997) documents on p.10 of the Navy wildlife resource report; however, as shown here the planning team did not understand the derivation.

²⁰² Correct application of a multiplier of 100 deer/sq-mile for "best quality habitat" (HSI = 1.3) requires using an equivalent multiplier of 77 deer/sq-mile in calculations, which mathematically pegs the multiplier to an HSI of 1.0.

²⁰³ See Navy DEIS at 3-149 and planning record files deer_per_square_mile.xls and HSIfinal2byWAA2.xls.

²⁰⁴ The DEIS indicates that the capacities shown on Line-4 are the minimum level allowed by the wolf standard, and that all action alternatives for the Navy project will further reduce the capability.

Appendix B

The overly large denominator lowered the result.²⁰⁵ The Forest Service discovered the error after publication of the DEIS, and we provide a correction in Line-5 of Table 1-B.

Table 1-B — Deer Habitat Capability in 2007, as reported in Navy DEIS & Corrections

<i>Units = deer per square mile</i>	WAA 1901 N. Etolin	WAA 1910 S. Etolin	whole island
4. 2007 Condition (Navy DEIS, with all elevations error)	18	?	18
5. 2007 Condition (Navy DEIS, for <1500' habitat only)	25	?	25
6. 2007 Condition, Line-5 w/ deer multiplier misuse fixed	19	?	19

↑
SCS-115,
con't.

Line-6 also applies the correction (described earlier) for improper deer multiplier use. Although these carrying capacities are above the 18 deer/sq-mile standard, further needed corrections explained in sections C and E result in failing the standard by a wide margin.

C. Different Forest Service Deer Modeling Belies the Navy DEIS Modeling.

For its 2007 Forest Plan DEIS the Forest Service based its deer modeling on Size-Density²⁰⁶ vegetation data instead of the Vol-Strata that has been used in the 1997 Forest Plan and all project-level planning since then (including for the Navy project). The Forest Service's own statistical studies, using groundtruthed data, have demonstrated that Vol-Strata data has no correlation to old-growth habitat quality, largely because that dataset considers timber volume irrespective of tree size.²⁰⁷ When used for wildlife analysis, Vol-Strata causes, for example, thick stands of small trees to be incorrectly scored as high quality habitat. Accordingly, the Forest Service has devised the Size-Density dataset to better indicate habitat quality, among other purposes. In the 2007 Forest Plan DEIS the Forest Service acknowledged that this superior dataset results in lower deer model habitat capability scores than when Vol-Strata data is used.²⁰⁸

The 2007 Forest Plan DEIS, however, did not present any habitat capability scores — it only presented percentage changes in capability since 1954 and into the future.²⁰⁹ Greenpeace FOIA'd the underlying habitat capability scores that had been used to calculate those percentages, and the scores for Etolin Island WAAs are shown in Table 1-C. Note that for 1954 (Line-7), prior to significant logging on Etolin Island deer habitat capability in WAA 1901 and on Etolin Island as a whole were already below the 18 deer/sq-mile standard, and it was marginal in WAA 1910. Line-8 shows that by 2006 carrying capacity was below the standard in WAA 1910 and significantly below in WAA 1901 and on Etolin Island as a whole.²¹⁰

²⁰⁵ Pers. comm. with Melissa Cady, January 4, 2008. In research a data question for ours, Cady discovered the error and reported it to us.

²⁰⁶ Also known as stand-density data.

²⁰⁷ See Caouette et al. (2000) and Caouette & DeGayner (2005).

²⁰⁸ See 2007 Forest Plan DEIS at 3-192.

²⁰⁹ See Table 3.10-6 in the 2007 Forest Plan DEIS and compare it to Table 3-112 in the 1997 Forest Plan FEIS.

²¹⁰ By showing results only as percentage changes in the 2007 Forest Plan DEIS the Forest Service avoided use of the deer multiplier entirely; however, the underlying model outputs had been adjusted to allow the deer multiplier to be directly applied without error. We have applied the multiplier in that way in Table 1-C.

Table 1-C — Deer Habitat Capability in 1954 & 2006, from 2007 TLMP DEIS Data

<i>Units = deer per square mile</i>	WAA 1901 N. Etolin	WAA 1910 S. Etolin	whole island
7. 1954 Condition (2007 TLMP data and correct multiplier)	17	18	17
8. 2006 Condition (2007 TLMP data and correct multiplier)	15	17	16

SCS-115,
con't.

This analysis of Etolin Island’s current condition reveals a significant shortcoming in the island’s ability to reasonably provide a much timber for the Tongass timber program, given the nature of the island’s habitat and the effects of past logging.

Further, the key point that vegetation data needs to accurately portray habitat characteristics was emphasized by scientists on the deer and wolf expert panels²¹¹ which the Forest Service conducted in 1995 to 1997 in preparation of the 1997 Forest Plan. The scientist were very suspicious of the Vol-Strata dataset, and deer panelists would have preferred to review an earlier model that did not use it. Importance of this data being accurate was also expressed in Kiester & Eckhardt (1994). As indicated earlier, the non-correlation of Vol-Strata to habitat quality was demonstrated by two Forest Service studies in the present decade, yet the dataset remains in use for Navy and other projects.

SCS-116

D. For Year 2033, Modeling with Size-Density Data Shows a Significant Habitat Shortfall.

In this section we make a rough adjustment of the Navy DEIS analysis of effects of the action alternatives on deer carrying capacity, by using the deer multiplier correctly and taking into account the ratios (by WAA) between above results from using Vol-Strata and Size-Density data.²¹² We can only estimate in this way because we do not have data for the Navy alternatives that would allow us to construct a table like *Table 1-C*. Applying the ratios to year 2033 habitat capabilities shown on Navy wildlife report page 11 yields the results in *Table 1-D*.

Table 1-D — 2033 Habitat Capability – Our best estimate from data presently available

<i>Units = deer per square mile</i>	WAA 1901 N. Etolin	WAA 1910 S. Etolin	whole island
Alternative A (No Action)	15	?	16
Alternative B	14	?	15
Alternative C	14	?	15
Alternative D	14	?	15
Alternative E	14	?	15
Alternative F	15	?	16

SCS-117

Note, however, that the adjusted results in Table 1-D overestimate habitat capability and under-estimate impacts, for reasons described in the next three sections. We expect that a thorough analysis in a Revised DEIS for the Navy project would result in significantly lower habitat capabilities than shown here, and we request such an analysis. We have provided the above table only to illustrate that even with results that are overestimates, the Navy project

²¹¹ See: Ford (1995); Nichols (1995); and Robertson (1997).

²¹² The ratio is between Line-6 and Line-8.

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will make a bad situation worse and cause a significant shortfall in protecting wolf viability and the needs of deer hunters.

E. The Navy DEIS Over-estimates Habitat Capability by Improperly Ignoring the Substantial Acreage *Partial Cuts* in the Deer Modeling.

Earlier we included a section treating in a general way issues regarding the large acreage and high proportion of partial cuts that is proposed in all of the Navy action alternatives.²¹³ Concerning the analysis of project impacts to deer, the problem is whether or not partial cuts have been treated as clearcuts, as was intended in the design of the deer model. Involved in this question is: (1) whether the project will actually make a uniform removal (by basal area) throughout a unit, and (2) whether some resulting openings will exceed 0.1 or 0.2 hectares (*one-quarter* to *one-half* acre) in size.²¹⁴

SCS-118

If openings larger than that will be created they need to be treated as small clearcuts for purposes of deer modeling, for several reasons. First, doing otherwise would constitute a fundamental modification of the deer model. By design the model treats group selections with 90% or greater retention as a special habitat category, while treating all other old-growth logging as clearcutting. In the Navy deer modeling, in essence a new habitat category has been created by screening the vegetative data and modifying it for the partial cut units. Notes from a staff meeting for another Tongass project show that “feedback ... received from commenting agency biologists indicates they do not think partial cutting they have seen so far should be given any credit in the current deer model.”²¹⁵ The Forest Service has steadfastly refused for years to allow modifications of the deer model at the project-level, for example disallowing corrections to the model’s deer multiplier or the use of the more accurate Size-Density or TimTyp data in place of Vol-Strata.²¹⁶ These are needed moves that were apparently not allowed because they militate toward lower timber yields from projects. Now, however, the Forest Service to allow a project-level change to the model when it helps justify a large timber yield.

SCS-119

Although the information is not disclosed in the DEIS (in violation of NEPA), the Wildlife Report explains how partial cuts were considered in the wildlife analyses, and in particular the deer modeling. Medium and High volume forest to be partially cut was assumed to “not enter the stand initiation phase or the stem exclusion phase after harvest.”²¹⁷ That is, these cuts are not treated as clearcuts, contrary to the model’s design. The assumption for partially cut Low volume forest was that these stands will no longer qualify as productive old-growth, and that they will enter the stand initiation phase.²¹⁸ So, only this Low volume forest was treated in the modeling in the way intended by the model. Furthermore, the DEIS does not

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SCS-122

²¹³ Among the alternatives the acreage to be logged under this prescription ranges from 696 to 4,838 acres, amounting to between *one-half* to *three-quarters* of the total acreage of units. (DEIS Table 2-2) Many the partial cut units exceed 100 or even 300 acres.

²¹⁴ There is some uncertainty in the threshold of concern, and further research is needed. Pers. comm., Matt Kirchhoff.

²¹⁵ Record of Gravina EIS staff meeting, March 21, 2000.

²¹⁶ See Forest Service responses to comments or appeals of almost any sizeable timber project over recent years.

²¹⁷ See Wildlife Report at 11.

²¹⁸ Id.

disclose the acreages High, Medium and Low volume forest that would be partially cut, and we request it.²¹⁹

Based on Deal (2001), the Wildlife Report “assumes” that partial cuts can be modeled in that manner because Deal:

“found that partial cutting did not significantly change abundance for most of the important forage species for deer, and that stand structure after partial cutting was more similar to old growth stands than to young growth stands that develop after clear-cutting.”²²⁰

SCS-122

A difficulty here is that Deal (2007) would have been more illuminating to rely on. This study is a synthesis of Deal (2001) and other more recent partial cut studies. It clarifies that these studies view stand structure only in terms of basal area and vegetative species composition, not canopy structure. Canopy structure is a critical habitat element that affects snow cover, which in turn is a critical factor for the deer model.²²¹ We believe the Forest Service has not justified the way it has treated partial cuts in the Navy project deer modeling, and that the model should be used as intended.

On a related topic, the DEIS suggests²²² that the *two-aged* prescription also “probably” has less effect on deer habitat capability than the model suggests. No supporting citations were offered, and we believe no reasonable supporting documentation exists. Further, the DEIS failed to suggest how to evaluate this highly generalized information (were it even accurate) and how to weigh it in making a decision.

SCS-123

As explained in our section XIV(A), the DEIS and project resource reports leave substantial doubts about the true nature of the project’s partial cut prescription. Even apart from those uncertainties, but especially in view of them, we believe the impact of the Navy project on deer habitat capability is likely very much understated because of how partial cutting was treated in the modeling and the huge amount of such cutting in all of the action alternatives. Lacking the ability to run the model ourselves, we are unable to determine the magnitude of the possible over-estimation of carrying capacity in the DEIS. However, in view of the other corrections to project modeling in *Table 1-D* (which show future carrying capacity

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²¹⁹ This data should be developed using the same dataset as the modeling, and that data should be Size-Density.

²²⁰ Wildlife Report at 11.

²²¹ Having raised Deal (2007), what it means by deer “carrying capacity” needs explanation, since it differs from that term as applied to the above winter deer model. Deal’s studies do not substantively consider partial cutting effects on deer winter habitat. Deal (2007) includes a graph showing modeled capacity both in summer and winter in relation to the percentage of red alder in the stand. In the first place this is incongruous with the analyses for deer (and other wildlife) in the DEIS and Wildlife Report, which don’t consider alder. More importantly the graph comes from Hanley et al. (2006), which used a food-based deer model that has not been approved for use on the Tongass. What it for convenience calls “carrying capacity” might better be thought of as “faux carrying capacity” to avoid confusion when doing a winter carrying capacity analysis. The Hanley paper says: “*For simplicity, we termed that number “carrying capacity” (deer-days per hectare) while fully realizing that our value does not involve any consideration whatsoever of the dynamics of plant–herbivore interactions or the long-term sustainability of that level of use. Our estimates of food biomass in winter were the summer values minus all deciduous species or plant parts; we did not include any effect of snow.*” (Emphasis added.).

²²² DEIS at 3-97.

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as affected by the project to be far below the 18 deer/sq-mile standard), and additional shortfall due to the unjustified high scores for partial cutting would contribute to creating a critical situation.

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SCS-124,
con't.

F. The Deer Model Erroneously Assumes A Linear Relationship Between Habitat Loss and Population.

The DEIS and the Wildlife Report each in recognize very cursorily that “the current deer model assumes a linear relationship between habitat and capability.”²²³ There was no mention or discussion of the mechanisms or importance of that relationship, nor was there a citation to any documentation. In contrast, in comments on the 2007 Forest Plan DEIS, ADF&G scientists commented that :

reference should be made to the consequences of the non-linear density-dependent shape of change in deer populations in relation to carrying capacity (K) and how predation will affect deer numbers as K is reduced due to timber harvesting. This will lead to a better understanding and appreciation for how habitat changes will likely affect predator-prey dynamics. This is published in Bowyer et al. (2005), Person (2001), and Person et al. (1997), and much of it was presented during the CSR Workshop.²²⁴

ADF&G further clarified that disclosure should include:

the effect of lowering K on deer populations exposed to wolf predation. Deer numbers likely will be reduced much more than predicted by changes in HSI because of the non-linear relation between K, deer recruitment, and predation. Please refer to Bowyer et al. (2005), Person (2001), and Person et al. (1997).²²⁵

Other documentation of this modeling linearity problem include:

“A linear, numerical modeling approach is an unrealistic way to describe an animal's habitat.” (Jarvis 1994)²²⁶

A study on the Tongass of deer / wolf dynamics concluded: “Our predictions indicate that deer will decline disproportionately to the decay of K.²²⁷ Thus, a small change in K may precipitate a large change in deer numbers; an outcome also predicted by McCullough (1979) for populations of white-tailed deer. That outcome from our model stems from the nonlinear density-dependent relation between annual recruitment to populations of deer and density of deer with respect to K. ... Consequently, net annual recruitment of deer, which represents the portion of a deer population that can be removed by predators and hunters without causing a decline in the population, is reduced disproportionately to the decline in K. As K decays, wolves and other predators such as black bears will have a greater effect on deer numbers. Indeed, our simulations agree with those of Van Ballenberghe and Hanley (1984) and indicate that long periods in which populations of deer are suppressed by predation likely will be common in the future.” (Person 2001)²²⁸

↓
SCS-125

²²³ DEIS at 3-142, Wildlife Report at 9.

²²⁴ State of Alaska (2007), detailed comments section at 23. Enclosed as Exhibit E.

²²⁵ Id. at 25.

²²⁶ See: Peer review by Jarvis, in Kiester & Eckhardt (1994) (Exhibit H) at 68-76.

²²⁷ “K” is carrying capacity.

²²⁸ Person (2001). See also: Bowyer et al. 2005 and the peer review by McCullough in Kiester & Eckhardt (1994) at 119-120.

“(B)iologists from the U. S. Forest Service regularly use the habitat-capability model as an analog for actual numbers of deer to compare effects of alternative timber harvest plans on the supply of deer to subsistence users (U. S. Forest Service 1997). To use the model for that purpose, an assumption of a linear relation between changes in habitat suitability and deer populations is necessary. Our work challenges that assumption and suggests changes in productivity of habitats to support deer will have disproportionate effects on deer populations where predation by wolves is a factor. We emphasize the need to examine the effects of timber harvest, or any other disturbance to the system, at the community level rather than for only individual species. Modeling the wolf-deer system, as we have done, is better suited for assessing effects of forest management on deer populations than simple habitat-suitability models.” (Id.)

“(T)he fragmentation of the habitat by logging may make deer more vulnerable to predators (or hunters) because they would be concentrated in fewer appropriate wintering areas, particularly in heavy snowfall winters. Finally, snowfall and predation are not independent, and deer predation by wolves increases with snow depth (Mech et al., 1971). I think oscillatory tendencies in the deer-wolf system will be increased under forest fragmentation, and predator-pits may well be a consequence. Certainly a 20% kill by wolves and a high human hunting kill are liable to result in over-exploitation. I realize that these considerations go well beyond the limits of HSI models, but that is another point I wish to make. HSI models are intended for cases in which few data are available. But should the analysis be limited to HSI models in cases where a lot is known, such as for black-tailed deer? I suggest not, and that some analysis of the oscillation-inducing impacts of snowfall and predation (as well as hunting) should be incorporated in the analysis.” (McCulloch 1994)²²⁹

A thorough discussion of this issue is necessary to comply with NEPA, and it should incorporate consultation with experts in this field of knowledge. Also, some allowance (or factor of safety) should have been applied to deer model results to attempt to compensate for the model’s linearity, and is necessary for NFMA compliance given concerns for wolf viability.

SCS-125,
con’t.

G. Other Shortcomings Deer Model Shortcomings Have Been Not Disclosed in Violation of NEPA or

The DEIS and Wildlife Report both briefly list other factors that were ignored by the model but were considered by the project biologist. These include “predator/prey interactions, severe winters and other catastrophic events, birth/mortality rates, habitat patch size and juxtaposition.”²³⁰ There is no indication in the DEIS or planning record of how or in fact whether any substantive analysis of these factors was made. Further, because the deer model ignores these factors and because this can be expected to cause the model to over-estimate carrying capacity, an assessment of how to compensate for that is necessary. We provide some relevant information on the listed shortcomings and others, here:

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1. The deer model has an optimistic bias:

“(T)he approach of HSIs make them intrinsically optimistic.” (Lande 1994, referring to habitat capability models as “HSIs.”)²³¹

²²⁹ A peer review by McCulloch in Kiester & Eckhardt (1994) at 119-120.

²³⁰ DEIS at 3-142, Wildlife Report at p.9.

²³¹ See: Peer review by Lande, in Kiester & Eckhardt (1994) at 78.

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2. The deer model can be highly misleading because of the false precision it implies:

The false precision such models imply was "the greatest concern" of the 1994 peer review of the Tongass models. (Kiester & Eckhardt 1994)²³² The models imply a much greater level of precision than is warranted. Despite disclaimers about the limitations of habitat capability models, their quasi-quantitative structure will be taken to mean a high level of precision by those using the outcomes of the models, i.e. planners and the public." (Jarvis 1994)²³³ The models "can be highly misleading if their attractive precision is mistaken for accuracy." (Taber 1994)²³⁴

The Navy DEIS has not disclosed or taken into account that habitat capability models such as the deer model are intrinsically optimistic and lend themselves to an assumption of erroneous high accuracy by planners. The specific factors below are among those that cause optimism and hamper accuracy, yet the FEIS is blind to these factors. NEPA specifically requires an EIS to contain high-quality information and an accurate scientific analysis, and the FEIS fails those obligations. 40 C.F.R. § 1500.1(b); Lands Council v. Powell, 395 F.3d 1019, 1031 (9th Cir. 2005).

SCS-127

3. The model ignores habitat juxtaposition, patch characteristics, and fragmentation:

"(T)hese models do not ... take into account a species' use and possible dependencies on required habitat juxtapositions." (Kiester & Eckhardt 1994)²³⁵

"The second flaw is the failure to incorporate landscape features into the model. ... It is in fact frequently the case that species will require several different habitat types either simultaneously or over the course of an annual cycle. ... The results are especially misleading when each habitat-type is presented as supporting a particular density of individuals." (Lidicker 1994)²³⁶

"Did the authors assume that juxtaposition and interspersions would not be problematic and therefore could be ignored in the computer models? If this is the case, it must be justified. As habitats change, as is projected because of logging, juxtaposition and interspersions of habitats will change. Therefore, these must be incorporated into the models." (Powell 1994)²³⁷

"Because the model is largely qualitative and not mechanistic, it at best reflects current stand attributes and it may not reflect habitat capabilities in a more fragmented landscape. ... (T)he model will likely not continue to predict habitat suitability very accurately as the landscape is changed through logging practices. In other words, the habitat suitability model reflects the current juxtaposition of habitat that it is based on, and its utility as a forecasting tool will likely be limited if changes in the forest landscape alter the parameters assumed in the existing model. ... It is not only the amount of winter range but the juxtaposition of those habitats relative to each other that is important to maintaining deer populations. For example, during extreme winter conditions, if deer become very predictable in their spatial distribution, we will approach the same situation as

²³² See: Kiester & Eckhardt (1994) All Tongass habitat capability models were reviewed, including the deer model. Although subsequent changes were made to the deer model, its essential character has not changed in terms concerns raised in this appeal.

²³³ See: Peer review by Jarvis, in Kiester & Eckhardt (1994) at 72.

²³⁴ See: Peer review by Taber, in Kiester & Eckhardt (1994) at 188.

²³⁵ See: Kiester & Eckhardt (1994) at 15.

²³⁶ See: Peer review by Lidicker, in Kiester & Eckhardt (1994) at 89-90.

²³⁷ See: Peer review by Powell, in Kiester & Eckhardt (1994) at 159-160.

documented with wolves on Coronation Island by Dr. Dave Klein.” (Gillingham 1997)^{238,239}

“(T)he model, as currently applied, only summarizes the capability of individual stands of vegetation as deer habitat across the landscape. Juxtaposition and interspersions of habitats, patch shape, and patch size are not considered in the application of the model. While the model, in its present form, provides a great deal of information on the capability of habitats to support deer, it does not incorporate any parameters that describe ecological relationships across the landscape that may be important for a more complete representation of deer distribution and abundance.” (Suring 1997)²⁴⁰

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4. The model ignores stochastic and catastrophic events, including severe winters:

The Navy DEIS does make passing mention of the important effect of severe winters; however, the information is too cursory to be of use in evaluating the effects of the project. Other possible stochastics aren't really addressed at all.

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“(T)he influence of stochastic events, such as extreme snow accumulation at long term intervals, is not a functional model parameter.” (Klein 1997)²⁴¹

“Habitat suitability addresses the average capability of different stand types, at a fairly coarse spatial scale over mean winter conditions. It will be the extremes in winter conditions, however, that are key in determining the long-term population dynamics of the prey base for wolves. The models are deterministic and do not take into account stochastic events so often important in biological systems. It may not matter what the average winter conditions are, if by chance 4 severe winters occur in sequence.” (Gillingham 1997)²⁴²

“The deer Habitat Suitability Index (HSI) model presented on page 3-165 purports to estimate carrying capacity for deer during an average snow winter. However, this does not provide protection in the event of severe snow conditions. Severe winters may drive deer and predator-prey dynamics long after an event has occurred. For example, in Game Management Unit (Unit) 3 ... the severe winters of 1969 and 1971 resulted in a major crash in the deer population. It has taken over 30 years for that population to recover, largely because predation retarded recovery long after the severe winters. Planning for severe winter events is the best policy when considering protection of winter habitat for deer. The deer HSI model fails to do this. Further, climate change predictions for Southeast Alaska indicate the likelihood of extremes of warm and cold during future winters, along with much greater precipitation. That may mean occasional extreme snowfalls, not unlike what was experienced during the 2006-2007 winter. It would be wise, therefore, to emphasize the need to retain winter habitat for deer and calculate HSI under the assumption that all areas are at risk of deep snow. This would result in more scientifically credible evaluations.” (State of Alaska 2007, emphasis added.)²⁴³

²³⁸ See: Gillingham (1997), a peer review of the current deer model.

²³⁹ Klein experimentally introduced wolves to the island, and the deer/wolf system eventually crashed.

²⁴⁰ See: Suring (1997), a peer review of the current deer model

²⁴¹ A peer review of the deer model.

²⁴² See: Gillingham (1997), a peer review of the current deer model. s1 State of Alaska (2007), detailed comments at 21.

²⁴³ State of Alaska (2007), detailed comments section at 21.

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5. The Forest Service has produced no comprehensive documentation for the current model:

"The TLMP habitat capability models "build on a fairly nebulous 'stew' of combined professional judgement codified in the tables listed in the Suring et al. (1992) model and subsequently modified (but never shown) in the 'TLMP Panel Model' and the 'Interagency Modified Panel Model' (described in the 17 June '96 memo by DeGayner to TLMP Revision Planning File and in the Wildlife section of the draft 1997 TLMP).²⁴⁴ Of these various versions, only the Suring et al. (1992) model is described in sufficient detail to review." (Hanley 1997)²⁴⁵

We believe the lack of comprehensive documentation is one shortcoming that contributed to: (a) misunderstandings by Forest Service staff (e.g. in planning the Navy project) of the model's other shortcomings and its capabilities, (b) to errors in its application, and (c) to failures to conduct auxiliary or alternative analyses that are needed to adequately disclose project impacts under NEPA.

SCS-130

6. Summary

Discussion of model limitations in the Baht FEIS and analysis does not address these types of shortcomings. The FEIS only discusses environmental factors of the Tongass in general and not the relevant variables and factors that deer modelers intentionally omitted from the model or the other shortcomings that the Forest Service has introduced itself. The agency should have disclosed all of the model's shortcomings because an understanding of them is needed for the decision-maker and the public to grasp the utility and reliability of the deer model.

H. Quartiles

In view of the facts that:

- even the DEIS acknowledges that "deer habitat capability will not exceed 18 deer/sq-mile under any alternative at either scale [WAA 1901 or the whole island] in the stem exclusion stage, 26-150 years from now,"
- we have shown that the DEIS significantly over-estimates habitat capability,
- the action alternatives will take between 265 and 1708 acres of top quartile habitat,²⁴⁶ and
- many of the alternatives use clearcutting in most of the top quartile they cut,

we believe that top quartile forest should be dropped from the Navy alternatives. ←

SCS-131

XIV. Failure to Provide for Wolf Viability Violates NFMA.

ADF&G's expert on the Alexander Archipelago wolf believes from his research that wolf pack home ranges on Prince of Wales Island, which likely has better wolf habitat than Etolin Island, are about 100 square miles. At 265 square miles, on this basis Etolin Island can perhaps sustain two packs, given an adequate deer population. The DEIS and Wildlife Report have presented no estimates of the number of wolf packs or individuals, the extent of home ranges, or the location of dens. The DEIS speaks to the Forest Service's "commitment to

SCS-132

²⁴⁴ I.e., essentially the current deer model, also known as the DeGayner deer model.

²⁴⁵ A peer review of the 1997 deer model by Hanley.

²⁴⁶ See: Table Deer-6 in the Wildlife Report. This information should have been disclosed in the DEIS.

enhance habitat protection and population monitoring for the wolf” of about a decade ago that was made to avoid a threatened listing for the wolf under ESA. We find in our review of the DEIS habitat protection has not been enhanced but that instead problems with the deer modeling are preventing protection of adequate habitat for the primary prey. Also, there has been no real population monitoring of wolves on Etolin Island, and field notes in the planning record by various specialists have not resulted in an adequate study of the population.

SCS-133

As we have shown above, on Etolin Island and in WAA 1901 especially there is already a shortfall in the deer carrying capacity that is necessary to maintain both wolf viability and hunting. The shortfall can only get worse as a result of the project, as suggested by *Table 1-D* and the suggestion in our section on partial cuts that future carrying capacities in the table are over-estimates. Analysis in DEIS and Wildlife report accommodating wolf viability is based on a significant over-estimate of carrying capacity, and needs to be reconsidered.

SCS-134

Another element of maintaining wolf viability regards road density. We thank you for providing total road density data for the area below 1200 feet elevation, in recognition of the best available science. We believe that only the total road density, not open road density data (also provided in the DEIS), should be considered in making a decision on this project, wording to the contrary in the Forest Plan standard and guideline notwithstanding. It is clear from the wolf panel presentation at the Tongass Conservation Strategy Workshop (Ketchikan, April 2006) that the standard and guideline does not properly implement the science,²⁴⁷ but the S&G does not preclude acting more conservatively than its language. Similarly, the decision should be based on a threshold of 0.7 miles/sq-mile of “total roads” below 1200 feet, not a threshold of 1.0.

The DEIS notes at 3-148 that roads connected to a community are of greatest concern for wolf viability. Although this may be true as a general principle, we believe the EIS should identify road density as a high concern for Etolin Island and WAA 1901 in particular, because of close proximity to the Wrangell road system, just across Zimovia Strait. As ADF&G wolf biologist Dave Person commented to us regarding concerns about the isolated road system in the Traitors Cove area (near Ketchikan) and its high road density:

SCS-135

Further, one has only to look at wolf harvests on Heceta, Suemez, Dall, Sukkwan, Baker, Lulu, Noyes, Kosciusko, Kuiu, and Long islands to see that heavy (and in the case of Heceta) destructive harvests can occur without direct road access. People transport ATVs and even trucks (Dall, Long, Suemez, Kosciusko, and Heceta) to hunt deer and wolves along those remote road systems. Marten and wolves will likely be killed at a higher rate than they are at present once the project begins. Whether or not that will reduce wolf or deer numbers substantially, I cannot tell.

The DEIS itself notes that 18 wolves were taken on Etolin in the 2004-2005 season, the highest record in about 20 years.²⁴⁸ ADF&G consistently notes (regionwide) that in addition there is illegal take or other unreported harvest of wolves. Together, this indicates that wolves on Etolin Island may be under significant and increasing pressure due to accessibility (including high road density). Moreover, the cumulative effect of increasing road density on both Wrangell and Etolin Islands should also be considered. In 2005 ADF&G Area Wildlife Biologist Rich Lowell wrote to the Backline timber sale planning team:

SCS-136

²⁴⁷ See powerpoint presentation at: <http://tongass-constratreview.net/Documents/Present13-Wolf.pdf> Also, obtain a copy of the audio or video tape, which the Forest Service has.

²⁴⁸ DEIS at 3-150.

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"While I have no immediate concerns about wolf mortality or viability on Wrangell Island at this time, the continued destruction of deer winter range and further increases in road density will likely give rise to such concerns in the near future."²⁴⁹ (emphasis added.)

We believe there is a significant wolf mortality concern on Wrangell Island, and that not the TLMP road density standard and guideline but the best available science should be applied — no more than 0.7 miles/sq-mile of "total roads" below 1200 feet elevation allowed.

SCS-137

Finally, we note errors in the synopsis of road densities at the top of DEIS page 3-150. The table numbers used as references are incorrect, and at least one road density that is given is incorrect.

SCS-138

XV. Failure to Provide for Subsistence Deer Hunting Violates ANILCA.

The subsistence analysis in the DEIS for subsistence deer hunting is inadequate because it is based on an assessment of current and future deer carrying capacity that, as we have discussed above, is erroneous and incomplete. Moreover, no real analysis of cumulative impacts to subsistence hunting was prepared. That analysis is needed, and should include Wrangell, Etolin, and Zarembo Islands, taking into account past, planned, and future timber projects. Especially the Backline, Skipping Cow, and Baht projects need to be taken into account, along with deer matters in the comments and appeals that signatory groups of these comments have submitted. Future shifts in Wrangell's subsistence hunting patterns need to be foreseen (as a result of stem exclusion on past logging units as well as planned logging), and a possible change in Etolin Island's importance – absent significant further loss of carrying capacity to further logging – must be considered.

SCS-139

Further, the method the DEIS used to assess ability to satisfy hunter demand is faulty. ADF&G has roundly criticized the methods involved of using the 36% wolf factor and of using the model to estimate deer numbers.²⁵⁰ For a numeric indicator of ability to satisfy subsistence hunting demand, the Navy EIS should rely on the TLMP standard of providing a deer carrying capacity of at least 18 deer per square mile.

SCS-140

XVI. Comment Submission

These comments are respectfully submitted by the following individuals and their respective organizations. Verified signatures will be provided upon request.

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²⁴⁹ Email memo from Richard Lowell to Melissa Cady (USFS Wrangell District wildlife biologist), Nov 14, 2005, 3:23 pm.

²⁵⁰ See: (1) p.4 of the June 15, 2006 ADF&G comments on the preliminary draft CSR Workshop proceedings; and (2) the attached detailed comments to the State of Alaska's comments on the 2007 TLMP DEIS, pp.21-25.

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Appendix B

Forest Service Response to Sitka Conservation Society et al (SCS) Comments:

SCS-1

Response: The decision on the Forest Plan was signed on January 23, 2008. Fifteen appeals to the Chief of the Forest Service were received. These appeals were resolved and the decision upheld on August 22, 2008. See response to comment SCS-9 for a discussion on the timber demand.

The “Alternatives Considered but Eliminated from Detailed Study” section of Chapter 2 in the Navy FEIS discusses the potential of micro-sales as an alternative. See response to comments SCS-3 and 4 concerning micro-sales.

SCS-2

Response: See response to comment SCS-1. The agency assessed and considered the comments received on the Navy DEIS both individually and collectively. Additional analysis included assessing the effects of the changes made in the 2008 Forest Plan. The additional analysis and changes are explained in the Navy FEIS, Chapter 2.

The Forest Plan has been implemented since March 17, 2008. Fifteen appeals were submitted to the Chief of the Forest Service, who affirmed the decision on August 22, 2008. Under the 36 CFR 217 appeal regulations for forest plan decisions, implementation of the Forest Plan continues even if there are challenges to the forest plan decision. Project decisions, such as the Navy Timber Sale decision, can be appealed under the 36 CFR 215 regulations, which do not allow implementation of the project until the appeal of the project has been resolved.

The Forest Plan has a timber sale program Adaptive Management Strategy, which restricts the timber program to a portion of the suitable land base that excludes the moderate- and higher-value roadless areas until the actual level of timber harvest on the Tongass reaches 100 MMBF for 2 consecutive fiscal years. Most of the Navy project area is in this first phase of the Adaptive Management Strategy. The southeast portion of the area, the Navy watershed that is in the second phase of the Adaptive Management Strategy, has been deferred from the proposed action and alternatives in the Navy Final EIS.

The 2008 Forest Plan ROD also contains transition language for timber sale projects already being planned. The Navy project is in Category 2, which requires the Forest Supervisor to review the project and incorporate the new direction in the amended Forest Plan to the extent this can be done without causing major disruptions in the implementation of the project. The Navy Final EIS analysis adopted all standards and guidelines from the 2008 Forest Plan; however, most of the standards and guidelines remain the same as the 1997 Forest Plan.

The Navy Draft EIS and Final EIS disclose the effects of varying levels of timber harvest and road building in the roadless areas, from a high of almost 5,400 acres in Alternative C to a low of almost 1,000 acres in Alternative E, and no harvest or road building proposed within the roadless areas in Alternative F and Alternative A, No Action. Alternative F has no roads or timber harvest in the roadless areas, but estimates almost 300 roadless acres are indirectly affected by the timber harvest and road building adjacent to the roadless area boundaries. This is a wide range of alternatives for the Forest Supervisor to consider the trade-offs of the effects to roadless character before making his decision, and nothing commits the roadless areas to developed status until the Navy project decision is made.

SCS-3

Response: Two alternatives were considered that did not build roads within the inventoried roadless areas. One of these, Alternative F, was analyzed and detail for the Draft EIS. The other was eliminated from detailed study, since it was so similar to Alternative F (see Chapter 2, Alternatives Eliminated from Detail Study). The National Environmental Policy Act (NEPA) requires a range of alternatives, not several alternatives that respond to the same issue. The analysis of different alternatives is a fundamental principle of NEPA. Each alternative should include different methods to accomplish the purpose and need, for example, eliminating harvest in an area in all alternatives does not allow for a thorough comparison. By reviewing the analysis of a range of alternatives, the decision-maker can make a reasoned selection by weighing and balancing affects. See also response to comments SCS-1 and SCS-4.

SCS-4

Response: See response to comment SCS-3.

A micro-sale alternative would not meet the purpose and need of meeting a continuous supply for the needs of the larger mills of Southeast Alaska industry. The Tongass micro-sale program is based on purchaser requests for timber rather than the Forest Service identifying and offering timber for sale. A micro-sale is a timber sale that may consist of dead or down timber, or small amounts of green timber, which has been proposed by a prospective purchaser. The District Ranger evaluates the proposal, and may agree to offer the timber for bid using an informal advertisement and short bid form.

The micro-sale program has been successful on Prince of Wales Island, which has an extensive road system that connects 12 communities and about 20 very small mills. The Navy project area, however, does not connect to any communities. All wood would have to be moved to a mill via saltwater. All alternatives include small harvest units along the existing road system that could be used for small sales. Units 76, 77, 140 and 141 were designed with small sales in mind.

The Wrangell Ranger District Roadside EA was recently proposed to focus on additional small sale opportunities on Etolin, Wrangell, and Zarembo Islands in response to the recent demand for wood fiber due to high fuel prices. This project will provide more opportunities to provide small sales and micro-sales.

SCS-5

Response: The effects of climate change to the Tongass National Forest are still largely unknown. A short section discussing climate change has been added to Chapter 3 of the Navy FEIS. Recent predictions of these effects are unsubstantiated. The 2008 Forest Plan FEIS addresses this issue in Chapter 3 of the FEIS and on pages 50-51 in the Record of Decision. That forest-wide analysis discusses the risk of possible effects and the considerable uncertainty concerning specific predictions of how the climate may change, and even more uncertainty regarding the effects of climate change on the resources of the Tongass. Where appropriate, the Navy FEIS does include discussion of wind, insects, and hydrology as it relates to the project area.

SCS-6

Response: See response to comment SCS-5.

A revised DEIS to include the cumulative effects of climate change is not warranted, since no more is known about these effects than when the Forest Plan was prepared. The Tongass National Forest will continue to monitor potential effects of climate change through the existing Forest Plan monitoring program, and other studies that are happening regionally and nationally. The Navy project area is too

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small of a landscape to analyze as broad-based a topic as climate change, which is broad-based to the extent that even the Tongass National Forest is too small to analyze. For this reason, a climate change analysis at the project level would likely draw the same conclusions as those in the Forest Plan FEIS.

SCS-7

Response: The analysis for the FEIS has been updated in response to public comments. Refer to the Changes Between Draft and Final section in Chapter 2 of the FEIS. Ultimately, it is not larger documents but better decisions that count.

All analysis and supporting documents can be found in the project record. Tiering to the analysis done for the Forest Plan or referencing to the project record documents supports this analysis. Elements we have tried to incorporate into the Navy FEIS address 40 CFR 1500.4 (b) – Prepare analytic rather than encyclopedic EISs; 40 CFR 1500.4 (c) – discussing only briefly issues other than significant ones; 40 CFR 1500.4 (f) – Emphasizing the portions that are useful to the decision maker and reducing background material; 40 CFR 1500.4 (g) – deemphasize insignificant issues; 40 CFR 1502.2(b) – Impacts shall be discussed in proportion to their significance, brief discussions of other than significant issues. The “Issues” section of Chapter 1 identifies the decision maker’s significant issues.

SCS-8

Response: This project was intended to offer several sales and is not an unrealistic supply of timber for a small or medium-sized local sawmill. According to the Tongass Sawmill Capacity and Production Report for CY 2006 (Final Report dated October 11, 2007), this amount would allow Viking Lumber Company of Craig, AK to operate at capacity for just half of their annual operating schedule. Viking’s actual mill production for CY 2006 was 19 MMBF. At this rate, a timber sale of 40 MMBF would allow Viking to operate for 2 years. As you can see, the amount of volume proposed for the Navy project is not unrealistic. Furthermore, Viking Lumber Co. is just one of 11 active small- to medium-sized sawmills in Southeast Alaska that provided information contained in this report. The decrease in employment is largely attributed to the closure of the Ketchikan Pulp Company’s sawmill in 1998. After the initial decrease in employment, the industry has stabilized since 2002 (Forest Plan, Figure 3.22-6, p. 3-502). While there is no longer a strong market for chips and lower-volume wood in Southeast Alaska at the moment, there still is a market for sawlogs. The value of lower-value wood may increase in the future if fuel oil prices remain high and more people use wood as a heating source.

SCS-9

Response: Brackley and Haynes (2008; footnote 2) detail how the demand studies from the USFS PNW Research Station have defined Pacific Rim. They state that the “demand studies traditionally considered the Pacific Rim as the major producing areas of the three contiguous Pacific coast states, British Columbia, Alaska, Russian Far East, and the major consuming regions of Japan, Korea, Taiwan, and China (Haynes and Brooks 1990)”. Brackley et al. (2006) recognized that the United States is a net importer of timber. A mill in Alaska has the option to ship products to traditional export markets (Japan), emerging new markets, or the lower 48 states. Demand for wood products is global in nature and increasing amounts of wood products are being imported into the United States. Alaska products constitute a small proportion of the total US market; very small shifts in how much of the U.S. market Alaska supplies can mean a big change in Alaska.

Brackley and Haynes (2008) state that several short- and long-term changes point to an increase in demand for wood products from all sources, including Alaska. Lumber production in sawmills in western Canada has slowed, in addition to longer-term factors, such as interest in renewable energy applications and a projected steady increase in U.S. population and concurrent increasing demand for

softwood products. They state that the probability of a future decrease in demand for lumber from all Pacific Rim markets is virtually zero. In fact, they argue that projected consumption in domestic markets alone will increase substantially. Therefore, there was no compelling reason for the Brackley et al. (2006) study to include a scenario showing demand falling, which would be contrary to the best scientific information available.

Estimated demand for Alaska sawn products declined considerably between Brooks and Haynes (1997) and Brackley et al. (2006). The lowest projection of derived demand for sawn products from Alaska in Brooks and Haynes (1997) for the period 2003 to 2007 was 130 million board feet (MMBF). The lowest projection in Brackley et al. (2006) for the same period was 30 MMBF. These differences were due to changing assumptions from one projection to another, and shifts in the structure of the industry as it adjusted after the end of the long-term contracts.

Brackley and Haynes (2008) state that “the existing model is a robust system that remains a valid approach to model demand for Tongass timber because of the limited data on lumber shipments and values and production costs.” They go on to explain that Alaska producers are sawing lumber products that are, on average, better quality and enter higher-priced markets, than lumber manufacturers are producing in the western Pacific states and in Canada. These high-quality products have similar prices in domestic and foreign markets. Using historic data with scenario assumptions to model movement of these products in both domestic and foreign markets is a valid approach.

Brackley and Haynes (2008) state, “...the RPA timber Assessments (Haynes et al. 2007) provided the background for the many assumptions needed in the demand model. The size of the U.S. market ... suggests that Alaska softwood lumber producers have access to a large domestic market assuming they can compete with other producers. That is, the relatively small amount of Southeast Alaska production should be able to find markets in domestic or export markets for clear (shop and factory grades) and other high-quality lumber (large sizes of dimension lumber 2 by 10, 2 by 12, and heavy timbers). These markets have the higher prices needed to cover the higher Alaskan costs. Since these high-value markets are not modeled directly in the RPA timber assessment, the Pacific Rim market data are a reasonable proxy for describing the demand for high-value products produced in Southeast Alaska. In the demand model, the demand facing Alaskan producers is then made up of two parts: one part that is assumed to go to Japan and another part that goes to U.S. domestic markets.”

Brackley and Haynes (2008) also state “...current production levels and shipment patterns in Southeast Alaska demonstrate how the industry has transitioned to operate in current market opportunities”. They go on by saying that shifts to “...higher proportions of shop lumber, larger sizes of dimension lumber, heavy timbers, and cants should give Alaska producers an opportunity to supply products of relatively higher value to both domestic and export markets.”

Brackley and Haynes (2008; footnote 16) state, “...there is not [an] official source of information for shipment of lumber from Alaska to domestic markets. Exports to foreign markets are based on export declaration forms submitted to the U.S. Department of Commerce as reported by Warren (for two most recent publications see Warren 2006 and Warren 2007). Total production from the mills is estimated from several sources. Given estimates of total production and exports, domestic production is determined by the subtracting exports from total production.” They also state, “...other than some observations of past flows, there is no consistent historically reported annual data series for shipments from Southeast Alaska to the lower 48 states.”

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The Forest Service corrected the deficiencies identified by the U.S. Court of Appeals for the Ninth Circuit by completing the 2008 Forest Plan. As described in the Forest Plan Final EIS (p. 3-504 to 3-511) and Record of Decision for the (p. 29 to 35), a revised market demand analysis was done. This market demand analysis was used to determine the 2007 market demand as stated in the Navy DEIS Appendix A and has been used to update the market demand for FY 2009 (Navy FEIS Appendix A). The information on the timber market demand used for the Forest Plan can be found at <http://tongass-fpadjust.net/>.

SCS-9a

Response: Please see response to comment SCS-9.

SCS-9b

Response: The timber industry in Southeast Alaska needs to be considered on a more-regional scale than on a community-by-community basis.

SCS-9c

Response: Please see response to comment SCS-9.

The purpose of the Navy Timber Sale includes serving the existing timber operators near Wrangell, as well as other users of Southeast Alaska timber, both existing and potential. Looking at only supplying the current need eliminates the possibility of any future expansion for the timber industry. Interest has been expressed for additional factors of the wood products industry to supply fuel for heating community buildings and homes.

The Forest Plan included the Timber Sale Adaptive Management Strategy, which limits the lands available for timber harvest to those necessary to support demonstrated levels of demand. This strategy is based on the *Morse Methodology*, named after the author. While the majority of higher-value roadless areas are not available for timber harvest, this strategy will ensure those areas that are available are not impacted until timber demand rises.

The Timber Sale Adaptive Management Strategy will be implemented in three phases, based upon performance. The Phase 1 portion includes approximately 537,000 suitable acres, or 69 percent of the total suitable land base on the Tongass. Under Phase 1, timber harvests will be restricted to roaded and mostly lower-value inventoried roadless areas (areas in close proximity to existing roads) until the actual level of timber harvest reaches 100 million board feet a year for 2 consecutive years. Under Phase 2, the Tongass could then plan for timber projects in the Phase 1 and the Phase 2 portions of the approved suitable land base, resulting in a program that operates on 680,000 acres of suitable lands, including some moderate-value roadless areas (areas farther from existing roads with multiple-use value for recreation, fish and wildlife use). Phase 2 restricts harvest to Phase 1 and Phase 2 lands until the level of timber harvest reaches 150 million board feet a year for 2 consecutive years. Finally, at that point, Phase 3 of the Strategy applies, and the Tongass could then plan for timber projects within the entire suitable land base. A map of these phases is included with the Forest Plan and on the website at www.fs.fed.us/r10/tongass/.

The Adaptive Management Strategy identified the Navy Lake area as a Phase 2 land area. For the Navy project, planning and implementation of timber harvest in this area will be deferred until criteria for Phase 2 is met.

SCS-10

Response: Please see response to comment SCS-9 regarding timber demand.

The Navy project alternatives have been developed to achieve the objectives you suggest to the extent practicable for this project.

- (1) Restoration: Some timber stands will be actively managed to achieve a desired condition. Most stands in the project area are mature to over-mature, and in a declining productive growth state;
- (2) Harvest roaded areas: The project would harvest areas that are roaded. The proposed alternative focuses on these areas; most proposed roads are extensions of existing roads
- (3) Support value-added manufacturing: The agency does support value-added manufacturing. Locally, USDA grants have procured manufacturing investments, such as dry kilns; and
- (4) Allocate land and management effort to broad forest values and true economic engines of recreation and tourism and commercial fishing: The location of this project does not lend itself to promoting recreation and tourism, which is largely centered around Southeast Alaska major cities, Juneau and Ketchikan, and to some extent, Sitka. Other lands of the Tongass are more suited and allocated to meeting these goals. This project was designed to minimize the effects on these industries through Forest Plan Standard and Guidelines. In the Navy FEIS, Chapter 3, see Fisheries section for the possible effects on Essential Fish Habitat, and Scenery and Recreation sections for the possible effects to the tourism/nature recreation-based industries.

SCS-11

Response: See response to comment SCS-9.

SCS-12

Response: The “worth” of the timber program goes beyond the figures you display. The residents of many Southeast Alaska communities enjoyed a fairly stable economy during the time of the long-term contracts. While some communities now rely on a tourism industry or income from taxes due to high home values, others still depend on the inclusion of wood products industries and the related jobs from road construction and water transport of materials. Diversified economies are more stable and the inclusion of the timber industry helps to stabilize the economy in many communities.

SCS-13

Response: The Forest Service does use public works contracts, which creates local jobs, to develop infrastructure to manage our National Forests. Road construction for timber sale contracts may be accomplished by the purchaser or turned back to the Forest Service for construction. If the road construction is turned back to the Forest Service, the Forest Service may use public works money to accomplish this road construction work. It is not known at this time if the Forest Service will be doing the road construction for Navy ROD. This infrastructure allows us to manage our forests and to offer timber for sale, creating revenue, which creates more jobs. Infrastructure has been developed and jobs have been created. Future revenue will be generated. This infrastructure allows for better management of our forests and may be used for purposes other than timber extraction in the future, as is evident with the logging roads constructed in the past throughout Southeast Alaska. Some of these roads constructed for timber hauling have been upgrading and are now used as scenic nature-based tour routes or provide access to recreation facilities, other amenity-based development, and homes.

SCS-14a

Response: Many of the projects that you mention were developed during a time of better timber economics and have been delayed due to litigation and settlement agreements. If offered at the time of completion, these timber sales would have likely appraised positive. Current and future projects are designed to be as economical as possible under current market conditions.

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SCS-14b

Response: Road maintenance throughout the Tongass is ongoing and scheduled according to the amount of use. Often, road maintenance in the area of a timber sale is performed during the analysis stage, since many field crews use the roads to access the project area to do field surveys to collect the information required for analysis. Road maintenance increases the safe use of these roads and reduces the amount of resource damage that may occur with increased use. Road maintenance is routinely done on roads that receive public use whether for subsistence hunting and fishing or to access recreation sites.

No road construction associated with the Navy Timber Sale will be done until a NEPA decision has been made. There are still projects in the Navy area that may occur before the Navy appeal period is complete. These are listed in the cumulative effects section under the Transportation heading in Chapter 3 of the EIS. Most of these projects listed have already gone through the NEPA process. The Wrangell Ranger District Roadside EA is proposed to use only existing roads for timber access.

SCS-15

Response: Pages 11-15 of the Transportation Report for the Draft EIS contains the estimated road construction costs for each alternative. This information has been updated and is located in the “Transportation” section of Chapter 3 in the Final EIS and in the updated Transportation Resource Report. The main changes to some of the alternatives were the removal of harvest units and roads within the Forest Plan OGRs and the deferral of the activities in the Navy watershed.

SCS-16

Response: The road construction costs were included in the DEIS analysis, and whether or not they can be funded by public works is unknown at the time. These costs are incorporated in NEAT_R and are amortized by alternative, according to the amount of timber to be hauled over those roads, resulting in a road construction cost per MBF. These costs can be found in the FEIS, Chapter 3, Timber Economics section.

The NEAT_R Estimated Forest Service Financial Costs and Revenues uses \$41/MBF for environmental analysis (NEPA). The Navy project analysis and documentation costs are based on the proposed action (Alternative B), which is the highest volume. This cost is calculated for an anticipated, estimated harvest volume rather than an actual harvested volume. The estimated net sawlog volume for Alternative B is 39,338 MBF. At \$41/MBF, the NEPA cost is \$1,634,753.

The Financial Efficiency Table (Table 3-5 TM-5): Estimated Forest Service Financial Costs and Revenues are in the Navy DEIS (p. 3-12) and updated in the Navy FEIS. The Forest Service costs in the DEIS analysis erroneously used \$49/MBF for Sale Administration. This should have been \$9/MBF and has been corrected in the FEIS.

See response to comment SCS-13 regarding public works.

SCS-17

Response: See response to comment SCS-9. The \$101/mbf figure is based in part on the TSPIRS reports. When preparing the Workload Analysis for the Tongass in 2007, managers estimated the amount of money needed by Forest Service personnel to analyze, prepare and administer a timber sale. These spreadsheets have been added to the project record.

SCS-18

Response: Current law allows timber harvested from Federal lands in Alaska to be shipped out of Alaska only if the “the supply of timber for local use will not be endangered” (16 USC Section 616, enacted in 1926). Shipment outside the State of unprocessed timber from National Forest System lands

in Alaska is allowed with prior approval by the Regional Forester after the sale is awarded, if the request meets certain criteria. Such approvals have been granted in the past on a case-by-case basis at the request of the purchaser.

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

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

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

SCS-19

Response: The limited interstate shipment policy is limited to 50 percent of the total sale volume and is limited to hemlock and spruce meeting the 15" small-end diameter and/or grade 3 requirements. See also the response to comment SCS-18 regarding Limited Interstate Shipment policy.

The purchaser of the Backline Cable Timber Sale did ship 16.67 MBF of hemlock and spruce to TRM Wood Products Co., Inc. of Maple Valley, WA. This represents 0.004 percent of the sale volume. TRM Wood Products is a small company. They are a lumber yard that operates a small sawmill behind a retail store. The business offers products not usually found at the big box stores like Home Depot or Lowe's. They offer custom cut products for contractors and individuals. They are interested in the smaller logs from Alaska because of the tight grain compared to most of the second-growth forest being harvested in western Washington.

SCS-20

Response: NEAT_R does reflect Alaska yellow-cedar export rates. Species selling values are incorporated from the most recent quarterly appraisal bulletin used for the residual value appraisal method. The Navy project uses the 3rd Qtr. 2007 appraisal bulletin.

SCS-21

Response: Table 3-2 *Estimated Project Employment and Income* on page 3-9 of the DEIS states in footnote 3 that the sawmill jobs range from 50 percent of the volume shipped to markets outside Alaska to all sawlogs processed locally. In Southeast Alaska, sawmilling results in 3.31 (annualized) jobs per MMBF of net sawlog volume sold (net sawlog volume reported in Region 10 Cut and Sold reports). Employment data is an average of 2000 to 2005. Employment data comes from sawmill surveys in 2000, 2002 (Kilborn et al. 2004), 2003 and 2004 (Brackley et al. 2006), and the Alaska Department of Labor and Workforce Development (<http://almis.labor.state.ak.us>).

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This table is used again in the FEIS, as generated in NEAT_R v. 2.15. Numbers and values have changed due to changes to alternatives since the DEIS.

SCS-22

Response: The fact that such benefits and activities as commercial fishing, tourism, mining, recreation, and subsistence are not assigned monetary values and quantified in the economic efficiency analysis does not lessen their importance in the overall decision-making process. These industries have been discussed as practicable in the Navy analysis even though an economic analysis is not required for timber sale projects (FSH 2409.18 section 32). However, since these industries are mostly not confined to the use of resources within the project area and are not limited to the project area, this analysis tiers to the recently completed analysis in the Forest Plan FEIS, Volume 1 pgs. 3-511 to 3-523; pgs. 3-539 to 3-543, and pgs. 3-548 to 3-556.

Decision makers routinely choose an alternative that does not maximize present net value. The Forest Service Manual states that decision makers must “consider economic efficiency, *along with other factors* (emphasis added), in making decisions and in implementing and reviewing projects, programs, and budgets” (FSM 1970.3(3)).

Much of the EIS evaluates potential effects that cannot be reasonably assigned a monetary value at this time. The type of benefits identified in this subject may be generally classified as ecosystem services. Ecosystem services are those services and benefits provided by healthy ecosystems. Definitions of ecosystem services can be broad and include both use and non-use values. A number of different definitions have been identified, including a typology (classification system) developed by the Millennium Ecosystem Assessment (2005), which is featured on the Forest Service’s Ecosystem Services website. The Assessment identifies four general categories of ecosystem services: provisioning, regulating, cultural, and supporting. Interest in ecosystem services has increased, in recent years, and economists have made useful progress in developing and improving methods and techniques that can be used to value non-market-ecosystem-services. Recognizing the potential utility of the ecosystem services concept, the Forest Service recently proposed that ecosystem services be used as a framework for describing and evaluating the many benefits associated with NFS lands. The Forest Service established an Ecosystem Services web site (<http://www.fs.fed.us/ecosystemservices/>) that provides detailed information and resources, identifies and discusses Forest Service efforts in this area, and issues a regular Ecosystem Services newsletter.

The Forest Service’s Pacific Northwest Research Station (PNW) recently issued a technical report that attempts to define an economics research program to describe and evaluate ecosystem services (Kline 2006). Kline (2006, pg. 7) identifies several key challenges or steps that are involved in applying the ecosystem services concept. These include defining a typology of ecosystem services or, in other words, defining what to measure and how to measure it. An important aspect of this measure involves, in Kline’s (2006, pg. 10) words: “...translating ecosystem complexity into manageable sets of well-defined ecosystem metrics”. The next challenge is to determine how these metrics are affected by specific Forest policy and management actions and, then, identifying these effects in terms of measurable units or outputs that can be assigned monetary values in a way that will allow meaningful comparison between alternatives.

The third challenge is to measure the value of these units or outputs in monetary terms that accurately reflect the societal values of these services. As Kline (2006, pg. 15) notes, “...total ecosystem values provide little guidance to policy or management decisions unless these decisions can be expressed as marginal or incremental changes in ecosystem services”.

Evaluating the impacts of the alternatives on, for example, subsistence in these terms would require that the potential impacts to subsistence be quantified in pounds of edible resources potentially foregone and in the case of deer, would require estimating the actual number (or at least a reasonable range) of deer that would be affected, negatively or positively, by the alternatives. This type of analysis would also be required for salmon, marine mammals, moose, berries, and so on. The ecological impact assessments presented in this EIS follow standard scientific approaches to these types of analyses and typically assess impacts in terms of probability and risk, not in numbers of affected deer or salmon, etc.

The difficulties associated with identifying production relationships and the corresponding units of measurements is, as noted earlier, generally considered one of the main challenges currently facing ecosystem services analyses. Kline (2006, 11) notes that, in general, “ecologists have not been forthcoming with the types of ecosystem output measures economists typically desire or expect for formal economic analysis” and because “ecology is not particularly well suited to prediction: production relationships may be highly or purely uncertain.”

The draft report prepared by Phillips and Silverman (2007) and included in the Wilderness Society comments provides a rough approximation of total economic values of “wildlands” on the Tongass and Chugach National Forests. These values are not sufficiently refined for use in policy and management analysis. They are a mix of different kinds of values (total worth, marginal value, market and non-market, etc.) from a variety of studies. Even if these total economic value estimates were more accurate, they would provide little guidance with respect to evaluating the alternatives in this EIS because the ecological impacts of the project alternatives are not expressed as marginal or incremental changes in a way that can be assigned monetary values. This reflects the current state of knowledge and available secondary data.

The Forest Service, as noted above, has developed and is in the process of further refining a research agenda based on ecosystem services that will allow these types of non-market ecosystem services values to be incorporated into management decisions in the future. With respect to the Tongass National Forest, scientists from the PNW Research Station in Juneau have recently initiated an ecosystem services research program that is aimed at using the Tongass as a case study of the impacts of forest management on the long-term provision of ecosystem services and goods. The initial phase of this program has involved working with the MIMES (Multi-scale Integrated Models of Ecosystem Services) model developed by leading ecosystem services researchers at the University of Vermont. Initial work has focused on developing a simplified, dynamic model of forests and ecosystem services and goods. Future research plans involve adapting MIMES to model the impacts of management decisions on the flow of ecosystem services and goods.

SCS-23

Response: See response to comment SCS-22.

SCS-24

Response: See response to comment SCS-22.

SCS-25

Response: See response to comment SCS-22.

SCS-26

Response: Planning regulations followed during the analysis for the Forest Plan FEIS, include an analysis of socioeconomic conditions in Southeast Alaska. See response to comment SCS-22 and the Economic and Social Environment section of the Forest Plan FEIS, Volume 1.

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Jobs in the ecosystems services sector are important in certain parts of Southeast Alaska, and economic benefits to communities derived from these services exist, such as fuel sales, restaurant business and lodging. However, these jobs, whether direct or indirect, have little chance of being lost or jeopardized by logging in the Navy project area because there are no communities directly connected to the project area. See the 1st paragraph of ACMP-39 for fisheries information.

SCS-27

Response: See response to comment SCS-22.

SCS-28

Response: The timber industry sector can positively impact the regional economy and diversified community stability. Forest Service policy is based on the multiple-use concept, which on the Tongass National Forest includes the timber resource as well as the economic activity generated from tourism and recreation. As far as attracting new residents and keeping existing residents from leaving, this is related to available jobs with good pay and the overall economic health of Southeast communities. A viable wood products industry can contribute to economic growth and stability of the region even if it does not reach previous levels experienced with the long-term contracts.

SCS-29

Response: The decision for the location of the small OGRs in the Navy project area was part of the decision for the 2008 Forest Plan. The proposed OGR at the pinch-point was not selected. Additional information has been added to the Changes Between Draft and Final section in Chapter 2 of the Navy FEIS. See comment ADFG-4 and GI-3.

SCS-30

Response: The analysis of the trade-offs between resources was considered during the analysis for the Forest Plan. The reference to the South Etolin Wilderness Area in the Navy DEIS (p. 3-18) suggested that the Wilderness could function as an area for source wildlife populations and that more mobile species could disperse from this area, and includes a disclosure that the lack of connectivity through the pinch-point could result in two isolated populations for less mobile species. The Navy FEIS, Chapter 3, Issue 2 presents more information on the effects of connectivity throughout Etolin Island. See response to comment SCS-29.

SCS-31

Response: The effect on coarse canopy forest by removing 30 percent of the basal area with a single-tree selection harvest would cause the stand to function as a volume class 5. The coarse canopy analysis in Navy FEIS includes this assumption that this silviculture prescription would change the coarse canopy acres to continue to function as productive old growth (POG) but not necessarily as a coarse canopy stand. The Wildlife and Old Growth Reports discuss the effects analysis of partial harvest on coarse canopy forests. Half of the coarse canopy acres in WAA 1901 is at lower elevation and within the beach buffer and riparian management buffers or in non-development LUDs and will not be considered for timber harvest. There is no Forest Plan direction requiring the protection of all coarse-canopy forest. The effects to coarse canopy (or large tree forests) were included in the analysis for the Forest Plan, Chapter 3, Biodiversity section.

SCS-32

Response: Etolin Island is a naturally fragmented landscape. Most of the habitats in the Old-growth Reserves, non-development LUDs and beach and riparian buffers have not been harvested in the past and provide old-growth forest connections. Many species are mobile or adapted to the fragmentation of this landscape and can use the connections that exist. Additional information on connectivity has been

added to the Wildlife Habitat Fragmentation section of Chapter 3 in the Navy FEIS and the Old Growth and Wildlife Resource Reports.

SCS-33

Response: Analysis and discussion of the effects is commensurate with the amount of effects that the project will have on an area. These topics are analyzed to the extent that a decision can be made and the effects can be known.

SCS-34

Response: The Tongass has one of the most intact forest ecosystems remaining in the world. About 92 percent of the native productive old growth remains and 87 percent of the high-volume old growth has not been disturbed. The recently amended Tongass Forest Plan features an integrated science-based old-growth conservation strategy that protects the integrity of old-growth forests by retaining blocks of intact, largely undisturbed habitat distributed across the landscape. The conservation strategy will ensure the Tongass will continue to have no listed Threatened or Endangered species and that eagles, brown bears, black bears, and mountain goat populations will remain healthy. Forest Plan guidance protecting beach, estuary, and riparian areas will ensure that Southeast Alaska fisheries continue to be among the world's most healthy.

The Tongass was exempted from the Roadless Area Conservation Rule because roadless areas are plentiful in Southeast Alaska and because the Tongass Forest Plan provides adequate protection for them. In fact, over 91 percent of the Tongass is now in either inventoried roadless areas or designated wilderness. Even after 100 more years of logging at the maximum level permitted in the Forest Plan (the maximum level may never be achieved), over 81 percent of the Forest would be inventoried roadless areas or designated wilderness.

As was explained in the response to comment SCS-2, the Navy Draft EIS and Final EIS disclose the effects of varying levels of timber harvest and road building in the roadless areas, from a high of over 5,000 acres affected in Alternative C to a low of almost 1,000 acres affected in Alternative E, and no harvest or road building proposed within the roadless areas in Alternative F and Alternative A, No Action. Alternative F has an estimate of almost 300 roadless acres indirectly affected by the timber harvest and road building adjacent to the roadless area boundaries. This is a wide range of alternatives for the Forest Supervisor to consider the trade-offs of the effects to roadless character before making his decision, and the high-profile debate as well as public support for protecting roadless areas will be factors he considers when making his decision.

SCS-35 and SCS-35a

Response: The roadless section in the Draft EIS refers to other resource sections and reports, rather than duplicates the discussions of effects within the roadless area boundaries. This was because no special values were identified that were not already covered in these disclosures of other resource effects. In response to comments, summaries of these effects have been added to the roadless section in the Final EIS to improve communication and understanding of the effects to the inventoried roadless areas.

SCS-35b

Response: As is explained in the effects section of the timber supply and economics issue, the volumes, value and cost estimates modeled in NEAT-R are used to compare relative differences among the alternatives. Alternative F is only in the roaded portion of the project area and gives the relative value to compare with the other alternatives that enter roadless areas to varying degrees, from a high of

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9 percent of all roadless areas affected within the Navy project area in Alternative C, to a low of 2 percent affected in Alternative E, with less than 1 percent indirectly affected by units and roads adjacent to the roadless areas in Alternative F. Costs and values used in the NEAT-R model are assigned by regional values, logging methods, species' values and regional policies and do not change because of an inventoried roadless condition. With over three-quarters of the project area roadless, the roadless analysis is focused on the characteristics affected, using acres affected and miles of road as indicators. Additional consequences, summarized from other resource sections, have been added to the roadless section in the Final EIS. There is no advantage to doing the economic analysis by an inventory boundary for roadless characteristics. Timber sales would not be sold by roadless area and the model is used to give a relative ranking, not the precise sale configuration or appraisal that will occur when timber sales are configured and sold to be as economical as possible.

SCS-35c

Response: As explained above, information summarized from the other resource sections of the EIS has been added to the Navy FEIS to improve communication and understanding. A discussion of the uncertainties of effects resulting from climate change has been added, tiered to the 2008 Forest Plan FEIS. The conclusions are that the science-based old-growth conservation strategy that protects the integrity of old-growth forests by retaining blocks of intact, largely undisturbed habitat distributed across the landscape will provide resiliency in the face of uncertain but anticipated change and provide for an amount and distribution of habitat adequate to maintain viable populations of vertebrate species across the Tongass. An increased emphasis on monitoring climate-related changes in the Forest Plan will help detect effects from climate change that may warrant changes in management and the Forest Plan provides the flexibility to make those changes.

In the Navy project area, about 14,000 acres (18 percent of the project area) are suitable and available for timber harvest, so large portions of the area will remain undisturbed into the future, even if the maximum allowable harvest occurs over the next 100 years. The most acres proposed for harvest in this entry are in Alternative C, over 6,000, or about 43 percent of the suitable timber acres. The fewest acres proposed for harvest are in Alternative F, about 1,250 acres, about 9 percent, with Alternatives D, B and E proposing 17 percent to 24 percent of the suitable acres to be harvested in this entry.

Regarding the roadless component of the Navy project area, almost 61,000 acres are roadless including the 2,000 unroaded acres at the head of Anita Bay, about 80 percent of the total project area. Alternative C would directly affect the most vegetation by cutting trees in cable-harvest units and clearing roads within the roadless acres, about 1,650 acres and 17 miles of new NFS and temporary roads within the roadless areas. In addition, Alternative C would harvest almost 3,000 acres with helicopter yarding, but these units leave 70 percent of the timber stand intact and do not require any roadbuilding. Therefore, they do not cause the same disturbance to roadless character as cable harvest units that are clearcut, some clearcuts with 50 percent reserve trees, but still accessed by roads. This is contrasted with Alternative F where no vegetation would be removed within the roadless areas, not even using helicopter yarding. Alternative B would remove vegetation from over 600 acres with cable yarding and 7 miles of roads, and almost 1,700 acres by helicopters. Alternative D has a similar amount of cable yarding units, about 550 acres and 5 miles of road, but less than 650 acres of helicopter harvest. Alternative E has less than 200 acres of cable unit harvest with just under 2 miles of road, but almost 2,300 acres of helicopter harvest within the Navy project area.

SCS-36

Response: These analyses have been considered by resource areas, summarized and added in the roadless section of the Final EIS. Key conclusions are that at the most, 6 percent of the Mosman

Roadless Area (3,400/57,000) and 5 percent of the North Etolin Roadless Area (2,000/42,000) would be impacted by Alternative C, leaving sufficiently large areas to be considered for potential wilderness in the next round of forest planning. The other action alternatives would impact even less, from 3 percent of Mosman and 2 percent of North Etolin in Alternative B to less than half of 1 percent of both areas indirectly affected by the units and roads adjacent to the roadless areas in Alternative F.

The Forest Supervisor has a range of impacts to consider, with none of them causing any area to become too small or integrity so compromised that it would not be considered for potential wilderness recommendation. With so much of the area remaining intact in all alternatives, the ecosystem integrity, wildlife habitat and primitive recreation opportunities in old-growth forests remain to be considered in this potential wilderness evaluation process.

The addition to a Congressionally-designated Wilderness requires an act of Congress. No potential areas for Wilderness designation were identified during the 2003 Supplemental EIS to the Forest Plan, which looked specially at this topic.

SCS-37

Response: Alternative F eliminates roadless areas from timber harvest and road building proposed in the Navy area and Alternative A, No Action, provides the baseline to compare effects for all alternatives. The timber market demand was reanalyzed with the 2008 Forest Plan and supporting information can be found in that FEIS. See response to comment SCS-9. The Forest Supervisor will consider the trade-offs, including economic and ecological reasons, when he makes his decision.

SCS-38

Response: The responsible official will take into consideration all values of all resources including the Forest Plan direction and allocation of the land within and adjacent to the project area. See response to comment SCS-9 regarding timber demand, and response to comment SCS-22 regarding ecosystem values.

SCS-39

Response: The proposed activities within the Navy watershed were deferred at this time due to the implementation of the Tongass Sale Program Adaptive Management Strategy in the decision for the 2008 Forest Plan, which placed the Navy watershed into a Phase 2 category. Additional information concerning the Adaptive Management Strategy and the Navy watershed can be found in the Relationship to the Forest Plan section of Chapter 1 in the Navy FEIS.

SCS-40

Response: An Invasive Species Risk Assessment was completed for this project. Additional information about invasive plant species has been added to the Changes Between Draft and Final section of Chapter 2, in the Invasive Plant Species section of Chapter 3 in the Navy FEIS, and in the Botany Resource Report.

SCS-41

Response: An Appeal Decision, Flathead National Forest Land & Resource Management Plan Appeals, U.S. Forest Service Nos. 1467, 1513, 13-14 (Aug. 31, 1998) [hereinafter Flathead Forest Plan Appeal Decision] hold(s) that the NFMA diversity provision requirements are “procedural in nature”, and that the Forest Service is not obligated to maintain “any specified level of abundance or distribution of particular plant or animal communities”.

However, there are several ways in which the silvicultural prescriptions are designed to maintain levels of all species:

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- Uneven-aged management is being implemented using a single-tree selection prescription, which will retain 70 percent of the stand's pretreatment basal area. Of this, 50 percent of the basal area of spruce and cedars in the original stand will be retained. Alaska yellow-cedar and western redcedar regeneration is considerable in many of the stands being harvested. A summary of pre- and post-harvest conditions shows quantitative effects of single-tree selection for trees over 9" DBH for helicopter units in the Navy project area, found in the Silviculture Resource Report, Table 6. Monitoring after harvest will be done via stocking surveys on all harvest units to verify the effectiveness of recruiting and retaining desired species in the managed stand.
- Several of the even-aged stands will have reserve trees retained as seed trees, which will comprise western redcedar and Alaska yellow-cedar. This is being done to minimize the effects of porcupine damage on the regenerated stands, as porcupines do not prefer these species as a source of food. This also will help establish and maintain a cedar component in the newly regenerated stand.
- The planting of Alaska yellow-cedar is an option that is built into the silvicultural prescriptions and can be used if deemed necessary. This is costly and usually not necessary with the prolific natural regeneration that occurs in Southeast Alaska.
- At the time of precommercial thinning for even-aged stands, Alaska yellow-cedar and western redcedar are the first priority species to be favored and selected as leave trees. This is both an effective and economical way to increase the percent of cedar within a managed stand.

SCS-42

Response: Table 2 of the Navy Silviculture Resource Report displays the species composition for the inventoried stands in the project area. This data indicates that the average species composition of inventoried stands is 17 percent Alaska yellow-cedar. See response to comment SCS-41.

There is a punctuation error in the Forest Plan p. 4-70, which caused yellow-cedar and western redcedar to be grouped with Pacific yew, Pacific silver fir, and subalpine fir as rare species. The cedar species are not considered rare species and there should be a period instead of a semi-colon after naming them (email from Krosse, Forest Ecologist, July 3, 2008). The corrected version is as follows:

I. Stage II Intensive Inventory ...

H. Consider regenerating and maintaining a mix of dominant overstory tree species, where appropriate, for the site, to provide for the diversity of future stands and to augment the future availability of forested habitats used by other species (wildlife and plants). Common, but less represented Forest-wide overstory species include yellow-cedar and **western redcedar**. **Pacific yew**, Pacific silver fir, and subalpine fir are considered rare tree species (see Plants Standards and Guidelines, Section C).

SCS-43

Response: Discussions of yellow-cedar decline and risk to wind storms are in the Silvicultural section of the Final EIS. The information on future changes in climate and the effects is currently speculative. Aerial surveys of insects and other pathogens will continue to occur annually as scheduled by the State and Private Forestry, Forest Health Group of the Forest Service. Monitoring of riparian no-harvest and RAW zones has been ongoing and will continue. Any modifications to these buffers may be made dependent on this information. Most insect outbreaks occur where trees are already stressed. Younger,

faster growing trees generally are more insect-resistant than older, slower growing forests. See also response to comment SCS-87.

SCS-44

Response: The FEIS describes the expected direct and indirect effects to soils associated with implementation of the project. The effects to the nutrients in soils, disruption of mycorrhizal systems, and erosion are expected to be minimal since logging slash will be left on site to decompose and provide nutrients. The only areas where stumps and rooting systems will be disturbed are for road construction, which was acknowledged in the Soil section of the Draft EIS, with more information in the Transportation section. The disclosure of the best management practices is important since these are the methods that reduce the effects and how the conclusion can be made. Landwehr and Nowacki (1999) and Landwehr (1993), conducted studies on detrimental soil conditions as a result of shovel, partial- and full-log suspension yarding. They found partial-suspension yarding and shovel yarding typically result in less than 5 percent soil disturbance while full-suspension yarding results in less than 3 percent detrimental soil disturbance.

SCS-45

Response: When NFS roads or other permanent facilities are constructed, the land becomes part of the long-term transportation system. Transportation goals and objectives and standards and guidelines pertain to the management of this facility. These effects are considered to be ‘irreversible and/or irretrievable’ since this land is no longer being managed as forested land and those sites are taken out of timber production.

Temporary roads are not designated as part of the transportation system and are allowed to revegetate, to forested lands. The land is still considered productive forest land and is often a site that favors spruce regeneration. Because the growing conditions (soil) are altered, these areas are considered as having detrimental soil disturbance. The environmental analysis did consider all lands taken out of productivity due to road construction with temporary roads and NFS roads as subsets.

SCS-46

Response: Lands with slopes greater than 72 percent are taken out of the suitable timber base at the Forest Plan level. At the project level, harvest can be allowed based on an on-site slope stability analysis done prior to harvest. These areas are sometimes included within the unit boundary but are avoided during harvest.

The assumption that the partial-cut prescription will protect slope stability is based on the slope stability equation used by Swanston and others (1991). By reducing the factors that contribute to instability, the potential to induce instability is decreased.

SCS-46a

Response: Temporary roads are generally inside of a unit and the effects are included in the analysis rather than double counting the effects on the same footprint. The effects of roads on the old-growth forests are described under the Irreversible and Irretrievable Commitments section in the Introduction to Chapter 3. The effects of roads on watersheds, wetlands and wildlife are described in the Watershed, Wetlands and Wildlife sections of Chapter 3 in both the Navy DEIS and Navy FEIS. Total road density has been used for the effects on wildlife and includes system and temporary roads.

SCS-47

Response: A transportation map that shows all NFS roads in the project area was included with Appendix C, Road Cards, of the Navy DEIS. A similar map will be included with the road cards for the

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Navy Record of Decision. In the FEIS, the roads for each alternative are displayed on the alternative maps at the end of Chapter 2.

SCS-48

Response: The logging system and transportation analysis (LSTA) was developed at the onset of the project which includes all suitable timber and possible transportation options before the alternatives were developed. This information was used in the development of a position statement (Gate 1) and all subsequent analysis. The unit location is the first consideration, with the roads situated to be able to reach those units as economically as possible. Sometimes units that could be roaded are accessed instead by helicopter to minimize the effects to resources, be consistent with Forest Plan direction or reduce costs. The roads being proposed are for silvicultural use only and other uses, such as access for recreation, were not considered in the design or location.

The management of existing roads for the entire Wrangell Ranger District was done with the ATM EA and DN. Travel management is handled at a higher level than the Navy project. Since road maintenance funding is not allocated for small areas, but rather district wide, district-wide management is required. This decision included which roads will be closed/decommissioned or at what maintenance level they will be maintained. Please see the Transportation Cumulative Effects section of Chapter 3 of this FEIS for details about the ATM EA.

SCS-49

Response: The decision for the 2008 Forest Plan has revised the placement of several OGRs in the project area. There are no roads in the small OGRs.

Alternative C contains a small segment of proposed road in a medium OGR because there was no reasonable alternative (see Road Cards, Road 6555 in the DEIS for details). If constructed, this road would be closed at the end of the timber sale. Alternative road location discussions can be found in the Transportation section of Navy FEIS Chapter 3 under Direct and Indirect Effects, Alt. C.

SCS-50

Response: In the past, the Tongass National Forest used the terms obliteration and decommissioning interchangeably. The 2005 Travel Management Rule updated the definitions in 36 CFR 212.1 to include decommissioning but not obliteration. The CFR states, "Road Decommissioning. Activities that result in the stabilization and restoration of unneeded roads to a more natural state."

All temporary roads used as part of the Navy project area will be decommissioned. Culverts across streams will be removed and the streams will be allowed to return to their natural channels, slopes will be stabilized, and erosion concerns will be addressed.

NFS roads are intended for intermittent use, while decommissioning is recognized as a strategy for long-term road closures. Decommissioning would significantly increase costs for reoccurring management activities due to numerous iterations of removing and replacing stream crossing structures. This would result in additional short-term negative effects to water quality from construction that would occur on a relatively frequent basis. Structures that have an unacceptably high chance of failure and/or structures where failure may result in detrimental effects to a resource will be removed at the end of the timber sale, and biological functions will be restored to their natural state.

SCS-51

Response: All roads are constructed for silvicultural activities; no other long-term use is being proposed.

Based on observations of the Anita Bay road system by field personnel during the collection of data for the Navy project, there is very little road use, even during the busiest time of the year, the fall hunting season. Few vehicles are stored at the LTF, although small numbers of ATVs are occasionally brought by boat. Use on the road systems by individuals is likely to be very limited. Additionally, restrictions on public access during the timber sale due to safety concerns will keep road use lower on new roads than the existing roads at Anita Bay. The very low incidental use by non-Forest Service users on these roads will not increase the need for maintenance on these roads.

Since no monitoring such as a traffic counter has taken place on the Anita Bay road system other than personal observations, accurate traffic projections are not possible.

SCS-52

Response: The Transportation section of the FEIS provides the official definitions of NFS and temporary roads. Additional clarification has been included with the legal definition in the Transportation section in Chapter 3 of the Navy FEIS.

National Forest System Roads are those roads that are designed for long-term use and generally access a larger area. One of the primary distinctions is if engineering control points are needed to lock in the location of the road for the contractor. An example of a control point would be where the road crosses a fish stream and the most advantageous route that will minimize effects to resources and reduce costs.

Temporary roads describe roads used during a timber sale that are decommissioned at the end of it; they are not tracked as part of a roads inventory. They are intended for one-time use and typically access one unit or landing. In the past, some roads were considered temporary and long-term use was not considered. As part of the decommissioning activities, all culverts will be removed, all stream channels are restored to their natural gradient, waterbars are added to limit erosion, cut and fill slopes revegetated, in order to stabilize and restore these roads to a more natural state and limit any potential environmental damage the decommissioned road could possibly cause. While these roads must follow BMPs, they do not have to meet the same requirements of NFS road construction, which results in less expenditures and a more-economic timber sale offering. Temporary roads are decommissioned after the timber sale and left in a condition that requires no further maintenance. The cost of decommissioning is borne by the timber sale purchaser before the unit can be accepted as completed.

The prism of a temporary road is permanent but these roads will revegetate (as will system roads unless maintained). Often alder will colonize the road first, followed by Sitka spruce, since the road provides a well-drained site.

The effects of temporary roads on resources are discussed in other resource sections in Chapter 3, in the unit cards, and in resource reports.

Each resource that uses road densities as a measurement in their analysis will state the assumptions for which types of roads they are using. For example, road densities for wetlands, soils, wolf and roadless area analysis considered the effects from both NFS and temporary roads.

SCS-53

Response: On many National Forests, a temporary road would resemble a skid trail more than it does in Southeast Alaska. However, since our soils are much wetter, the use of shot rock prevents extensive resource damage and limits the area affected to the road bed. As explained in the response to comment SCS-52, there are fundamental differences between NFS roads and temporary roads. Any changes to the definitions are outside the scope of this project, and must be done at the national level. However,

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effects of the differences between temporary road and NFS roads are examined and explained in the respective Chapter 3 resource sections and reports.

Temporary roads are not tracked in our formal database because they are decommissioned at the end of the timber sale and not expected to be reused.

Temporary roads do not meet the definition for temporary fills as used by the Corps of Engineers (COE). Temporary fills are used during road construction. Prior communication with the COE has indicated that they do not generally require the removal of the entire road prism of a temporary road. The Corps of Engineers explains this in their Nationwide Permit section 33, **Temporary Construction, Access and Dewatering**, which states: “Temporary structures, work and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites; provided that the associated primary activity is authorized by the Corps of Engineers or the U.S. Coast Guard, or for other construction activities not subject to the Corps or U.S. Coast Guard regulations.”

SCS-54

Response: Road closure and decommissioning will be included in the timber sale contracts. If there is an intervening circumstance, as your comment alludes to, additional NEPA may be required. The public will have the opportunity to voice their concerns about any potential changes at that time. There are no reasonably foreseeable changes to the road management strategy for the Navy project area.

SCS-55

Response: There may be effects to plants, wetlands, silviculture, habitat fragmentation and soils from all roads used in this project, which is why these effects are classified as irreversible effects. Best management practices and Forest Plan Standards and Guidelines are expected to minimize these effects, but restoring the site to pre-management situation is not possible. This is one of the reasons that the different lands are allocated for different management objectives.

The closure and decommissioning of these roads is the best management practice for these remote road systems. The Forest Service does not have the money, manpower, or equipment to maintain temporary roads on remote islands. While some sediment will be created from the removal of structures, timing windows and proper storage practices will reduce these impacts. The reference you cited does not take into account the sediment production from a blocked culvert, especially with diversion potential; these are the conditions can cause the greatest impact to downstream environments.

SCS-56

Response: The costs of individual road segments are included in the NEAT-R runs located in the project record. These are estimated costs at this point and more refined costs will be used for the timber sale appraisal. The road costs for each road are not included on the road cards since the total costs of all the roads by alternative is more pertinent, since that cost is used to arrive at an indicated bid value. Although an individual road may be less expensive than another road, if the road needs to be connected to the LTF by additional road construction, then this information is not relevant.

The heading “Proposed Road Concerns” was misleading and has been changed to “Proposed Road Construction Concerns.” See the other resource sections and reports for additional information about the effects of roads. Effects to particular roads or road segments are discussed under various resources in Chapter 3 and on the road cards. See Comment SCS-57, which identified roads with specific concerns.

Transportation section in Chapter 3 states, “The change authorized under any of the Navy project alternatives to the Anita Bay road system is not expected to impact the long-term access or travel management on the existing Anita Bay road system.”

Short-term effects are listed under the Direct and Indirect Effects section by alternative. In essence, the only effect to the transportation system is additional open road during the life of the timber sale. This does not affect the larger Etolin Island transportation system since the timber sale and associated monies bear the costs of opening, maintaining, and closing the roads.

The road cards identify site-specific or road-specific concerns. They are intended to display the effects by resource. The FEIS includes additional information on environmental effects.

SCS-57

Response: The Transportation section of the Navy FEIS has been updated in response to comment SCS-52; the NFS roads constructed for this project will be used intermittently. Predicting future management activities “15 years” and beyond is not possible with shifts in management strategies, the political environment, etc. It follows that predicting future road use for those management activities is beyond the reasonably foreseeable future as well. The anticipated use of each road is included on the road cards.

SCS-58

Response: This section was updated in the Navy Final EIS to be consistent with the decision for the 2008 Forest Plan; however, both total and open road density was calculated for the DEIS, Table 3-50, p. 3-150. As stated in this table, both system and temporary roads were used and the analysis included all roads whether they were drivable or not.

Total road density is now used instead of open road density to analyze the effects to marten and wolves. ADF&G wolf harvest records in GMU 3, which includes Etolin Island, indicate that the most common method of transport for hunters harvesting wolves is boating (an average of 77 percent from 1988-2001), whereas other methods of transport that might take advantage of roads, including highway vehicles, off-highway vehicles, and snow machines are much less common (21 percent from 1988-2001). At this time, road access and human caused mortality has not been determined to be a significant contributing factor to locally sustainable wolf mortality.

See response to comment ADF&G-18.

SCS-59

Response: The complete cost breakdown of the proposed road system by alternative is included in pages 11-15 of the FEIS Transportation Resource Report. Table 14 in the Transportation Resource Report displays the estimated maintenance cost by road maintenance level. These costs were included in the NEAT-R program for financial efficiency analysis. A maintenance cost analysis for this project is uncomplicated due to the uniformity of the proposed management. All NFS roads constructed during this project are proposed to be closed at the end of the sale with one exception. Closed roads are considered to be in a self-maintaining state and will not require additional routine maintenance. The roads are monitored, usually in conjunction with other activities, and those costs are estimated at \$15 per mile per year.

The analysis only identifies easily quantifiable maintenance costs and does not include value that is added or subtracted to various resources by the roads. Resource issues due to road construction will be contained in resource-specific areas of the Navy EIS or other resource reports.

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The purpose of road construction in the project area is strictly for timber harvest. Without timber harvest, there would be no reason to build these roads. The same goes for future timber management. Without a plan for future timber management in an area to which a road leads, the road becomes of no use for its primary purpose. The economics of other resources must then support it or the road will be closed.

Future timber management lends primary support for keeping a road open. It is also true that closing roads increases the costs of future timber management by requiring future roadway maintenance and repair and by limiting opportunities of small-scale, specialized management. This type of management is often accomplished through salvage sales. Salvage sales are usually not large enough to support reconstructing a closed road to gain access, resulting in merchantable timber that may be lost. Closing roads also increases the costs of future silvicultural activities. Typically a pre-commercial thin is performed 20-25 years after a unit has been harvested. Storing lengthy segments of roads reduces the mobility of the thinners and results in higher thinning costs. All these factors must be taken into consideration along with the cost analysis in making a determination of the actual costs of maintaining roads.

SCS-60

Response: The ATM EA decision has authorized the implementation of a strategy to decrease the size of the Wrangell Ranger District road system to match the anticipated budgets. Details of the decision are contained in the FEIS, Chapter 3, Transportation Cumulative Effects section and the resource report. Details of projects implementing the strategy are in the Cumulative Effects section as well. As a result of the ATM EA decision, there are two eventual outcomes and work has begun towards those goals.

1. Roads will be closed and deferred maintenance problems will be resolved as part of the road closure process.
2. Due to the reduction of the road system, additional funds will be available to fix deferred maintenance problems.

SCS-61

Response: Please see response to comment SCS-13 and SCS-56.

SCS-62

Response: The decision on the ATM EA was considered in the analysis of the Navy alternatives and these actions are compatible. See the Chapter 3 Transportation Cumulative Effects section for the details of the ATM EA decision. The ATM EA recognized the potential for a Navy action alternative in the Cumulative Effects.

SCS-63

Response: There are currently projects implementing the strategy to close and repair roads with deferred maintenance obligations as outlined by the decision for the ATM EA. At this time, there is no timetable for the completion of all the deferred maintenance tasks.

The ATM EA Decision Notice spells out the implementation process:

“Implementation of this project is expected to begin in late September 2007. It should be noted that only a few roads will be closed immediately. Because of current and future management in an area, lack of environmental concerns, or low maintenance costs for specific roads, certain roads slated for closure will remain open for longer periods than others.”

SCS-64

Response: The sentence in question has been deleted from the Navy Final EIS since it does not apply to road maintenance and reconditioning of existing NFS roads.

SCS-65

Response: The use of helicopters is listed on page 8 of the Timber Resource Report and in Chapter 3 of the FEIS as a logging system. While a smaller helicopter, such as a Jet Bell Ranger or Hughes 500, is used to transport people in and out of the woods, the analysis for the Navy project does not consider helicopters a component of Access Travel Management (ATM). This is because ATM plans are considered long-term management of the road network for a particular area.

Helicopters used for the Navy project are considered in the Logging Systems Transportation Analysis. Specifically, larger helicopters, such as a 61 Sikorsky or 107 Vertol, would be transporting logs to roads or barges. These roads are a part of the ATM. Logs would then be truck hauled to a marine access facility. Helicopters, as a logging system, do not require a *different sort of road system*. There are certain landing size requirements and slope limits for helicopter yarding, but this does not affect the ATM. Fuel storage must be in compliance with timber sale contract provisions, which would be checked for compliance during sale administration.

SCS-66

Response: Logging costs include cost for road maintenance for those roads used for the timber sale and the work is performed by the purchaser, or contractor. The purchaser, or contractor, is also responsible for post-harvest road storage and decommissioning. These costs would be included in the purchaser's sale bid, as a part of the total logging costs. We recognize that decommissioning, or placing a road in storage, when the purchaser is on site, is the most cost effective.

Road Condition Surveys (RCS) were not intended to be done annually. The Tongass Roads and Stream Crossing Project was a collaborative effort between the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Environmental Conservation (ADEC) and the USDA Forest Service. The Road Condition Survey (RCS) Report is a final project report on the project's comprehensive 3-year monitoring effort that focused on best management practices (BMPs) for forest roads. The project assessed the degree of compliance with BMPs that are intended to prevent nonpoint source pollution from the construction, maintenance and closure of culverts, bridges and roads and evaluated the ability of existing culverts to efficiently pass fish. This RCS project is part of the Forest Service's overall effort to evaluate the condition of roads and stream crossings on the Tongass National Forest. The report reflects the initial and second phase of the road condition survey. The Forest Service and ADF&G identified needs for maintenance and restoration of fish habitat.

The ADF&G and ADEC cooperated with the Forest Service to finalize the Road Condition Survey protocols that the Forest Service had initiated in 1994 (FSH 7709.58-99-2). The protocol provided a standard mechanism for the long-term collection and storage of information and data analysis related to fish passage and nonpoint source pollution sources. It established a database and associated tools (GIS, ability to query) to maintain historical information, identify existing and potential threats to fish habitat and passage, prioritize maintenance and restoration, estimate the costs of such efforts and objectively discuss these issues, both internally and with other interested parties. Since the initiation of the survey, the road condition survey protocol has been revised to gather more specific data to better evaluate fish passage.

The collection of Road Condition Survey data by the Forest Service and ADF&G over 3 years greatly improved the knowledge and awareness of site-specific and programmatic problems associated with

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logging roads and stream crossing structures. The RCS project provided agencies with a mutual interest in protection of fish habitat and migration an opportunity to address these joint concerns in a cooperative and objective manner. A common foundation of information was established, upon which ADF&G, ADEC and the Forest Service can base discussions and decision making relative to prioritizing maintenance and managing stream crossings.

SCS-67

Response: It appears that these road comments are in reference to Table 3-33 of the Navy DEIS. The information from Table 3-33 came from the Wrangell Ranger District Roads Analysis was completed in 2006. This table was presented for information and recommendations only with the caveat that some of these conditions had already been corrected. There was no decision on this Roads Analysis but it was used with updated information to complete the Wrangell RD ATM EA. The Wrangell RD ATM EA (2007) Decision Notice included the decisions on the maintenance of these existing roads. See the Chapter 3 Transportation Cumulative Effects section for additional details regarding the ATM EA. See the response to comment SCS-60.

A risk assessment for invasive species was completed between DEIS and FEIS. Because reed canary grass is so well established along some of the existing roadsides, it is impossible to eradicate. Measures, such as cleaning off-road equipment to help reduce the spread of invasive plant species will be part of the timber sale contract.

SCS-68

Response: See response to comment SCS-55.

SCS-69

Response: The mitigation efforts are based on a competitive process for funding, so no dates can be determined because we do not know the ranking of the projects. Funding sources have also changed over the years and continue to which makes this difficult to identify as well. Mitigation required under the timber sale contract will be implemented at the time of the proposed activity.

The majority of the mitigation tied to hydrology issues is tied to road projects that have been NEPA-cleared to work on and should be completed in a reasonable timeline.

SCS-70

Response: The existing condition analysis of the project watersheds found the watersheds to be functioning properly. The proposed timber sale activities have taken in account existing condition of project watersheds.

SCS-71

Response: Our analysis concludes that water yield will not be detrimentally impacted by the proposed timber sale. Even watersheds that have 20 percent of harvested stands less than 30 years may not have detrimental effects to the water yields. In addition, many of the stands proposed for harvest will retain 70 percent of the trees, which will have a much lesser effect than if these stands were clearcut.

SCS-72

Response: Currently scientists do not agree on how the climate will change in Southeast Alaska and what the magnitude or the timeframe is when this could occur. Therefore, how this change will affect water yield in Southeast Alaska would be speculative at this time. Please see response to comment SCS-5.

SCS-73

Response: Evaluation of stream temperature data from both harvested and un-harvested watersheds on Prince of Wales Island showed no predictive relationship between harvest and high stream temperatures (Walters and Prefontaine 2005), which are likely to occur during low flows resulting from warm, rainless weather (USDA Forest Service 2004). However, these studies only considered maximum stream temperatures over 15° C, and generally only considered older riparian harvest, where alder had replaced conifer riparian forests.

No stream temperature data are available for the project area. However, given the relatively small proportion of existing riparian harvest in most watersheds (Table 3) and the recovery of canopy since riparian forest along fish streams has been harvested (prior to TTRA in 1991), it is unlikely that stream temperatures have been measurably increased by timber harvest in the Navy project area.

The buffers for this timber sale will be more effective than buffers present on POW streams within the study since those buffers were designed prior to the implementation of TTRA and the Forest Plan Riparian Management Areas, and will be more efficient in protecting the range in temperature fluctuation.

SCS-74

Response: No modifications are proposed in the riparian management area buffers as required by the Forest Plan, Appendix D. Because we use tree heights to determine the distance of the buffer, the vegetation next to the stream will be what occurs there naturally. The reasonable assurance of windfirmness (RAW) buffer is the only portion of the buffer that will be modified, and wind-prone trees will be removed from that part of the buffer, leaving a buffer more resistant to windthrow. The canopy structure retained in TTRA and additional RAW buffers is similar to the rest of the stand. The old-growth characteristics that are typical in Southeast Alaska are multi-layered canopies (vertical diversity) with 60-80 percent canopy closure.

SCS-75

Response: See responses to SCS-5 and SCS-73.

SCS-76

Response: The site-specific application of BMPs, with a monitoring and feedback mechanism, is the approved strategy for controlling nonpoint source pollution as defined by Alaska's Nonpoint Source Pollution Control Strategy (October 2000). In 1997, the State approved the BMPs in the Forest Service's Soil and Water Conservation Handbook (FSH Handbook 2509.22, R10 Supplement, October 1996) as consistent with the Alaska Forest Resources and Practices Regulations.

The activities proposed in the Navy EIS will be in compliance with the Clean Water Act and has not violated water quality standards for turbidity or sediment. A discussion of sedimentation and water yield is located in the Watershed and Fisheries section of Chapter 3 in the Navy FEIS, and a more detailed discussion of the Clean Water Act and how it was applied for the Navy FEIS can be found in the Watershed, Fisheries, and Marine Environment Resource Report in the planning record. The cited USFS reports (Paustian 1987 and the 2004 M&E report) do not conclude that water quality standards were violated. We have not received any notice of violation of water quality standards from the State of Alaska. The Alaska Department of Environmental Conservation, pursuant to 11 AAC 110.015 of the Alaska Coastal Management Program and 11 AAC 95 (the Forest Practices Regulations), reviewed the DEIS and concurred with the Forest Service's consistency determination for this project with respect to water quality.

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The FEIS concludes that water quality effects will be temporary and localized, will be minimized by the application of BMPs (shown site-specifically in unit and road cards), and will not impair existing or designated uses. Forest-wide BMP implementation monitoring results indicate a high rate of successful BMP implementation.

The Forest Plan does not require sediment monitoring or baseline water quality monitoring. Neither NEPA nor the Clean Water Act requires an assessment of fine sediment particle accumulation. We continue to work cooperatively with the State of Alaska to develop and apply water-quality monitoring protocols.

SCS-77

Response: Please see response to comment SCS-76.

SCS-78

Response: Please see response to comment SCS-76.

SCS-79

Response: Please see response to comment SCS-76.

SCS-80

Response: Fisheries information was added in the watershed description and can be found in the Watershed, Fisheries, and Marine Environment Resource Report in the project record. An Essential Fish habitat was analyzed and discussed both in the Navy DEIS and FEIS. This information has been reviewed by NMFS.

Escapement data is not accurate to determine populations and no other population data is available.

SCS-81

Response: Please see response to comments SCS-62 and SCS-63.

SCS-82

Response: Roads are closed using specifications agreed upon by the ADF&G, the EPA, and the Forest Service and will not interfere with fish migration. Existing red pipes will be scheduled for removal or replacement at the Regional Office level and will be fixed as funds become available.

SCS-83

Response: The additional items requested, such as erosion features and red culverts, are displayed in table format in the Watershed and Fisheries section of the Navy FEIS. A comparison can be evaluated using the all the activities within each watershed name.

SCS-84

Response: Projects to close and repair roads within the Navy project area are ongoing and will continue through and beyond the Navy project. See the Transportation Cumulative Effects section of Chapter 3 in this FEIS for additional details.

Setting priorities for the construction of new roads versus restoration work on the existing roads is not possible due to different funding sources. Congress budgets money for certain projects each year and this money cannot be arbitrary reallocated at the Forest level.

Many of the road problems on the Anita Bay road system are minor and will be fixed before any timber haul is initiated. Large-scale restoration is not necessary and road conditions will be improved to facilitate logging operations.

SCS-85

Response: The Wildlife Report and the biological evaluation have additional information about effects to wildlife species by alternative. A “Threatened, Endangered, and Sensitive Species” section has been added to Chapter 3 of the Navy FEIS. Species population viability is a Forest Plan-level concern. An EIS does not need to exhaustively cover every subject and was not the intent of the CEQ regulations. See response to comment SCS-7.

SCS-86

Response: See response to comment SCS-87.

SCS-87

Response: The single-tree selection (STS) silvicultural prescription would retain 70 percent of the basal area, which retains stand structure as well as trees that can be used for nests and dens. This prescription does consider economics by allowing trees of greater economic value to be included in the 30 percent basal area removed, but this does not preclude consideration for retaining structure as wildlife habitat. The interdisciplinary team (IDT) was represented by all resources concerned. The resources and concerns include:

1. Wildlife - retention of wildlife habitat and viable populations
2. Silviculture - retention of desirable species for maintenance of a productive stand, generation of a young age class to create the multiple age classes of an uneven-aged stand, and an economic second entry (harvest) in 40 years, and a third entry in 80 years.
3. Timber – selecting trees of greater value to offset the higher cost of helicopter yarding and improve overall sale economics

STS units will retain structural characteristics. All the large trees would not be cut. Marking guides would be within a range of larger diameters, not a particular diameter and above. Furthermore, the prescription would not remove more than 50 percent of the spruce and cedar from any STS unit.

The single-tree selection prescription does target those trees with the most economic value. However, retaining 50 percent of the basal area of cedar and spruce will allow for release of existing trees and provide regeneration potential in the future. The goal is to maintain species diversity at preharvest levels.

With the retention of 70 percent of the original stand basal area, the stand structure will not be significantly altered. There will be structural diversity within the canopy to provide suitable wildlife habitat.

SCS-88

Response: The intent of single-tree selection is to remove trees uniformly throughout the unit. With the variable stand structure that occurs in the forest of Southeast Alaska, it is possible to have small openings that occur much like the small openings that occur naturally. The marking crew will adjust marking guidelines when necessary to minimize openings. It is for this reason that trees will be individually marked for removal.

SCS-89

Response: See response to comment SCS-88. Openings of less than 2 acres in size are not considered to be clearcuts. Deer modeling assumptions are found in the Wildlife section in Chapter 3 of the Navy FEIS.

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SCS-90

Response: There are advantages to even-aged management on the Tongass. These are identified in the 2008 Tongass Land and Resource Management Plan on pages 4-71 and 4-72. While young-growth management is being pursued on the Tongass, most stands do not provide the amount of timber suitable for the existing mills.

SCS-91

Response: The Navy Timber Sale is different from the long-term sale offering, since those sales focused on clearcut harvest only and those sale offerings were already under contract at the time the NEPA analyses was prepared.

One advantage of looking at a larger project area for timber harvest and then offering multiple sales is a more comprehensive cumulative effects analysis at a more landscape scale plus analysis is usually less costly since it takes less time to prepare one NEPA analysis than multiple documents. Field work costs will be about the same although some cost savings are realized from concentrating harvest in one area rather than five or so dispersed areas.

However, the use of partial harvest requires many more acres to obtain the same volume required to meet the calculated annual timber demand. This does not necessarily ‘multiply the effects’ but rather can reduce the effects on soils and watershed and on many species of wildlife. In addition, partial harvest has been found to be more socially acceptable, as most of the partially harvested units will not be discernable to the casual forest visitor.

The volume from the Navy timber sale will be part of the Tongass National Forest annual harvest.

See also response to comment SCS-87.

SCS-92

Response: See response to comment SCS-85. The Navy FEIS does include a section that discusses TES species, including the goshawk.

SCS-93

Response: See response to comment SCS-92. A Biological Evaluation has been completed and can be found in the planning record.

SCS-94

Response: A discussion of goshawks is in the Biological Evaluation and the Wildlife Resource Report in the project record, and in the Threatened, Endangered, and Sensitive Species section of Chapter 3 in the Navy FEIS. Goshawk survey results are discussed in the Wildlife Resource Report and the data is part of the project record.

SCS-95

Response: The decision on the 2008 Forest Plan has increased the number of acres in Old-growth reserves and non-development LUDs (2008 Forest Plan ROD, p. 4, 15-16, 18-21.) A discussion specifically related to the consideration given to the Queen Charlotte goshawk is found on pgs. 22-23 of the decision on the 2008 Forest Plan.

SCS-96

Response: The nest buffers, as designed, meet the Forest Plan direction (page 4-99) and have been determined to be adequate to protect nesting habitat. They were not intended to protect all goshawk habitats (including foraging habitat). The analysis for the 2008 Forest Plan considered the most recent information and will continue to protect all known nests. Only buffers around “probable nests” may be

subject to timber harvest, and only if 2 years of monitoring indicates no evidence that goshawks are present or actually nesting.

SCS-97

Response: See response to comment SCS-96.

SCS-98

Response: The Forest Plan incorporates the best available science as used in the analysis for the Forest Plan. There are varied opinions on the size of goshawk nest buffers depending on geographic location. The decision on the Forest Plan (p. 22-23) explains the rationale on the management of habitat for the Queen Charlotte goshawk.

SCS-99

Response: Goshawk population viability is a Forest Plan-level concern. Following Forest Plan Standards and Guidelines will provide for population viability. While any alternative may affect individual birds, no alternative is expected to affect population viability.

SCS-100

Response: Prey species for MIS species for goshawks or marten are discussed in the Forest Plan FEIS and resource reports.

SCS-101

Response: See response to comments SCS-85 and SCS-93.

SCS-102

Response: No marbled murrelet nests have been found, after thousands of acres surveyed (available in project record). There are areas of higher murrelet activity noted, but these do not necessarily mean nest areas. The conservation strategy was reviewed during the analysis for the 2008 Forest Plan to see if it adequately provided for habitat for wildlife species using MIS and species of concern (FEIS Volume II, Appendix D). This strategy provides areas of old growth where timber harvest is not allowed and will provide marbled murrelet nesting habitat. All Forest Plan Standards and Guidelines were also reviewed during this analysis.

The 2008 Forest Plan FEIS discusses the population trends (p. 3-241 through 3-243) conducted by interagency including losses that may be attributed to large-scale logging. Alternative 6 of the Forest Plan (which was chosen as the Selected Alternative with some modifications for the 2008 the Forest Plan Record of Decision) was determined to have a very high likelihood of maintaining viable and well distributed marbled murrelet populations (p.3-286). This analysis also included a review of the Conservation Strategy (Albert and Schoen).

Timber rotations of about 100 years are used within the Timber Management LUD to achieve the objectives of that LUD. Modified landscape and Scenic Viewshed LUDs usually have longer rotations. Timber harvest is not allowed within the Old-growth habitat LUDs and that timber will remain old growth or allowed to mature into old growth.

SCS-103

Response: The decision on the Forest Plan has replaced the Marten Standard and Guideline with the Legacy Standard and Guideline. The Record of Decision (p. 22-23 and 25) explains the rationale for this change. See responses SCS-104 through SCS-109 for information on your other concerns.

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SCS-104

Response: The marten model is not the only analysis that is used. The effects on productive old-growth habitat and fragmentation is discussed and analyzed in the Wildlife Report and the Old Growth Report. Trapping is discussed in the Subsistence Report. Chapter 3, Issue 2 summarizes these effects on fragmentation and productive old growth.

SCS-105

Response: Roads are not a part of the marten model. The model calculates HSIs based on timber volume strata (high, medium, low), elevation, and landscape position (riparian versus upland area). There is a discussion of the road density in the Wildlife Report and in Chapter 3, Wildlife section.

SCS-106

Response: The discussion on the Issue of Wildlife Habitat Fragmentation, Issue 3, Chapter 3 in the Navy DEIS and the fragmentation discussion in the Wildlife and Old Growth Reports have been expanded to include patch size analysis, now Issue 2 in Chapter 3 of the Navy FEIS.

SCS-107

Response: The Forest Service does not have a trapping refugia model. The entire forest is open to trapping unless otherwise specifically restricted by ADF&G. The only area that ADF&G has closed to marten trapping is Kuiu Island. Other areas are restricted by season and bag limits.

The Wildlife section in Chapter 3 of the Navy FEIS discusses trapping of species such as wolves and marten. Additional information concerning trapping is contained in the Wildlife Resource Report and communications in the project record.

The Forest Plan Conservation Strategy, beach buffers, riparian buffers, non-development LUDs and Old-growth Reserve system provides sufficient habitat and connectivity to ensure species population viability, which is a Forest Plan issue and not project level issue.

The Conservation Strategy analyzed in the Forest Plan determined that the Old-growth Reserve system had more merit in maintaining marten populations than did the treatment of individual stands (which was much of the focus of the 1997 Forest Plan Marten Standard and Guideline). Therefore, the reserve system was enhanced by the review of small Old-growth Reserves and additional land allocated to non-development LUDs (Forest Plan ROD p. 25-26). The Legacy Structure Standard and Guideline adds additional old-growth habitat areas by focusing on maintaining acres of structure in those VCUs with a higher risk of providing insufficient habitat due to previous timber harvest (Forest Plan, p. 4-90 and 4-91). Figure 1-2 displays the LUDs and Phase 2 area in and adjacent to the project area and their spatial arrangement. The discussion of the connectivity of wildlife habitat has been supplemented and can be found in the Issue 2, Chapter 3 in the Navy FEIS.

SCS-108

Response: See response to comment SCS-100. Flynn conducted a marten prey availability trapping study in 2002 on Etolin Island and that information is incorporated by reference.

SCS-109

Response: Information about the marten trapping and trends can be found on the Alaska Fish and Game website (<http://www.wc.adfg.state.ak.us/index.cfm?adfg=pubs.mgt>) by Game Management Unit. The State of Alaska is responsible for identifying trends in populations and whether trapping should be restricted.

Trapping efforts are motivated by numerous factors, for example, the recent high cost of fuel last winter may show a downward trend in trapping. The Forest Plan provides direction that the State and the Forest Service will work cooperatively to assist in maintaining long-term sustainable marten populations.

SCS-110

Response: The requirements of NFMA relate to National Forest management planning. MIS are not required at the project-level although the effects to certain species are used to analysis the effects to their habitat. Since the FEIS does not analyze bears, a road density impact analysis is not needed.

Brown and black bears were analyzed as Forest Plan MIS and more information can be found in the 1997 Forest Plan FEIS and 2008 Forest Plan FEIS and planning record. Forest Plan Standards and Guidelines (pg. 4-92) and non-development LUDs provide habitat protection and habitat for both brown and black bears. The Wildlife Resource Report and other information pertaining to bears are located in the project record.

The standards and guidelines for bear habitat management recommend a coordinated effort with ADF&G to manage access where concentrations of brown bears occur to minimize human/bear interactions. As there are no identified brown bear concentrations within the project area, this standard and guideline is not applicable nor is a road density analysis needed, as it is not part of a bear standard and guideline.

The Forest Plan Standards and Guidelines that require 500-foot buffers on streams for brown bears are specific that these buffers are only required where important brown bear foraging sites have been identified by ADF&G (Forest Plan 4-92). No such sites have been identified in the project area, so there is no need to apply this standard.

SCS-111

Response: The sentence refers to all MIS and not just cavity nesters. The concept of MIS is tied to Forest Plan analysis and not specifically project analysis although sometimes the same species are used. The effects to all MIS were disclosed in the Forest Plan FEIS.

In the case of cavity nesters, the Conservation Strategy retained sufficient habitat Forest-wide to maintain population viability. In addition to the Old-growth Reserves within the project area, habitat for cavity nesters will occur in the beach and riparian buffers, areas deferred from harvest this entry, and in the retention of 70 percent of the stand for those units that will be managed with the uneven-aged system. Many of these cavity nesters are mobile (such as the birds mentioned) and can fly over open habitat. The habitat in the pinch-point is naturally fragmented and small species have managed to either adapt to these conditions or function as populations with little interactions.

SCS-112

Response: There are no endemic mammals on Etolin Island that are considered to be unique populations with restricted ranges. Viability for endemic mammals is addressed through the Forest Plan Conservation Strategy. A large portion of Etolin Island is either Wilderness or non-development LUDs plus the areas retained as beach fringe or riparian management areas would remain as habitat for any mammals on the island.

SCS-113

Response: The 2005 direction does not require running the deer model but instead states what to use to run the deer model. "To run the interagency deer model, follow the procedures outlined on page 2-155 in the *Annual Monitoring & Evaluation Report for FY 2000* and Attachment 1, page 1 of the *MOU*

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between the State of Alaska and USDA Forest Service on Coastal Zone Management Act/Alaska Coastal Management Program – Consistency Reviews.”

For the DEIS, this direction was followed. For the Navy FEIS, the deer model was still used as an analysis tool, but used the SDM crosswalk and the standardized coefficients used by the 2008 Forest Plan FEIS. The deer model was just one of the tools used by the wildlife biologists to assess the effects of the proposed activities of the Navy project on deer. See Chapter 3, Issue 2, and the Wildlife Section.

SCS-114

Response: See response to comment SCS-113. The standardized coefficients of 0 to 1.0, which were used in the Forest Plan FEIS and for the analysis of the deer model in the Navy FEIS, address the representation of the quality of habitat.

SCS-115a

Response: The estimate of deer carrying capacity (deer/square mile) was based on all lands for the analysis in the Navy FEIS, the same as was done in the Forest Plan and upon which the recommended 18 deer per square mile recommendation to accommodate both wolves and hunters is based.

SCS-115b

Response: See response to comment SCS-113. Deer habitat capability “scores” were included in the Forest Plan planning record and are included in the Navy FEIS, Chapter 3 subsistence section. Both analyses indicated 16 deer/square mile. The Navy FEIS does conclude though that this score may not be representative of the actual population.

SCS-116

Response: See response to comment SCS-113. However, there has been no definite correlation between the Size-Density model and quality of deer habitat or adjustments to the model. For that reason, the Size-Density model needed to be collapsed into the volume strata in order to be used with the model. An interagency team is currently working on a new deer model but it was not ready in time for this analysis.

SCS-117

Response: See response to SCS-113

SCS-118

Response: The Navy wildlife biologist was concerned with the amount of partial harvest and used the following parameters to outputs of deer model to be as accurate as possible within the model limitations: 1) Any unit with a prescription of equal to or greater than 50 percent basal area removal will be treated as a clearcut and referred to as clearcut; 2) Where single-tree selection (<35 percent basal area removed) is prescribed, post-harvest volumes for these stands have been estimated based on predicted volume removal as estimated by stand exams. These stands will be referred to as partial-harvest stands. This analysis assumes that partial-harvest stands with <35 percent of basal area removal in medium- or high-volume stands will continue to function as productive old-growth and do not enter the stand initiation phase or the stem exclusion phase after harvest, but would be reduced by one volume strata. Partial-harvest stands with <35 percent of basal area removal in low-volume stands would not continue to function as productive old growth and were coded as clearcuts for the deer model. It is probable that some openings greater than ½ acre will be created to facilitate safe removal of trees by the operator.

SCS-119

Response: The analysis did not consider where the partial harvest may create openings that are ¼ to ½ acre in size. It considered the amount of basal area removed to make a determination on what type of stand the harvest prescription would create and how it would function – either as a clearcut or a partially harvested forested stand. The function of the entire stand is analyzed. Natural openings up to ½ acre are common in many stands in Southeast Alaska as individual trees die or blow down, and the single tree selection prescription will mimic these naturally-occurring events. A group selection prescription is different from single-tree selection because all harvest occurs as small openings up to 2 acres in size and imitates more of the gap phase stand dynamics. See response to comment SCS-118.

SCS-120

Response: The analysis for the Forest Plan FEIS made the first steps towards using the Size-Density model. The comments and appeals received on this subject will be incorporated into determining further use of the Size-Density model. Work is in progress on the uses of the Size-Density model but no official direction has been formalized at this time.

SCS-121

Response: See response to comment SCS-118. Because the assumption in the deer model was that any treated stand would be a clearcut, the partial harvest acres, with either a medium or high volume strata, were coded as one stratum lower but remain as productive old growth.

SCS-122

Response: It is correct that only the low-volume partial-harvest stands were considered to function as clearcuts after harvest, which is what the deer model was developed to display – the loss of deer winter habitat due to clearcutting-forested areas.

In order to apply the model for purposes of comparison between alternatives, and because of the limitations of the model, the single-tree selection stands with 70 percent retention must be categorized as either “clearcut” or “unharvested”. The wildlife biologists determined these single-tree selection units would retain sufficient structural characteristics to qualify as POG.

Deal (2007) looked at silvicultural and botanical components of habitat and these are components of deer habitat as well. Regarding species diversity and plant community structure of partially cut older forests, the paper states that, “Overall, the light (1-25 percent basal area cut) and medium (25-50 percent) cutting intensity plots were similar to the uncut plots and did not significantly differ in community structure from the uncut plots” (page 526). Although partial harvesting will remove some overstory trees, the study found that “residual trees remaining after partial cutting grew rapidly and were dominant components of the current stand”. The historical plots studied by Deal were essentially “high-graded” – “immediately after cutting, there were few trees on these plots greater than 70 cm dbh.” (page 528). This will not be the case with the uneven-aged stands in the Navy project since a multi-storied stand will remain after harvest.

SCS-123

Response: This statement is the Navy wildlife biologist’s professional opinion. Two-aged stands are considered as clearcuts in the deer model analysis.

SCS-124

Response: See responses to SCS – 118, SCS-119, SCS-121, and SCS-122.

Appendix B

SCS-125

Response: You are correct. The current deer model assumes a linear relationship between habitat capability and habitat values, and that the estimated effects of wolves on theoretical deer populations do not vary. Model results are expressed as a deer habitat capability for the project area based on the area's cumulative HSI values. Model results are most useful for comparing relative changes by alternative rather than indicating actual effects to deer populations.

These limitations have been discussed in the 1997 Forest Plan FEIS, the 2008 Forest Plan FEIS analyses, and numerous other documents. However, an alternate peer-reviewed model has not been developed at this time. Therefore, the Forest Plan deer model is used for the Navy FEIS in conjunction with analyses of the effects on the amount of productive old-growth, fragmentation, increase amount of roads and elevational corridors, which also effect the use of deer habitat.

SCS-126

Response: See response to comment SCS-113, SCS-127 to SCS-130.

SCS-127

Response: See response to comment SCS-113.

The model is run through computer analysis and this amount of precision can be achieved. However, the accuracy can be in question since the model uses a base vegetation layer that is derived from aerial interpretation of the forest stands, uses landscape position for estimations of snow levels, and uses topographic contours to derive elevation and aspect. The vegetation coding for the combined layers was adjusted at the project level based on field information and whether the stand would still function as POG or a clearcut.

SCS-128

Response: See response to comment SCS-113.

Lack of analysis of habitat juxtaposition, patch characteristics, and fragmentation is one of the shortcomings of the model. However, a separate habitat fragmentation analysis was conducted to supplement knowledge on the effects of timber harvest on the old-growth forest.

SCS-129

Response: See response to comment SCS-113.

Stochastic and catastrophic events by their nature cannot be predicted and therefore cannot be incorporated into a model. For example, to do so we would have to predict chances of large-scale windthrow events or winters with exceptionally high snow levels, which is speculative.

SCS-130

Response: The documentation of the deer model adequately describes the process used for calculating HSI values. The discussion of HSI model limitations is adequate for the deciding official to make an informed and reasoned decision.

SCS-131

Response: All of the acres are assigned a value based on the existing condition and then the values are grouped into quartiles based on roughly a quarter of the acres in the analysis area. The placement of units is based on what is considered as suitable and available forest land by the 2008 Forest Plan decision. Which units are selected for harvest will be based on the analysis for all resources and not solely based on the results of the quartile analysis.

SCS-132

Response: Wildlife Report for the DEIS states: “Information on wolf packs on Etolin Island is limited. At least one pack inhabits the west side of Mosman Inlet in the vicinity of Cooney Cove. No dens have been located on Etolin Island to date.”

The Navy wildlife biologist has discussed this project with ADF&G biologists. See response to comment ADF&G-18. The State of Alaska is responsible for collecting and monitoring wolf populations and that data has been considered in the Navy FEIS, Chapter 3, Alexander Archipelago Wolf and Wildlife Resource Report.

SCS-133

Response: Viability of populations is from NFMA and therefore done at a National Forest scale, not at the project scale. The Forest Plan, FEIS, Volume I. page 281 addresses wolf viability. Wolf population monitoring is done by the State of Alaska.

SCS-134

Response: See responses to SCS- 115 and SCS-133.

SCS-135

Response: The Wildlife Report and the Navy FEIS considered total road density as an effect on wolves.

SCS-136

Response: The Wildlife Report and the Navy FEIS considered total road density as an effect on wolves. The wildlife biologist used WAA 1901 and Etolin Island (WAA 1901 and 1910) as the cumulative effects analysis area for wolves. The Forest Plan recommends either conducting this analysis on smaller islands or a portion of a larger island or among multiple WAAs. Since the road systems of Wrangell Island and Etolin Island are not connected and Etolin Island is not connected to a community, confining the analysis to Etolin Island was considered to be more accurate for the effects on the resident wolves.

SCS-137

Response: Wrangell Island is outside the cumulative effects analysis area for wolves and not addressed by this project.

SCS-138

Response: Road density numbers have been corrected for the FEIS.

SCS-139

Response: A more comprehensive cumulative effects analysis for subsistence deer hunting as you propose was done during the analysis for the 2008 Forest Plan FEIS, Chapter 3, Subregional Overview and Communities, Wrangell. Figure 3.23-32 shows that only part of the Navy project area is within the Wrangell Community Use Area.

SCS-140

Response: See responses to SCS-113 to SCS-115. Efforts were made to address ADF&G concerns during the Forest Plan analysis such as the standardization of the coefficients and using an HSI value of 1.0 for 100 deer/square mile. In addition, 18 deer/square mile is not a standard but rather a recommendation. The Forest Plan FEIS explains that not all areas could meet this recommendation.

Appendix B



THE WILDERNESS SOCIETY

Frank Roberts
Tongass National Forest
Wrangell Ranger District
Attn: Navy Timber Sale project
PO Box 51
Wrangell, Alaska 99929

Re: Comments on Navy Timber Sale DEIS

January 14, 2008

Dear Mr. Roberts:

The following comments are submitted on behalf of The Wilderness Society for the Navy Timber Sale Draft Environmental Impact Statement (DEIS). Thank you for the opportunity to provide comments on the proposed timber sale.

The Wilderness Society (TWS), founded in 1935, is a non-profit membership organization devoted to preserving wilderness and wildlife, protecting America's prime forests, parks, rivers, deserts, and shorelines, and fostering an American land ethic. With over 310,000 members and supporters nationwide, TWS has many members in Alaska who use the Tongass National Forest and are concerned with management of its natural resources and roadless areas. The Tongass National Forest, an internationally significant and nationally valued natural treasure, must be managed to conserve biological diversity, support local communities and their quality of life, and protect the ecological integrity of the coastal temperate rainforest in southeastern Alaska.

The Wilderness Society does not oppose continued logging in the Tongass. But we do believe harvest levels should be set based on realistic projections of actual market demand and that taxpayers should not be subsidizing activities that undermine other valuable forest resources. The Tongass contains many other economic assets in addition to its timber resources, including wild salmon streams, clean water and scenic views, all of which could be harmed by ill considered logging activity such as proposed in this DEIS.

Our concerns with this project fall into three main categories: the proposed harvest of timber in numerous Inventoried Roadless Areas (IRA), the flawed economic demand analysis that is the underlying basis for the purpose and need of this project, and the proposed harvest of significant amounts of timber from areas of high ecological

significance. While none of the six alternatives are without significant concerns, Alternative F is the best attempt to avoid well-known areas of ecological and social conflict. However, none of the alternatives come even close to penciling out economically, and we cannot support this project as it is currently proposed.

Roadless Areas

The Tongass National Forest makes up a significant portion of the largest remaining intact coastal temperate rainforest in the world. The Tongass supports many undisturbed watersheds and productive populations of gray wolves, wolverines, Queen Charlotte goshawks, bald eagles, Sitka black-tailed deer, brown bears, and five species of salmon. These species and several others depend on large, undisturbed roadless tracts of old-growth forest to maintain productive populations.

There is tremendous public interest in how America's remaining roadless areas are managed, as was clear during the Roadless Area Conservation Rule ("Roadless Rule") comment period, when approximately 2.2 million comments were generated nationwide. Approximately 2 million of these comments favored protection of roadless areas. In Alaska, more than 7,500 comments were submitted regarding the Roadless Rule, with approximately 82% supporting roadless area protection.

Preserving intact roadless areas is vitally important for conserving biological diversity and providing recreation opportunities, including hiking, hunting and fishing. These habitat blocks are abundant in plant and animal species, individuals of a given species, species with large home ranges, species sensitive to human activity, and intact ecosystem processes.

The Navy Timber Project proposes harvesting up to 97.8 million board feet of timber from 7,800 acres on Etolin Island, most of which would take place in IRAs. The project also proposes building up to 33 miles of new road that will fragment and negatively impact the quality of significant fish and wildlife habitat. Alternative D, the preferred alternative, proposes 2,514 acres of timber harvest and 11 miles of new road in IRAs. Except for Alternative F, the majority of each alternative would occur within pristine IRAs.

Over 5,000 miles of roads have been built on the Tongass, fragmenting wildlife habitat, impairing spawning streams and otherwise significantly damaging ecosystem values on the forest. The Forest Service is already unable to keep up with maintenance of these roads, and has accrued a multi-million dollar backlog related to road maintenance.

It is particularly disappointing that the Forest Service has elected to pursue roadless area entry in this sale, given the U.S. House of Representative's bipartisan passage of the Chabot-Andrews amendment to the FY08 Interior Appropriations Bill, which prohibits spending any more of taxpayers' dollars subsidizing wasteful and economically unfeasible roadbuilding projects in the Tongass National Forest. While not in the final bill, the American public has communicated in no uncertain terms that it feels the most valuable use of roadless areas may be realized when they are left in their unroaded condition.

We do not support the Tongass National Forest's decision to enter roadless areas of the Navy Timber Sale for several reasons related to the management of roadless areas. Most importantly, the agency lacks an adequate rationale for entering roadless areas on Etolin Island, as the Ninth Circuit ruled in *Natural Resources Defense Council v. United States*

↓ TWS-1

Appendix B

Forest Service, 421 F.3d 797 (9th Cir. 2005) that the Forest Service's misinterpretation of market demand for Tongass Timber in the 1997 ROD for the Tongass Land and Resource Management Plan (TLMP) was arbitrary and capricious.

↑
TWS-1,
con't.

Flawed Economic Demand Analysis

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

The Tongass Timber Reform Act (TTRA) provides that the Forest Service must provide a timber supply that (1) meets annual market demand for timber from the forest and (2) meets the annual market demand from the forest for the planning cycle. In August of 2005, the 9th Circuit Court of Appeals ruled that a previous error in calculating demand required the Forest Service to revise the Forest Plan. In response, new timber demand projections were completed and published in 2006.¹

The new timber demand projections are plainly in error and we have repeatedly made this case, based on economic analysis, in our comments on previous timber sales and in our TLMP DEIS comments last April. We incorporate by reference the April 30, 2007 comments of The Wilderness Society on the Tongass Forest Plan Revision DEIS. We have also attached a copy to our comments. Furthermore, we refer the Forest Service to the recent publication *Déjà vu on the Tongass: How Overestimating Timber Demand Prevents Responsible Stewardship*². We incorporate this report by reference and it can be found online at <http://www.wilderness.org/Library/Documents/DejaVuTongass.cfm>. This report critiques the timber demand model used by Brackley et al. and explains the five principal reasons why the demand projections are overly optimistic:

↓
TWS-2

1. Alaska's forest products industry has long been, and will continue to be, at a competitive disadvantage relative to other regions; it will therefore not supply a significant proportion of the markets that do exist.
2. This competitive disadvantage will make it challenging and highly unlikely that the timber industry in Southeast Alaska can increase its market share.
3. The Japanese market for Southeast Alaska's timber has collapsed and no longer represents a large demand for timber from the region.
4. The Brackley model is based on Japanese markets, which makes the model obsolete, as it does not represent current market conditions.

¹ Brackley, A., D.J. Parrent, and T.D. Rojas et al., 2006. Timber products output and timber harvests in Alaska: projections for 2005-2025. Gen. Tech. Rep. PNW-GTR-677. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 33pp.

² Morton, P., S. Phillips, and A. Gore. 2007. *Déjà vu on the Tongass: How Overestimating Timber Demand Prevents Responsible Stewardship*. Washington, D.C.: The Wilderness Society.

5. The hypothetical mills assumed by the Forest Service are likely to remain just that – hypothetical – for the foreseeable future.

↑ TWS-2,
con't.

As part of the justification for the Navy timber sale, the DEIS indicates that annual market demand for FY 2007 is 131 MMBF as calculated using the “expanded lumber scenario” (from Brackley et al.) which allows for sufficient volume for existing Southeast Alaska sawmills to operate efficiently.³ Since 1996 the backlog of uncut timber has exceeded the amount logged each year. By 2001 the harvest volume was less than an eighth of the volume under contract. At no time during the last six years has the volume sold or cut even approached the 131 MMBF proposed as the annual demand for FY 2007. Instead, recent logging levels have ranged from 33.8 to 50.8 MMBF during the last five years. Moreover, the DEIS acknowledges the forest products employment in Southeast Alaska dropped from 2002 people in 1995 to 499 people in 2005—a regionwide drop of 300% drop in timber industry employment over the past decade, suggesting a significant decline in demand for Tongass timber.⁴

TWS-3

We believe that this optimistic assessment depends on unrealistic assumptions—the same flawed assumptions as the model rejected by the 9th Circuit in *NRDC v. U.S. Forest Service*. More recently, a 9th Circuit District Court enjoined the Forest Service from offering the Threemile Timber Harvest Sale because of the need to update long-term market projections.⁵ Because the market demand analysis used to justify the sale here suffers from the same defects, this sale is also a likely candidate for an injunction should it proceed.

We recognize that the Navy timber sale analysis includes the new limited interstate shipment policy approved by the Alaska Region Regional Forester in March of 2007. The DEIS suggests that the policy “significantly increases the likelihood that timber sales in parts of the Tongass National Forest will have a positive appraisal under current market conditions”⁶. However, even with this new policy apparently included in the financial analysis, *not one of the alternatives appraises positively*⁷. Alternative F, which includes no new road building in IRAs, is by far the most economically feasible and yet the net present value (the indicated bid value minus the total project costs) is still a loss of *at least \$6 million*⁸. We cannot understand how the taxpayer benefits from such a project, especially when it compromises other important ecological, community, and economic values such as salmon streams, clean water, recreation opportunities, and subsistence uses.

TWS-4

Furthermore, we disagree with the statement that the new interstate shipment policy will increase the likelihood that more timber sales will appraise positively because Alaska still faces a competitive disadvantage with the Pacific Northwest, and because offering a supply of logs does not *create a demand* for those logs. We refer the agency to pages 27-29 of *Déjà vu on the Tongass*⁹ for further explanation of why the policy will not, in fact, help the

3 Navy Timber Sale DEIS at A-7.

4 Navy Timber Sale DEIS at 3-37.

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

6 Navy Timber Sale DEIS at 3-8.

7 Navy Timber Sale DEIS at 3-12.

8 *Ibid.*

9 Morton et al. 2007.

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Navy sale economics. Until the Forest Service demonstrates that it can more accurately project market demand, and updates its flawed demand model, we do not support the Navy timber sale.

↑ TWS-4,
con't.

Request to Consider New Scientific Information

In early 2007, The Nature Conservancy and Audubon Alaska jointly published a new, thorough ecological analysis of Southeast Alaska, including the Tongass National Forest¹⁰. The report represents over five years of effort in data compilation, analysis and review, with the ultimate goal of providing an improved understanding of the distribution, condition and conservation status of ecological values in the region. The data and analysis are available for free at <http://conserveonline.org/workspaces/akcfm>. The conservation assessment includes: an overview of the conservation approach; a systematic assessment of biodiversity values, habitat conditions and conservation status; a comparison of habitat condition and ecological risk among biogeographic provinces; a review of ecological systems and conservation issues among biogeographic provinces; and recommendations for how these findings can be applied to improve conservation within the Tongass National Forest. In addition, in the resource synthesis section provides a detailed review of current science on ecological systems; mammals; birds; fish; human ecology and industry. Finally, the report includes a map gallery of GIS products developed as part of the assessment; a ranking of ecological values among watersheds throughout the region in a watershed matrix, and a GIS database that provides a common inventory of ecosystem and habitat values that encompass lands throughout southeastern Alaska.

This is the first time such an extensive effort has been made to collect scientific information across the region from multiple data sources and agencies (including much of the Forest Service's own data) and compile it into a detailed analysis of ecological values. The analysis is already being used within the Tongass Futures Roundtable and among individuals to better understand the ecological landscape. More recently, the authors of the report (John Schoen and Dave Albert) have been adding additional data layers on top of the ecological information, such as important social values, traditional Alaska Native uses, and other values from stakeholders within the region. The Wilderness Society believes this report is significant new information that should be used to better understand where timber harvests may occur and create the least amount of ecological harm and social conflict. We request that the Forest Service analyze the Navy timber sale, and all future timber sales, using this powerful tool (in addition to the standard environmental analysis conducted as part of any sale). To demonstrate how the tool helps highlight important ecological values beyond those identified in the EIS, we conducted a brief analysis and summarized it here.

TWS-5

The conservation assessment analyzes areas of ecological importance using a watershed based approach. Within each Biogeographic Province, Value Comparison Units (VCUs) are ranked relative to each other using Marxan, a modeling program. By using the watershed matrix provided in the above website, one can look at each VCU affected by a timber sale, determine its priority rank (from 1 to 4), and then look at why it was ranked at that level. The Navy timber sale would take place in VCUs 4640, 4650, 4670, and 4680 in the Etolin

¹⁰ Schoen, John and Erin Dovichin, eds. 2007. The coastal forests and mountain ecoregion of southeastern Alaska and the Tongass National Forest. Audubon Alaska and The Nature Conservancy, 715 L Street, Anchorage, Alaska.

Zaremba Biogeographic Province. Below is a simple chart detailing the rank and importance of each of those VCUs.

Table 1. Conservation priority and biological importance of VCUs affected by the Navy timber sale

<u>VCUs Affected</u>	<u>Conservation Priority</u>	<u>Biological Importance*</u>
4640 – Alice Peak	4	This VCU ranks in the top 25% for salmon habitat.
4650 – Kindergarten Bay	3	Ranks in the top 40% for big trees in upland habitat.
4670 – Mosman Inlet	2	This VCU provides particularly good habitat (top 22%) for bears, deer, salmon, and marbled murrelets. It also ranks highly for big trees in riparian areas.
4680 – Burnett Bay	1	Ranks #1 for marbled murrelet habitat (includes over 7% of the province’s murrelet habitat) and includes some of the biggest trees in the province.
*The % ranking is based out of all 27 VCUs within the Etoin Zaremba Biogeographic Province.		

The conservation assessment states that areas or VCUs that rank as priority level 1 or 2 are defined as “high value watersheds in primarily intact condition.”¹¹ Both the Mosman Inlet and Burnett Bay VCUs are particularly important areas of biological value due to the reasons shown above (among others).

In addition to looking more generally at the relative importance of each VCU, by using the powerful GIS mapping tools one can determine where each individual proposed harvest unit falls in relation to its ecological and social importance. For this analysis, we looked at Alternatives D & F, the preferred alternative and the alternative that avoids harvesting timber in roadless areas. In Alternative D, several units are proposed in VCU 4680, Burnett Bay, which ranks overall as a top priority. Specifically, units 57, 58, 60, 61, 63, & 64-66 would all take place in Priority 1 areas, in an IRA, and would require new road. Unit 66 is in a Priority 1 area, and unit 68 falls in both a Priority 1 & 2 area and in an IRA. Additionally, unit 41 is in an IRA; unit 42 is in a Priority 1 area, in an IRA, and requires a temporary road; and unit 47 falls in both a Priority 1 & 2 area, is in an IRA and a small Old Growth Reserve (OGR), and requires the construction of temporary road.

In VCU 4670, Mosman Inlet, 49, 50, 95, 96, & 101 are all in a Priority 2 area and in an IRA, and require new road construction. Units 38 & 48 are in a Priority 1 area and in a small OGR. Units 36 & 37 are in a Priority 1 area and in an IRA. Unit 78 is in a Priority 2 area. In VCU 4650, Kindergarten Bay, unit 106 is in an IRA, and units 107 & 108 are in an IRA and require temporary road construction. In VCU 4640, units 120, 121, 122, 124, 15,

11 Albert, David and John Schoen. 2007. A conservation assessment for the coastal forests and mountains ecoregion of southeastern Alaska and the Tongass National Forest. In J. Schoen and E. Dovichin, eds. 2007. The coastal forests and mountain ecoregion of southeastern Alaska and the Tongass National Forest. Audubon Alaska and The Nature Conservancy, 715 L Street, Anchorage, Alaska.

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& 126 are all in IRAs. Finally, the GIS mapping tool also makes it possible to look at other social values in addition to IRAs, such as important areas identified by the Southeast Alaska Conservation Council (SEACC). SEACC “special areas” are areas that are of particular importance to local communities for recreation, fishing, or other purposes. On Etolin Island, all of VCU 4680, Burnett Bay, is a top tier SEACC special area. VCU 4680 is therefore clearly very important ecologically and socially because of its high value watersheds, large roadless areas, and community importance.

Alternative F poses fewer problems both from the perspective of roadless areas and biological values, but still has a few units that pose concerns. Specifically, in VCU 4670, unit 37 is in a Priority 1 area, and units 38 & 48 are in a Priority 1 area and in a small OGR. In VCU 4680, unit 43 is in a Priority 1 area.

Conclusion

For the aforementioned reasons we strongly urge the no further planning occur on the Navy project. Should such planning move forward we urge that all units within Inventoried Roadless Areas, units within Priority 1 & 2 areas listed above, as well as units in the Burnett Bay VCU be removed from any further consideration.

TWS-6

Sincerely,

/s/

Karen Hardigg
Alaska Forest Program Manager
The Wilderness Society

Forest Service Response to The Wilderness Society (TWS) Comments:

TWS-1

Response: The analysis for the 2008 Forest Plan corrects the deficiencies identified by the Ninth Circuit. The Forest Plan ensures that the Tongass continues to be managed in a sustainable manner to provide for multiple use, as required by the National Forest Management Act. An extensive analysis to determine the quality of each inventoried roadless area was completed for the 2003 Supplemental EIS for the 1997 Forest Plan. This analysis was reviewed and updated as necessary for the 2008 Forest Plan.

As alternatives were developed with higher levels of timber harvest, the minimum amount of roadless acres were included that allowed development, starting with lower-value roadless areas. In this way, development is allowed in roadless areas only to the extent necessary to achieve the multiple-use objectives, including timber production. The higher-value roadless areas were excluded from development as much as possible. In addition, an Adaptive Management Strategy in the 2008 Forest Plan limits timber harvest to lower-value roadless areas unless timber harvest levels rise sufficiently to warrant allowing timber harvest in higher-value roadless areas.

Please see response to comment SEACC-9.

TWS-2 and TWS-3

Response: See response to comment SEACC-9.

TWS-4

Response: See response to comments SEACC-9 and SCS-3.

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

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

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

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

In the document *Déjà vu on the Tongass*, the interstate shipping policy is correctly stated on page 27. However, the discussion loses sight of the purpose of the policy which was to allow for Alaskan operators a market for the smaller round logs, which they cannot mill and market as efficiently as larger diameter material.

Timber markets will continue to experience a downward trend. However, trying to keep the Southeast Alaska timber industry as a going concern is important for many of the communities and the State of Alaska. The Tongass Future Roundtable seeks to explore how a broad range of stakeholders can address these public policy issues and work together to achieve a long-term balance of healthy and diverse communities, vibrant economies, responsible use of resources -including timber, while maintaining the natural values and ecological integrity of the forest. One of their goals is to “Work toward a timber industry that has more continuity, sustainability and reliability.”

TWS-5

Response: The recently completed conservation assessment and resource synthesis for Southeast Alaska and the Tongass National Forest developed by The Nature Conservancy and Audubon Alaska was considered but not directly used for the Navy FEIS. However, the Navy FEIS was adjusted as necessary to be consistent with the management direction from the 2008 Forest Plan and the information from the TNC-Audubon conservation assessment has been incorporated into the Forest Plan Final EIS, as appropriate to strengthen the biodiversity analysis, and in the modification of alternatives.

The Biodiversity section of the Forest Plan Final EIS also provides more-extensive quantification of the existing levels of large-tree POG, high-volume POG, and intact watersheds by biogeographic province. It also makes projections for these measures into the future under each alternative, on NFS lands and cumulatively, for all of Southeast Alaska. The alternatives considered in the Forest Plan Final EIS were not designed around the Albert and Schoen (2007) report, but Alternatives A, E, and F take into account some of the considerations raised in that report. The Biodiversity section cites Albert and Schoen (2007) throughout the subsection that describes the forest-wide distribution of old growth. The Audubon and TNC assessment provides a summary of recent literature related to individual wildlife species, and the Wildlife section incorporates information from individual studies, citing them directly (Forest Plan, Appendix H, p. H-132). The information from this assessment was also taken into account for ranking roadless areas during the review of public comments and as part of the decision-making process for the Forest Plan.

In Chapter 2, the SEACC proposal was considered as an alternative. Please see response to comment SEACC-5 for discussion of this alternative.

While this conservation assessment contains much useful information, it cannot replace the direction from the Tongass Forest Plan. The revision and amendment of the Tongass Forest Plan is a product of 20 years of work and much public involvement throughout the communities of Southeast Alaska. Public involvement is critical in managing National Forest System lands for multiple uses, including those uses by people, whether it is for recreation or for resources to support jobs.

TWS-6

Response: As explained in TWS-1, the 2008 Forest Plan was developed to allow development in

roadless areas only to the extent necessary to achieve the multiple-use objectives, including timber harvest. The Timber Sale Program Adaptive Management Strategy further protects roadless areas by not allowing entry into the more-valuable roadless areas until actual harvest levels reach specified thresholds - 100 MMBF for 2 consecutive years for Phase 2, and 150 MMBF for 2 consecutive years for Phase 3. The conservation assessment published by The Nature Conservancy and Audubon Alaska was used in the 2008 Forest Plan. The Conservation Priority Areas identified are one of six criteria used to evaluate the quality of roadless areas with the intent of allowing development in the lower-value roadless areas before higher-valued roadless areas are developed. The 2008 Forest Plan decision is that most of the Navy project area is in the Phase 1 of implementation, except the southeast portion of the project area, the Navy watershed, which lies below the Burnett small Old-growth Reserve at the south end of the Burnett Bay VCU 4680. This watershed is in Phase 2 of the Adaptive Management Strategy described above, and the proposed units in Phase 2 (the Navy watershed) considered in the Draft EIS are not part of the Final EIS alternatives. Also, other refinements in alternatives made between Draft and Final EIS show that Alternatives E and F do not propose harvest in many of the Priority 1 and 2 areas identified in this comment, reducing roadless acres affected and again giving the Forest Supervisor a range of alternatives, considering the effects of varying degrees of impacts to the roadless characteristics.

The site-specific consequences to the salmon habitat and big trees for a variety of wildlife habitat are included in the Navy project effects analysis for those resources, and summarized in the effects to roadless characteristics in Issue 3 of the Navy Final EIS. Forest Plan Standards and Guidelines do not allow any commercial harvest in riparian areas, and unit cards show specific locations where additional protection to ensure the windfirmness of riparian buffers.

Alternative F in the Navy EIS would not enter any of the roadless areas, and few of the conservation priority areas, so the Forest Supervisor has a way to compare the site-specific effects and trade-offs of selling timber in Phase 1, or relatively lower-value roadless areas compared to other areas on the Tongass, to meet the multiple-use goals and objectives of the 2008 Forest Plan. With the Navy watershed portion of the area no longer considered because it is in Phase 2 of implementation, other alternatives have limited disturbance into the conservation priority areas, like Alternatives D and F that only have units at the north end of VCU 4670 (Mosman Inlet). Only Alternative C proposes harvest units on the west side of VCU 4670, with all the other alternatives leaving more of the big tree habitat on the west side largely intact. Alternatives D and E propose less harvest and more uneven-aged and two-aged units in VCU 4640 (Alice Peak). Alternative E also has smaller units and more uneven-aged units in VCU 4650 (Kindergarten Bay) and 4680 (Burnett Bay). All of these variations in unit size, placement and treatments show sensitivity to the biological values and give the Forest Supervisor more options to consider to lessen the effects and balance multiple uses when he makes his decision.

Appendix B



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
1689 C Street, Room 119
Anchorage, Alaska 99501-5126



9043.1
ER07/1045
PEP/ANC

January 14, 2008

Mr. Frank Roberts, Planning Staff
Wrangell Ranger District, Tongass National Forest
P.O. Box 51
Wrangell, Alaska 99929

Dear Mr. Roberts:

The U.S. Department of the Interior has reviewed the Draft Navy Timber Sale Draft Environmental Impact Statement (Draft EIS). The Draft EIS evaluates six alternatives for harvesting from zero to 97.9 million board feet of timber in the project area on Etolin Island in Southeast Alaska. We believe the information included in this letter needs to be taken into account in the Final EIS. These comments are submitted in accordance with the Council on Environmental Quality guidance for providing special technical expertise on water, biological, and geological resources.

Chapter 3: Environment and Effects, Botany, pages 3-37 through 3-49; Watersheds and Fisheries, pages 3-113 through 3-134; and Management Indicator Species, pages 3-141 through 3-160

The Draft EIS contains several statements of fact, as well as field observations and surveys conducted without supporting scientific documentation. We recommend the Final EIS include supporting references for such species-specific statements of fact and field surveys, and that they be listed in the "Literature Cited section." Examples include, but are not limited to, the following:

- "Sixty-six sensitive and rare plant Level 3 and 4 surveys were conducted for this project between 2004 and 2007." (page 3-37) | **USDI-1a**
- "Field reconnaissance was completed from 2004-2006, to map streams in the project area and survey watersheds to determine their sensitivity to past management activities." (page 3-115) | **USDI-1b**
- "Road Condition Surveys (RCS) were completed on the Anita Bay road system from 1998 to 2004." (page 3-115) | **USDI-1c**
- "Stream Surveys conducted on Duckbill, Navy, Pump, Wetbeck, and Camp Creeks." (page 3-115) | **USDI-1d**

- "Both brown and black bears are habitat generalists, and rely on different resources at different times of the year." (page 3-141) | USDI-1e
- "The Sitka black-tailed deer...is associated with old-growth forests..." (page 3-142) | USDI-1f
- "The American marten...represents species requiring old-growth habitat...dependent on high-quality winter habitat...especially in coastal and riparian areas" (page 3-152) | USDI-1g
- "...most bald eagle nests are in old-growth trees within the beach fringe, with some nests along other large riparian areas. Eagles also prefer the shoreline for perching and winter roosting habitat." (page 3-156) | USDI-1h

Chapter 4: Literature Cited, pages 4-21 through 4-28

There are several citations referenced that are incomplete. We believe it is important to include complete references in the Final EIS. Examples of these include, but are not limited to, the following:

- Alaska Department of Labor citation, page 4-21.
- ANILCA citation, page 4-21.
- Programmatic Agreement citation, page 4-25.
- Several of the U.S. Department of Agriculture citations, pages 4-26 and 4-27.

USDI-2

Thank you for the opportunity to comment on the Draft EIS. If you have questions concerning our comments please contact Lloyd Woosley, Chief of the U.S. Geological Survey Environmental Affairs Program, at 703-648-5028 or at lwoosley@usgs.gov.

Sincerely,



Pamela Bergmann
Regional Environmental Officer - Alaska

Appendix B

Forest Service Response to US Dept. of Interior (USDI) Comments:

USDI-1

Response: All of the citations for resource reports and supporting survey information have been reviewed and added where necessary. If you would like any of this information, please contact us with requests.

USDI-1a

Response: The resource report was reviewed and references updated. Plant survey notes and locations are in the planning record, and surveys are discussed in more detail in the Botany and the biological evaluation reports.

USDI-1b

Response: Field survey notes, analysis reports of the surveys, and stream habitat protection reports are in the Hydrology resource folder in the planning record.

USDI-1c

Response: Additional information, the Road Condition Surveys database, has been copied to the Hydrology resource folder in the planning record. See also response to comment SCS-66.

USDI-1d

Response: See USDI-1b.

USDI-1e to h

Response: See USDI-1.

USDI-2

Response: The citations have been reviewed and corrected. The materials referenced are available in the project record.

December 28, 2007

Frank Roberts
 Planning Staff Wrangell RD
 Tongass NF
 P.O. Box 51
 Wrangell AK 99929

Dear Frank,

In reviewing the Draft plan for the Navy project it becomes obvious that in order to have alternatives that are economic there must be major changes in the current approach. The Forest Service economics indicates that all alternatives are uneconomic. How can a plan be put out that cannot come up with at least one economic alternative?

GW-1

The problems that need to be addressed are the scattered approach to each of the alternatives, the use of partial cutting and the amount of road in particular the specified road. Partial cut down hill must be avoided it is not only bad for economics it is, in most cases, physically impossible.

Building an alternative that is centered on one log dump with units that are concentrated so that road construction is minimized and that all the volume in each selected unit is logged will enhance the economics. There are 3 strikes against partial cuts, adds \$50-\$75/MBF to the cost to log a unit, reduces the amount of volume logged in the unit that increases amortized costs such as road, move in and set up cost and in the case of down hill partial cut creates a physically impossible condition. When designing an economic alternative a recovery of 3-4 MMBF per mile of road should be the goal. This can be done by concentrating units and maximizing unit size.

GW-2

Only use helicopter logging when all other alternatives are exhausted. Helicopter units should be designed to be flown to existing infrastructure or direct to a barge or water dropped.

GW-3

All roads should be built to a temporary standard. If there is a need to upgrade a road for other than transporting timber, charge the cost of the upgrade to the management decision that dictates the need for a higher standard.

GW-4

There is a spread sheet attached that shows the economics of the proposed alternative as well as some of the other options. There is also an industry options that has positive stumpage. The industry option follows the above principals. The map describing this alternative has been previously submitted to the planning team. The industry proposal uses selling value and manufacturing costs that are current and not subject to the problems associated with the current Forest Service appraisal data.

GW-5

The plan says there is 14,000 acres of suitable and available in the planning area. The average volume per acre for the south island area is around 25MBF. This means the area

↓ GW-6

Appendix B

should be able to produce 350,000MMBF. The alternatives developed so far has one alternative that produces 97MMBF from 7800 acres. Using the above principals 97MMBF could be produced using less than 4000 acres of the planning area, this is less than one third of the potential for the area. The proposed alternative has only 62MMBF using 4700 acres of the planning area. Using the above principals the 62MMBF could be developed using less than 2500 acres of the planning area.

There is no reason given some flexibility in applying S&G's and the size of the planning area that an economic alternative can not be developed. The current plan is based on the principal that every acre must be managed for every use. It is not possible to produce economic timber sales using these principals. There must be recognition that there are large withdrawals of commercial forest land throughout the Tongass and in the vicinity of this project area. At some point it must be accepted that in areas designated for timber harvest the prescriptions used to manage these lands must favor the conditions necessary to produce viable timber sales.

Sincerely,

George Woodbury

GW-7

Forest Service Response to George Woodbury (GW) Comments:

GW-1

Response: See response to comment SC-1. Current market conditions and timber sale costs have influenced the economic viability of this project. The alternatives were designed to contain one or more sales and included enough volume to be able to be flexible in the future should the market conditions improve to harvest some of the less-economical units. There are smaller economic sales within the alternatives that can be offered at present.

GW-2

Response: The preferred alternative, Alternative D, concentrates harvest in the central portion of the island, near the Anita Bay LTF. Although there appears to be sections of road that are built where timber could be harvested, much of this area is in non-forest or non-productive forest (see Alternative 1 map in Chapter 2). Some sections of timber left along roads were due to a high number of streams, such as in the area along Road 51540. In order to present a range of alternatives over this large landscape, harvest units were located to respond to the key issues and sometimes resulted in less-intensive management. Alternative C, which responded to the issue of maximizing volume, resulted in the most intensive management configuration.

The partial-harvest units (two-aged management) in the DEIS were largely to meet either the Marten Standards and Guidelines or Scenery Standards and Guidelines associated with visual priority travel routes. Since the Forest Plan replaced the Marten Standards and Guidelines with the Legacy Structure Standards and Guidelines, more units could be clearcut using even-aged management, and this was considered in the Final EIS. Where partial harvest is needed to meet scenery objectives, the reserve trees are clumped and located outside yarding corridors for cable settings to minimize logging yarding costs. For shovel yarding and helicopter yarding, cut trees can be individually marked to achieve the partial-harvest prescription. This method can optimize economics by targeting trees of economic value and leaving trees with high amounts of defect. Much of the partial harvest is in units that need to be helicopter-yarded due to their location and feasibility of road access. Partial harvest was used to increase the efficiency of the helicopter operation by concentrating on the trees that would return the most-economic value. Smaller diameter and large, highly defective trees would remain if safe operations can be achieved.

GW-3

Response: Most of the timber that is helicopter logged will be taken directly to barges in the saltwater. Other units will be accessed by helicopter logging where roads are unfeasible due to cost or potential resource damage. Occasionally helicopter logging was determined to be more economically to log an isolated unit instead of building a length of road that accesses no other units in this project or in the future.

GW-4

Response: Temporary roads can only be constructed for a one-time use and then decommissioned. National Forest System (NFS) roads are those designed for long-term use and for multiple entries. All new NFS roads will be constructed to only to the specification needed for safe timber management operations and to minimize effects to other resources.

GW-5

Response: The alternative that was submitted is discussed in Chapter 2 of the FEIS, labeled Woodbury in the Alternatives Proposed in Draft EIS Comments section.

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GW- 6

Response: Stand exams were collected in the Navy project area from 2003 to 2006. GIS was used to aggregate the stand exam plots by volstrata and Forest Vegetation Simulator (FVS) was used to calculate the trees per acre and gross volume by diameter class for each species. FVS reports were imported into the NEAT-R program to provide an economic comparison of the alternatives. NEAT-R computes the estimated net volume by setting and by alternative, using District-specific cruise information. The information for the Navy project is 23.63 net MBF/acre for high volstrata, 18.90 net MBF/acre for medium volstrata and 12.11 net MBF/acre for low volstrata. Many of the areas are not high-volume strata.

However, the main reason that the ratio of “number of acres” to “amount of volume” is so large is due to the number of acres that need to be helicopter harvested due to terrain. Since clearcutting using helicopter increases the logging costs, due to the removal of a high percentage of small diameter or large trees with high defect, the silvicultural prescription focused on removing the most-economical trees.

GW-7

Response: There is some flexibility for some standards and guidelines but not all of them. The Navy project incorporated the Legacy Standard and Guideline instead of the Marten Standard and Guideline from the 1997 Forest Plan. This resulted in changing some of the silvicultural prescriptions to “clearcut” from “clearcut with reserve trees”. The Forest Plan is not managed as “every acre managed for every use”, but resource protection does occur in those areas allotted for timber production.

See response to comment GW-1.

Appendix C

LTF Guidelines

Appendix C

Navy LTF Site Selection, Design, and Operating Guidelines

Log Transfer Facilities (LTF)

An LTF is the location where logs are transferred between a ground-based transport system of roads and trucks and a water-based transport system of rafts, barges, and tugboats. Appendix G of the Revised Forest Plan (USDA Forest Service, 1997) contains LTF siting guidelines. The guidelines were developed by the Alaska Timber Task Force Log Transfer Facility Guidelines Technical Subcommittee in 1985. The guidelines identify physical characteristics necessary for safe and efficient log transport as well as minimum requirements for mitigation of water quality and aquatic habitat effects. We consider all of the guidelines and develop LTFs which represent the best mix: allowing activities to proceed while meeting all applicable statutory and regulatory requirements. The LTFs undergo a complex and rigorous permitting process involving multiple Federal and State agencies. The information contained in this appendix is intended to facilitate the permitting process and was published in the Draft EIS to provide an opportunity for the EIS reader to comment on locations, construction, operation, and monitoring for the proposed Navy Timber Sale LTFs. Two LTFs were proposed in the Navy Draft EIS. The Burnett Inlet LTF for Alternative B and the Mosman Inlet LTF for Alternative C. Since the Navy watershed is now in Phase 2, as described in Chapter 2 of the Navy Final EIS, the Burnett inlet LTF is no longer being considered. Only the Mosman Inlet LTF is proposed for the Navy Timber Sale project and described in this appendix.

Alternative C proposes the construction of the Mosman Inlet LTF in Cooney Cove. There are presently no existing roads in the vicinity of the proposed LTF site. The LTF location was selected because of a low-angle beach to the mean low tide line. To the northwest, the water depth and maneuvering space decreases closer to the head of the cove. The beach to the southeast is similar to the LTF; however, there is a little less protection and more road construction required in the old-growth reserve (OGR). A dive survey conducted by Haggitt Consulting for the Forest Service in April 2007, stated that the site was well suited for the proposed use as an LTF and that LTF activities would not impact any areas of significant marine habitat. Specific information for the LTF can be found in the Site-specific Design Criteria in the Road Management Objectives (RMOs) for the 6555 road.

Many of the variables that can affect the design and operability of any given LTF are addressed through the LTF siting guidelines. Four issues that are pertinent to analysis of the type of LTF to construct include in-water development, upland development, bark deposition, and economics.

In-water Development: Usually, a low-angle rock ramp designed for watering of logs requires rock fill to be placed in the water in such a manner that a log-loader can

Appendix C

effectively drive down the ramp to the water's edge and place bundled logs into the water. The ramp length depends on the slope of the beach, with a shallower beach requiring a longer ramp to allow for effective use at any tidal stage. A barge facility is usually sited to take advantage of deep water, or a causeway is built across a shallow beach to a point where the water will be deep enough to allow barge access. While not ideally suited for barge loading, a low-angle rock ramp can be designed to accommodate either land-to-water or land-to-barge log placement. Barge-only facilities cannot accommodate placement of logs into the water.

A low-angle ramp would be the most likely structure for the LTF site.

Upland Development: LTFs designed for direct placement of logs into the water can operate at almost all stages of the tide. Usually, logs are trucked directly from the landing or a small sortyard (2 acres) to the LTF, where they are placed directly in the water. Since tide stage does not restrict use of the LTF, an even flow of work can be maintained and log handling is kept to a minimum. Barge facilities are usually accessible during limited tidal stages, and in order to make efficient progress during a short loading window, logs need to be stockpiled near the LTF. To meet the need for stockpiling logs between barge loading, either the LTF site needs to be significantly enlarged or a larger sort/storage yard (5+ acres) needs to be developed in close proximity to the LTF.

It is not anticipated that a large log storage area will be needed at the site, but potential sort/storage areas exist not far from the LTF in and adjacent to rock pits that would be developed for road construction.

Bark Deposition: Loose bark and debris can be knocked off logs when they are placed directly in the water. This bark and debris can accumulate at LTF sites, reducing the marine productivity. Bark deposition is much less of a concern when logs are placed on barges, because considerably less bark is knocked off into the water.

Economics: Design and construction costs are generally higher for barge-only facilities than for log-watering facilities. Barge facilities usually require a higher degree of technical design, more detailed construction requirements, and larger amounts of fill material. Economics of rafting versus barging varies with each operator. Designing facilities that can be easily modified to accommodate either rafting or barging allows potential operators the most flexibility to meet their transport needs. From an environmental standpoint, log-watering facilities generally pose more potential associated resource effects to the marine environment due to the potential for woody debris deposition. Because a log-watering type facility can process logs from land to water on an on-going basis, the upland sort/storage yard is generally minimal in size. This is favorable in respect to the consequences of taking land out of production, visual impacts, and potential for sedimentation into adjacent streams.

Maintenance: Over the lifetime of the structure, the LTF will be maintained as needed to keep the facility in an operational condition. Maintenance may include brushing, replacing rock, surfacing, log cribbing, cable lashing, or any other part of the facility that may need repair. This does not authorize future expansion or significant alterations of the facility.

The LTF will be left in place as part of the forest transportation system after completion of the timber sale.

Responses to project scoping indicated concerns about bark deposition at LTFs and impacts on marine productivity. To address these concerns, sites have been selected that we anticipate will meet the approval of National Marine Fisheries Service. Concerns were also raised about interference with commercial fishing activities. Given the constraints of coastal terrain and economics, we have limited opportunity to completely avoid potential conflicts between logging operations and commercial fishing. For example, barges, log rafts, or floating camps could be located in areas that are preferred crab or shrimp pot sites. If these conflicts occur, we anticipate they will be temporary and similar to conflicts, which typically occur between competing fishermen.

Additional site-specific information pertaining to the guidelines developed by the Alaska Timber Task Force Log Transfer Facility Guidelines Technical Subcommittee for the proposed LTF follows.

Siting Guidelines

S1. Proximity to Rearing and Spawning Areas: Avoid sites within 300 feet of the mouth of anadromous fish streams, or in areas known to be important for fish spawning or rearing.

There are no anadromous fish streams within 300 feet of the LTF site. At the Cooney Cove site the nearest cataloged anadromous fish stream is Streets Lake Creek, approximately $\frac{3}{4}$ of a mile to the north. There is an unnamed stream at the head of Cooney Cove approximately 1,200 feet away that may have anadromous fish populations. Additional field data will be collected in 2007, to determine if anadromous fish are present. There are no expected detrimental effects associated with either stream.

S2. Protected Locations: Choose sites in weather-protected waters with bottoms suitable for anchoring and with at least 20 acres for temporary log storage and log booming.

The Mosman Inlet LTF faces southwest and has some, but not excessive exposure to southeast storm forces.

S3. Upland Facility Requirements: Choose sites with proximity to at least five acres of relatively flat uplands. The LTF should provide at least 60 linear feet of operating face along the water.

The site has a relatively large flat upland area. It is expected that the logs will be loaded onto barges, which means that a large area for sorting and storing logs is not as essential. The site has more than 60 lineal feet of operating face along the water; however, the actual operating face will be as small as feasible to reduce visual concerns in scenic viewshed and OGR land use designations (LUDs).

S4. Safe Access to a Facility from the Uplands: Choose sites where access roads to the LTF can maintain a grade of ten percent or less.

The access road near the beach can be constructed at grades close to 10%.

S5. Bark Dispersal: Choose sites where currents are likely to disperse sunken or floating wood debris.

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During the dive surveys for the Mosman Inlet LTF site, no tidal current velocity was noted.

S6. Site Productivity: Choose sites with the least productive intertidal and subtidal zones.

According to the dive survey, overall species diversity and abundance at the proposed site was similar when compared to other areas in the region.

S7. Sensitive Habitat: Avoid sites on or adjacent to sensitive habitats: extensive tide flats, salt marshes, kelp or eelgrass beds, seaweed harvest areas or shellfish concentration areas.

The proposed site is not located on or adjacent to sensitive habitats.

S8. Safe Marine Access to Facilities: Choose sites that are safely accessible to tugboats with log rafts at most tides and on most winter days.

The design for the LTF site is still pending. This will dictate how accessible the site is in relation to various tides. The beach extends from 0 to –10 feet MLLW (Mean Lower Low Water) at grades between 20 and 25%, which should result in safer operations. Winter weather (wind and high seas) may be a limiting factor at the site since the location is somewhat unprotected. Winter weather is likely to be a limiting factor for all logging operations.

S9. Storage and Rafting: Choose sites where stored logs, log bundles, or log rafts will not ground at low tide. Minimum depths of 40 feet Mean Lower Low Water are preferred for log storage areas.

It is anticipated that barging the logs will be used exclusively.

S10. Bald Eagle Nest Trees: Avoid sites within 330 feet of bald eagle nests.

If any eagle nests are located, a variance will need to be obtained before any work is done in the area.

Construction and Operation Guidelines

C1. LTF Design: Design LTFs to be least environmentally damaging as practicable, considering economics, facility requirements, physical site constraints, site usage (timber volume) and duration, water quality and habitat mitigation, and other potential uses.

Most environmental concerns are addressed through the siting guidelines described above for the site. Remaining concerns associated with erosion control, water quality, and visuals are addressed through design measures and operating guidelines. Physical constraints due to topography, as well as visual objectives, present design challenges at the site. The LTF will require separate upland sites for log sorting, storage, and equipment maintenance. Separation of the sort yard from the LTF site will reduce the amount of bare ground, and equipment activity adjacent to marine waters, thereby,

reducing risks associated with sediment transport, oil spills, and other potential hazards to marine water quality.

C2. Fill Structures: Design and construct fill structures to prevent erosion, pollution, and structural displacement.

Design for the LTF is pending. All of the above elements will be incorporated into the design.

C3. Timing of Inwater Construction: If necessary, limit adverse impacts to marine resources and avoid conflicts with other users through construction and operation timing restrictions.

The LTF was located to avoid adverse impacts to marine resources. No construction or timing restrictions are proposed to protect marine resources or to avoid conflicts with other users.

C4. Bark Accumulation Management: Use Best Management Practices to control inter-tidal and submarine accumulations of bark and other debris.

There should be very little bark accumulation due to barging the logs.

C5. Solid Waste Management: Remove solid wastes, including wood, generated from the LTF and dispose of it at an approved upland solid waste disposal site.

The contract will include provisions to ensure proper disposal of solid waste in accordance with National Pollutant Discharge Elimination System (NPDES) and other permits. Disposal methods may vary with type of waste accumulated. Daily cleanup of the LTF is required when accumulations of bark and other wood debris are present.

C6. Bark Accumulation: Comply with permitting agency cleanup requirements (if any) if inter-tidal and submarine bark accumulations exceed standards (100% coverage exceeding one acre or an accumulation exceeding ten centimeters at any point).

To date, cleanup has not been required at existing LTF sites known to exceed these standards. There is still some question as to whether cleanup is feasible or even beneficial. Cleanup efforts will require cooperative efforts between the Forest Service and permitting agencies. If cleanup or remediation plans are developed, they would address alternative transfer devices and methods, operational practices, and removal of bark from the ocean bottom. Remediation plans would be approved by State of Alaska DEC and permitting agencies.

C7. Bundle Speed: Control log bundle entry into receiving waters to the slowest speed practicable.

Not applicable for barging logs.

C8. Surface Drainage Management: Use Best Management Practices to control surface water runoff from LTFs.

The small sortyard has been located away from the LTF to minimize bare ground adjacent to marine waters. Grade control, sediment detention ponds, cross-drains and site cleanup requirements will address erosion and sediment transport associated with surface water runoff.

Appendix C

C9. Control of Hydrocarbons: Utilize oil pollution prevention plans (BMP 12. 8) and oil pollution contingency plans (BMP 12. 9) to minimize petroleum products entering waters.

Petroleum product storage and equipment servicing and refueling will be controlled through specific contract provisions. Spill Prevention Control and Countermeasure plans provide organizational structure and procedures for responding to oil spills.

C10. Onshore Log Storage: Where feasible, give preference to onshore storage and barging of logs.

Not applicable for barging logs.

C11. Facility Maintenance and Reclamation: Maintain active and intermittent LTFs and restore abandoned LTFs.

Maintenance may include brushing, replacing rock, surfacing, log cribbing, cable lashing, or any other part of the facility that may need repair. This does not authorize future expansion or significant alterations of the facility. The LTF will be maintained as part of the forest transportation system.

Monitoring and Reporting Guidelines

M1-6. Monitoring Requirements: Monitor for bark accumulations, oil sheen, surface runoff associated with LTF construction, operation and maintenance. Assure that corrective actions occur if necessary.

The LTF permit will specify monitoring requirements and methods. Typically, bark accumulation is monitored annually at the beginning of each operating season according to specific protocols by SCUBA diving surveys at active LTFs. Waters in the vicinity of the LTF are monitored daily for the presence of visible oil sheens during LTF operation.

M7. Report results of monitoring annually.

A summary of LTF monitoring results is available and reports are submitted annually to EPA and ADEC. LTF permits establish reporting procedures.

Appendix D

Road Cards

Appendix D

Road Card 51451

Road Management Objectives

Purpose and Use

The road management objectives (RMOs) presented in this appendix establish the intended purpose and display design maintenance and operation criteria (as per FSH 7709.55) for each proposed and reconstructed National Forest System (NFS) road in the Navy project area. The information on the RMO form will be part of the Forest Transportation Atlas, a permanent database that can be updated periodically as access needs, issues, and budgets change (FSM 7711.03). The information on the site specific design criteria form will be used during design, construction, and initial monitoring of any road work proposed in this document.

General Design Criteria

The general design criteria provide various descriptions of the type of road and the intended purpose and future use of the road. From this information, the maintenance and operation criteria can be developed. All Navy Timber Sale roads are constructed and maintained for silvicultural purposes. Wetlands will be avoided to the extent practicable. The practices described in BMP 12.5 will be applied to minimize impacts to wetlands where avoidance is not practicable. Therefore, all proposed roads meet the criteria for a silvicultural exemption from permitting under the Clean Water Act Section 404.

General Design Criteria and Elements are shown on the RMO portion of the road cards and are defined as follows:

- Functional Class: Local (L), Collector (C), and Arterial (A) classifications
- Service Life: Long (L) or Short (S), Constant (C) or Intermittent (I)

Operation Criteria

The operation criteria section includes a presentation of each of the five traffic management strategies identified in FSM 7731 (encourage, accept, discourage, prohibit, and eliminate) to be applied to different traffic classes on each road. The traffic management narrative describes what actions will be taken in order to apply each strategy. For example, if the strategy “eliminate” is prescribed for standard passenger and high-clearance vehicles, the narrative describes the method to accomplish this, such as removal of stream crossing structures, gating, etc.

Site-specific Design Criteria

The site-specific design criteria include road location objectives, wetland information, erosion control, proposed rock borrow sources, and all streams within the project area with proposed construction or rehabilitation of stream crossing structures.

Appendix D

Operational and Objective Maintenance Levels

Operational Maintenance Levels indicate the level of road maintenance, either Maintenance Level (ML) 2 or 3, during sale-related activities. Objective Maintenance Levels indicate the long-term maintenance plan for the roads as described in the following definitions. Applicable maintenance levels for the project area are:

- **Maintenance Level 1 (ML 1):** Roads are closed by barrier, bridge removal or organic encroachment and are monitored for resource protection. Basic custodial maintenance is performed to perpetuate the road and to facilitate future management activities.
- **Maintenance Level 2 (ML 2):** Roads are maintained for high-clearance vehicles and monitored for resource protection. Traffic would be minor, consisting of logging trucks during sale operations and administrative uses.
- **Maintenance Level 3 (ML 3):** Roads are maintained for travel by a prudent driver in a standard passenger vehicle and are subject to the provisions of the Highway Safety Act. Road use is by administrative and passenger vehicles, and by logging trucks.

Alaska Forest Resources and Practices Act

Under the Alaska Forest Resources and Practices Act (AFRPA) all roads will be maintained as "Active" during harvest-related activities. After these activities are completed, the AFRPA classes on the road cards will be implemented. These classes include:

- **Active:** A forest road being actively used for hauling logs, pulpwood, chips, or other major forest products, or rock and other roadbuilding materials.
- **Inactive:** A forest road on which commercial hauling is discontinued for one or more logging seasons, and the forest landowner desires continuation of access for fire control, forest management activities, occasional or incidental use for forest products harvesting, or similar activities.
- **Closed:** A road is closed when the following activities have been completed: a road is outslopped or waterbarred, or is left in a condition suitable to control erosion. The ditches are also left in a condition suitable to control erosion, and bridges, culverts, and fills are removed from surface waters.

The road segments are described using mileposts (MP) as beginning and ending points (Beginning milepost = Bmp; Ending milepost = Emp). Lengths are given in miles (mi). Road width is given in feet. Culverts are identified as cmp.

Blasting Restrictions

Seasonal restrictions on blasting are required within ½ mile of active bald eagle nests.

During road construction, blasting operations will be designed to reduce the risk of mass failure on potentially unstable or saturated soils (BMP 14.6). Blasting and/or excavation under saturated soil conditions are restricted.

Erosion Control

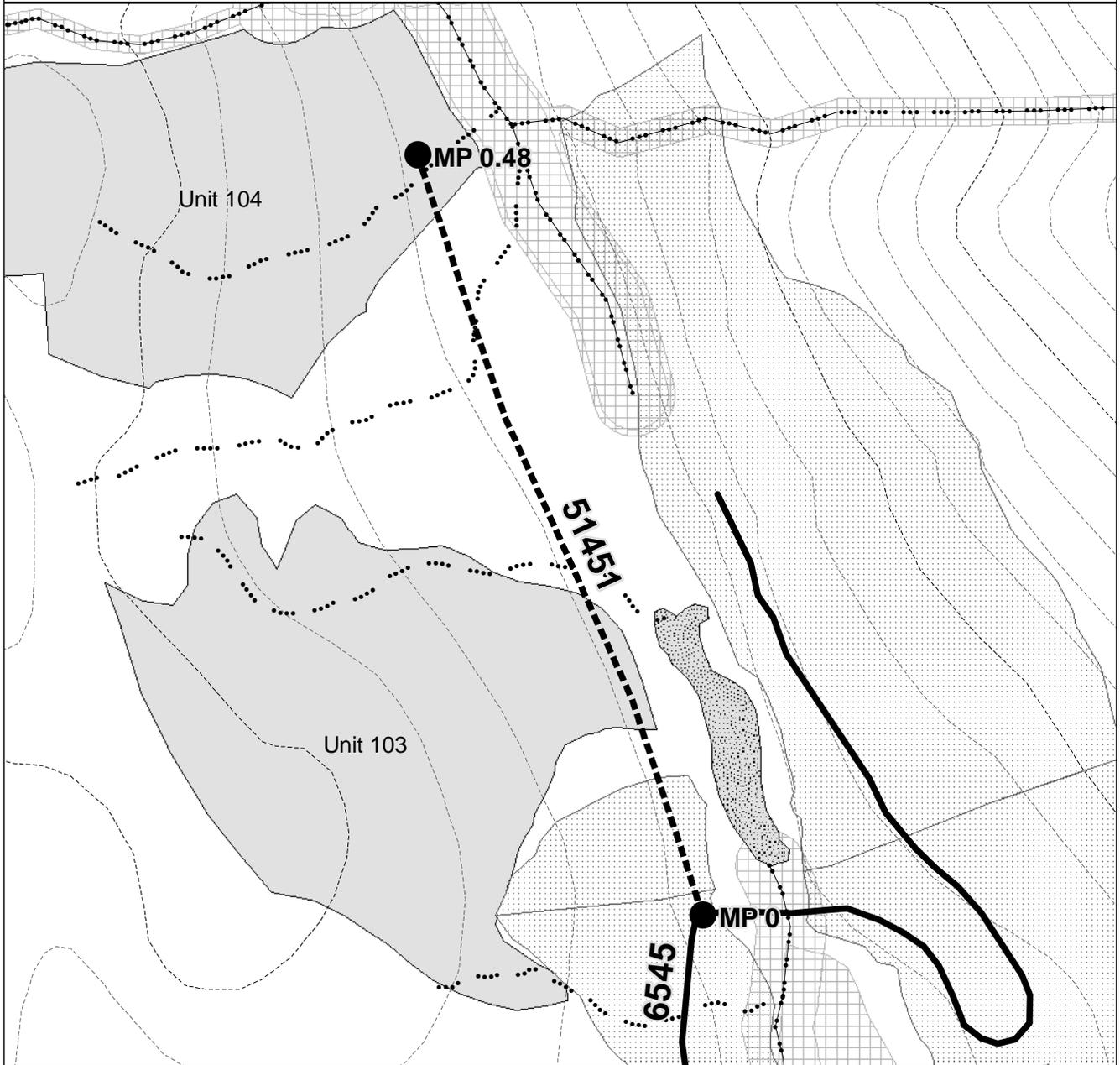
All erosion control measures are required to be in place before the end of the normal operating season and maintained during operations outside the normal operating season.

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Appendix D

Road 51451

Navy Timber Sale Final EIS



- | | | | |
|----------------------------|-----------------------------------|--------------------------|--|
| Proposed Units | NFS Road | Stream Class | |
| Existing Harvest Units | NFS Road Requiring Reconstruction | I | |
| Water | Proposed NFS Road | II | |
| 330' Eagle Nest Buffer | 100' contour | III | |
| Eagle Nest Tree | 500' contour | IV | |
| LTF--Log Transfer Facility | | Riparian Management Area | |



Last edited April 28, 2008

Appendix D

Site-specific Design Criteria Road No. 51451

Road Location: The purpose of this road is to access Units 103, 104, and 106. The road travels northwest as it hugs the base of a ridge while avoiding the riparian management area (RMA) buffer at the lower portion of the valley. Downhill yarding will be used for all three units. The road maintains a relatively constant elevation along its length. A temporary road (not shown on the map) continues from MP 0.48 to Unit 106 in some alternatives.

Wetlands: The road is located in forested wetlands between MP .20 and MP .45 due to alignment and grade constraints.

Erosion Control: An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMPs 12.17, 14.8).

Rock Pits: During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at rock quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Rock pits will require site-specific erosion control plans (BMP 14.18). The rock pit at MP 1.2 of the 6545 road was noted as potential initial rock sources. After construction of the initial road segment, it is expected that another small rock pit will be required, most likely near the end of this road, for the temporary road extension contained in some alternatives.

Resource Information (If applicable):

Timber/Logging: N/A

Soils/Water: Adequate structures will be necessary for all unmapped crossings.

Silviculture: N/A

Wildlife/Botany: N/A

Lands/Minerals/Geology/Karst: N/A

Scenery/Recreation: N/A

Heritage: N/A

**Stream Crossings
Road No. 51541**

A.) Mi: 0.22 AHMU: IV Channel Type: HC5 BF Width: 2-4 feet BF Depth: NA Substrate: cobble, gravel, silt
Gradient: 18% **Structure:** 18-24" CMP **Passage Req'd:** No **Timing Dates:**
Narrative:

B.) Mi: 0.37 AHMU: IV Channel Type: HC5 BF Width: 1-3 feet BF Depth: NA Substrate: gravel, cobble
Gradient: 15% **Structure:** 18-24" CMP **Passage Req'd:** No **Timing Dates:**
Narrative:

C.) Mi: 0.47 AHMU: IV Channel Type: HC5 BF Width: 1-3 feet BF Depth: NA Substrate: gravel, cobble
Gradient: 19% **Structure:** 18-24" CMP **Passage Req'd:** No **Timing Dates:**
Narrative:

Appendix D

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