

Appendix ROD-3

New Information since the Navy Final Environmental Impact Statement (2009)

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Additional Information since the Navy Final Environmental Impact Statement

Introduction

The 2015 Record of Decision (ROD) replaces the 2009 Record of Decision for this project. The 2009 Record of Decision selected a modified Alternative D and subsequently was remanded on appeal. The Responsible Official was directed to either select an alternative that was analyzed in detail in the Final Environmental Impact Statement (FEIS), or supplement the Draft EIS (DEIS) to provide detailed analysis for the Selected Alternative. The Responsible Official intends to select Alternative F, which was analyzed in detail in the FEIS, ensuring that the public has had adequate opportunity to review and comment on the alternative, in compliance with the direction in the Regional Forester's letter of remand.

Before making his decision in the Navy Timber Sale project, the Forest Supervisor, the Responsible Official for this decision, directed an interdisciplinary team (IDT) to review and analyze any changes in information since the 2009 FEIS. The interdisciplinary team identified and analyzed new or updated information and compared the effects to the FEIS.

This report summarizes the analysis of the new and updated information since the release of the Navy Timber Sale FEIS in 2009. It was used to inform the Responsible Official in making his decision for the Navy Timber Sale project on the significance of new information. Further analysis was included to address or clarify issues raised in the 2009 appeal points that also pertain to activities proposed by the 2015 Decision. The results of this analysis are documented in the addendums and updates to the resource reports in the Navy project record, and summarized in this appendix by resource. The project record also includes all of the 2009 appeal points and responses.

New Information

The Council of Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) require Federal agencies to prepare supplements to a draft or final EIS if “[t]he agency makes substantial changes in the proposed action that are relevant to environmental concerns” or “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 CFR § 1502.9(c)(1). To comply with this requirement, the Forest Service Handbook (FSH) 1909.15-2012-3, Chapter 10, 18.1 provides the following direction:

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If new information or changed circumstances relating to the environmental impacts of a proposed action come to the attention of the responsible official after a decision has been made and prior to completion of the approved program or project, the responsible official should review the information carefully to determine its importance. Consideration should be given to whether or not the new information or changed circumstances are within the scope and range of effects considered in the original analysis.

The FSH addresses new information arising **after** a decision has been made. The new and additional information for Navy Timber Sale has undergone interdisciplinary review and is available to the Responsible Official **prior** to the 2015 Decision, enabling a better-informed decision.

Appendix ROD-3, “Additional Information since the Navy Final Environmental Impact Statement”, summarizes the results of this interdisciplinary review. This review of new information and direction did not disclose any “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts” that would require a supplemental EIS under NEPA (40 CFR § 1502.9(c)). The Navy project has not made substantial changes in the proposed action that are relevant to environmental concerns. There are no changes, new information, or circumstances that may result in significant environmental impacts in a manner not previously evaluated or considered. The new information or changed circumstances are within the scope and range of effects considered in the original analysis.

Relationship to the 2008 Forest Plan

The Navy FEIS and March 2009 Decision incorporated direction from the Forest Plan (January 2008). The decision in the Forest Plan contains transition language for the Navy Timber Sale project. The direction in the decision for the 2008 Forest Plan was “to review these projects, 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 these projects.” This project began under the direction of the 1997 Forest Plan in 2006, and the Navy DEIS was released November 2, 2007. Direction between the 1997 Forest Plan and the 2008 Forest Plan Amendment did not significantly change the management direction of the project area for this project. Navy and the other projects in Category 2 were also assumed to be implemented in the environmental analysis in the 2008 Forest Plan Amendment FEIS. Therefore, because the FEIS considered these projects in its effects analysis, their implementation is not in conflict with the amended Plan.

Although there have been non-significant amendments to the Forest Plan since it was signed in 2008, none of these amendments would affect the Navy project.

Amendment to the 2008 Forest Plan

The 2008 Forest Plan is currently undergoing an amendment, including public involvement, and release of the DEIS which is expected to be available for public comment around mid-2015. Some of the issues being considered in the current amendment include the transition to young-growth management, renewable energy opportunities, roadless area considerations, and wildlife habitat and the conservation strategy.

As described above, since Navy and the other projects in Category 2 were assumed to be implemented in the environmental analysis in the 2008 Forest Plan Amendment FEIS, their implementation is not in conflict with either the 2008 Plan Amendment or the current Forest Plan Amendment direction.

Changes in Policy/Agency Direction since 2009

Project-Level Pre-decisional Administrative Review Process

The Consolidated Appropriations Act of 2012, Section 428, directed the Secretary to establish a project-level pre-decisional administrative review process (“objection process”) for projects and activities implementing land management plans, in place of the post-decisional appeals process used by the agency since 1993. The Navy Timber Sale project has gone through the objection process (36 CFR 218) which replaced the appeals process (36 CFR 215) on March 27, 2013. Under the objection process, rather than filing appeals after a decision document (Record of Decision, or Decision Notice) is signed, individuals and entities may now file objections after the environmental analysis and the draft decision are complete, but before the final decision is signed. The purpose of the objection process is to encourage collaboration in project planning between the Responsible Official and interested publics, with the goal of resolving issues and coming to a better-informed decision before a final decision is made.

A 45-day objection filing period begins when a legal notice is published in the newspaper of record, and an EA or FEIS is issued, along with a draft decision. A letter or email stating that these documents are available (hard copy, DVD, and/or on the Forest Service public website) is sent out to individuals and organizations who submitted specific written comments. The Navy FEIS was distributed to the mailing list in 2009 and will not be redistributed; however, it is available online at

http://www.fs.fed.us/nepa/nepa_project_exp.php?project=14556 or available for review at Forest Service District offices. Objections must be filed in writing with the Reviewing Officer within the objection filing period, as was specified in the draft Record of Decision (ROD).

To be eligible to object to a project, individuals and entities need to have previously submitted timely, specific written comments during the public comment periods, unless the objection concerns an issue that arose after designated opportunities for comment were over. Comments must be within

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the scope of the project, have a direct relationship to the proposed action, and include supporting reasons for the Responsible Official to consider.

After the 45-day objection filing period ends, a 45-day objection review period begins. Prior to a written response by the Reviewing Officer, the Reviewing Officer or the objector may request to meet, along with the Responsible Official, to discuss the issues raised and any possible resolution. At the end of the 45-day objection reviewing period, the Reviewing Officer will issue a written response detailing how the objections have been addressed, which may also include instructions to the Responsible Official (36 CFR 218.11(b)). The final decision document cannot be signed until all concerns and instructions identified by the Reviewing Officer in the objection response have been addressed by the Responsible Official (36 CFR 218.12(b)).

Implementation of decisions subject to the objection process may commence immediately after a final decision is signed. There is not a requirement to publish notification of the decision. See the Navy draft ROD “Administrative Review-Opportunity to Object” for more discussion of the objection process and eligibility to object.

Inventoried Roadless Areas (2001 Roadless Rule)

When the project decision was signed in March 2009, the Tongass National Forest was exempt from the 2001 Roadless Rule. The effects analysis for the Navy FEIS was based on the 2008 Forest Plan roadless inventory. All action alternatives in the FEIS, except for Alternative F, proposed activities within inventoried roadless areas. These proposed activities were consistent with the direction in the 2008 decision of the Forest Plan.

The March 4, 2011 ruling by the Federal District Court for the District of Alaska in *Organized Village of Kake v. USDA* vacated the Tongass exemption from the roadless rule. The State of Alaska appealed that decision to the Ninth Circuit Court of Appeals which on March 26, 2014 reversed the District Court decision concerning the exemption of the Tongass from the roadless rule. The three-judge panel of the Ninth Circuit Court determined that the USDA was reasonable, in 2003, when it exempted the Tongass from the roadless rule. The Ninth Circuit Court also remanded the case to the District Court to decide whether a supplemental EIS is required for the Tongass exemption. In August 2014, however, the Ninth Circuit Court of Appeals granted another hearing, held in December 2014 before an eleven-judge panel to rehear the State of Alaska’s appeal. The Ninth Circuit Court has issued its en banc decision in *Organized Village of Kake v. USDA, 11-35517*, upholding the Alaska District Court’s reinstatement of the roadless rule, which remains in effect and applies to the Tongass. Alternative F does not include any harvest units or road building within the inventoried roadless areas as described by the 2001 Roadless Rule; however, the other action alternatives considered in the FEIS did include timber harvest and road building within IRAs to maximize timber harvest in this area.

Effects to roadless area values were analyzed by alternative in the Navy Timber

Sale FEIS using the Forest Plan's 2008 roadless inventory. However, the analysis update for the 2015 ROD is based on the 2001 Roadless Rule inventory, which is slightly different than the Forest Plan's 2008 roadless inventory used in the Navy FEIS. See Figure 2 in this appendix. Alternative F, the Selected Alternative, proposes no timber harvest or road building in any inventoried roadless area under either the 2001 or 2008 inventory. See also "Issue 3 – Inventoried Roadless Areas" in this appendix. The outcome of litigation with regard to the Tongass exemption does not alter the effects or change the analysis as a result of the project.

USDA Strategic Plan 2010-2015

The USDA Strategic Plan 2010-2015 provides the long-term objectives for the agency. One of the goals of the USDA Strategic Plan FY2010 – 2015 is to "Assist Rural Communities to create Prosperity so they are Self-sustaining, Repopulating and Economically Thriving". To help achieve this goal, the Alaska Region's development of a Transition Framework program is intended to build upon current assets and economic sectors and develop other opportunities within the communities within the Tongass National Forest.

As part of this strategy, there is a gradual shift of Tongass forest management from primarily old-growth timber harvest to young-growth forest management. On May 26, 2010, Tom Vilsack, the USDA Secretary of Agriculture, put out a news release (Release No. 0288.10) highlighting the increasing emphasis the Forest Service, in cooperation with USDA Rural Development and Department of Commerce's Economic Development Administration, is putting on this management shift. The Secretary issued Memorandum 1044-009 on July 2, 2013, "Addressing Sustainable Forestry in Southeast Alaska" which reaffirms the USDA's high priority for this transition and the goal that in 10-15 years, the majority of timber sold by the Tongass will be young growth.

Although there is currently no young-growth timber of merchantable (commercial) value available for harvest in the Navy project area, the Selected Alternative contributes to the supply of timber needed to maintain the timber industry during the transition to young-growth management, thus helping ensure that the infrastructure and job skills will be available when the young growth is ready for harvest.

USDA Investment Strategy for Creating Jobs and Healthy Communities in SE Alaska

A primary goal of the administration is a sustainable, stable economy for Southeast Alaska's communities. To this end, Forest Service officials have been working with local communities to encourage a diversity of forest-related jobs built around timber, renewable energy, forest restoration, tourism, subsistence, recreation, fisheries, and mariculture. Timber harvest remains a component of Southeast Alaska's diversified economy and a stable and sustainable timber supply is essential for the continuing existence of the timber industry. The Navy Timber Sale project contributes to this goal by sustaining timber jobs and related opportunities. More information is available at http://www.fs.usda.gov/detail/r10/home/?cid=FSBDEV2_038855.

Climate Change Considerations

The Navy FEIS, pages 3-5 and 6, addresses climate change and the rationale for not discussing it in detail at the project level. Climate change is a topic that continues to be studied throughout the agency, including the Tongass National Forest.

The Forest Service is concerned with effectively integrating climate change issues into land management decisions and NEPA analysis. On January 13, 2009, the USDA Forest Service, Washington Office released a report called “Climate Change Considerations in Project Level NEPA Analysis”. The paper addresses how climate change can and shall be discussed in project-level analysis, evaluating the cause and effect relationship between a proposed action and climate change, and whether a quantitative or qualitative analysis is warranted. The report states that “It is not necessary to calculate GHG emissions for most projects; however, in situations where the responsible official finds the information useful for decisionmaking, such data and conclusions developed through quantitative analysis would normally only be used for comparing alternatives related to direct effects or addressing any applicable regulatory requirements related to GHG emissions. Without enough scientific understanding to draw conclusions about the significance of the quantitative results, qualitative discussions about the potential for greenhouse gases sequestered and emitted are more appropriate for disclosing climate change implications. “

More recently, CEQ issued revised draft guidance in December of 2014 to “provide Federal agencies direction on when and how to consider the effects of greenhouse gas (GHG) emissions and climate change” in NEPA reviews (79 FR 77802; December 24, 2014). The draft guidance “recommends that agencies use a reference point to determine when GHG emissions warrant a quantitative analysis taking into account available GHG quantification tools and data that are appropriate for proposed agency actions.” The guidance also states that “in addressing GHG emissions, agencies should be guided by the principle that the extent of the analysis should be commensurate with the quantity of the projected GHG emissions. When an agency determines that evaluating the effect of GHG emissions could not be useful to distinguish between the no-action and proposed alternatives and mitigations, the agency should document the rationale for that determination.”

In 2011 and again in 2014, the Forest Inventory and Analysis (FIA) program, a subunit of the Pacific Northwest Research Station, made numerous carbon storage estimates and prepared the first national assessment of the storage and flux of carbon in down woody material (DWM) (Anderson 2011) and for live trees, snags and logs (Barrett 2014). The 2014 report indicates that the overall carbon mass stored in just aboveground trees, snags and logs in the Tongass is quite large: about 650 million tons, which is equivalent to 2.4 billion tons of CO₂. This above-ground carbon storage does not include belowground pools such as carbon in non-forested wetlands, alpine, grass and shrublands, roots, soil, litter and other organic materials - which is estimated to be as large as the aboveground stores (Barrett 2014). “Although there is substantial amount of

recent literature about the effects of forest management on carbon stores, different authors have reached widely different conclusions about net sequestration because of different assumptions about the timeframe of interest, initial volume, post-harvest residuals, decay rates, the amount of energy expended in harvest and transport, utilization rates, lifespan of wood products, future growth rates of young growth stands, temporal discounting and substitution effects” (Barrett 2014). Because of these differing perspectives, this information was not deemed essential to make a reasoned decision for this project.

Many proposed projects and programs will emit greenhouse gases (direct effect) and, thus, contribute to the global concentration of greenhouse gases which affect climate (indirect effect). Because the Navy Timber Sale is extremely small in the global atmospheric CO₂ context, it is not necessary to conduct a quantitative analysis of actual climate change effects.

For the Navy project, all the action alternatives would result in an initial net release of carbon into the atmosphere above that of the No-action Alternative, although over time, regenerating young growth could result in greater net sequestration of carbon than the No-action Alternative. Alternative C proposes the most timber harvest (62.0 million board feet (MMBF)) and roadbuilding (25.7 miles National Forest System (NFS) and temporary road) and would thus have a greater immediate effect on carbon sequestration than Alternative F, which proposes the least harvest (13.1 MMBF) and roadbuilding (3.3 miles NFS and temporary road). At the Navy project scale, the magnitude of the project is so small compared to the factors that contribute to climate change that foreseeable effects would be small, if measurable at all, for all alternatives. It is estimated that the forests of the Tongass represent approximately only one quarter of one percent of the stored carbon in forests worldwide (Forest Plan 3-19). Within the Navy project area, this percentage is considerably smaller. Therefore, it is reasonable to conclude that small, if even measurable, changes in carbon sequestration under any of the action alternatives, whether positive or negative, would not be a relevant factor for choosing among alternatives. Additionally, the task of understanding all the factors that influence climate change and how carbon is sequestered continues to be subject to substantial uncertainty and for these reasons is not essential to a reasoned choice among alternatives. None of the action alternatives are predicted to measurably contribute to the cumulative effects on climate change.

The Tongass National Forest currently monitors climate change in several ways, one of which is formally assessed in the annual Forest Plan Monitoring and Evaluation Report under the following question: “*What are the long-term changes to the permanent snowpack and how does it affect the physical and biological environment?*” The 2013 Tongass National Forest Monitoring and Evaluation Report identifies a number of activities in its Action Plan for 2014-2015 which include continued coordination with other agencies supporting climate change research, staff and employee training, completion of vulnerability assessments, and continued monitoring of snowpacks, glaciers,

and stream information. In addition, the regeneration of Alaska yellow-cedar is being monitored in order to maintain or increase this species in regenerating stands on sites judged to be suitable for the species' long-term persistence.

The Forest Plan FEIS discusses climate change factors (p. 3-11 to 3-20) and discloses 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 National Forest. The Tongass National Forest will continue to monitor potential effects of climate change through the existing Forest Plan monitoring programs, and other studies that are occurring regionally and nationally. Any need for a different course of action that might affect this decision will be addressed through existing procedures to determine whether changes are warranted (Navy FEIS p. 3-5).

Based on the current understanding of climate change in Southeast Alaska and action alternatives associated with the Navy Timber Sale project, specific adaptation actions are not necessary to meet Forest Plan objectives at this time.

Forest Service National Core Best Management Practices

In April 2012, the Forest Service issued a memo initiating implementation of the National Core Best Management Practices (BMP) program, which integrates water resource protection into management activities conducted across the landscape. Directives for using these BMPs are currently in development. The National BMP Program will enable the agency to readily document compliance with the management of nonpoint source pollution at local, regional, and national scales and address the new planning rule requirement for national BMPs (36 CFR 219.8(a)(4)). The Navy project will implement the most up-to-date BMP guidance.

Forest Service National Core Best Management Practices Monitoring Program

The Forest Service is developing a National Core BMP Monitoring Program that addresses implementation and effectiveness of BMPs. The draft National Core BMP Monitoring Technical Guide is currently in review. The Tongass National Forest has tested the national protocols for timber harvest and road activities and has adopted them as part of Forest Plan Monitoring. Results will be reported in the Annual Tongass National Forest Monitoring and Evaluation Report.

National Pollutant Discharge Elimination System (NPDES)

On March 20, 2013, in *Decker v. NEDC*, the Supreme Court reversed the Ninth Circuit Court's decision in *NEDC v. Brown* and held that the Clean Water Act and its implementing regulations do not require the NPDES permits for stormwater discharges from logging roads into the navigable waters of the United States. However, should it be determined that an NPDES permit is required for this project, the Forest Service will comply with any applicable permitting requirements prior to project implementation.

Updates to the Analysis and Information in the Navy Timber Sale FEIS

Chapter 1

The issues were reviewed and no additional issues were identified. No public involvement has occurred specifically for the Navy project since 2009; however, comments on other timber harvest projects were considered at the time of the review.

No changes have been made to the proposed action, Alternative B (FEIS p. 1-2), and there are no changes that are relevant to environmental concerns. However, as described below under Issue 1: Timber Supply/Sale Economics, updated timber volume estimates based on timber cruise plot data resulted in lower net volume estimates than the volume estimates in the FEIS which were based on stand exam data. This has resulted in lower net volume estimates in the updated analysis for the proposed action, as well as the other action alternatives.

Chapter 2

Alternatives Considered but Eliminated from Detailed Analysis

Refer to Chapter 2, pages 2-17 and 2-18 of the FEIS which discusses the action alternatives which were considered but eliminated during the planning process. During the informal resolution meetings for the appeal on the 2009 Decision, three proposals were received from the appellants and are discussed below.

Four appeals to the 2009 Navy ROD, under the 36 CFR 215 appeal regulations, were submitted by several organizations, including The Wilderness Society (TWS), SEACC et al., Greenpeace et al., and Juneau Sierra Club. Forest Service personnel and appellants met to discuss possible appeal resolutions. Three of the appellants presented proposals, all subsets of the 2009 Selected Alternative, which only included the units in the roaded area. The Wilderness Society (TWS) and SEACC et al. both submitted a proposal that avoided inventoried roadless areas, omitted the units in the area between Anita Bay and Burnett Inlet and units with an Alaska yellow-cedar component, and stipulated removal of culverts rather than installation of waterbars from National Forest System (NFS) roads that would be put into storage upon sale completion. The Sierra Club submitted a proposal that included all the aspects of the TWS and SEACC proposals, plus deleting Units 114-120 along the 51540 road, and Unit 94. Like the TWS/SEACC proposal, it also stipulated removal of culverts, rather than installation of waterbars for NFS roads associated with the timber sale.

The Navy IDT considered these proposals and compared potential effects by resource to the other alternatives in the FEIS. The IDT found that the issues addressed by the appellants' proposals are already addressed in other

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alternatives considered in detail, primarily Alternatives E and F. Alternative E addressed the wildlife habitat concern with harvest in the area between Anita Bay and Burnett Inlet by avoiding harvest in that area, and Alternative F partially addresses this concern by reducing harvest in the area. Alternative F addresses effects to inventoried roadless areas by avoiding all harvest and road construction in inventoried roadless areas. All alternatives include seed tree retention in some units to help maintain or increase the cedar component in regenerating stands.

The appellants' suggestion during the informal resolution meetings to remove culverts from roads which will be put into storage was also considered. The disposition of the roads after harvest activities are complete is determined by the Objective Maintenance Level and the Alaska Forest Resources and Practices Act (AFRPA) Class, shown on the road cards, and the site-specific needs of the road, consistent with the Wrangell Access and Travel Management Plan (ATMP). The decision whether or not to remove culverts from NFS roads will be made at the time of road storage. The roads will be evaluated for erosion potential, and measures will be implemented to reduce sediment delivery and reduce the risk of crossing failure and stream diversion. This may include the removal of drainage structures and bridges, or construction of water bars, rolling dips or other measures necessary to protect resources. The language of "Where feasible, culverts will be left in place with adequate protection, typically waterbars" has been removed from the road cards.

After the March 4, 2011 Federal District Court, District of Alaska ruling in *Organized Village of Kake, et al. v. US Department of Agriculture (D.C. No. 1:09-cv-00023 JWS)* that the Tongass is no longer exempt from the 2001 Roadless Rule, the IDT also considered a modification of Alternatives B through E that dropped proposed units and roads within 2001 IRAs.

FASTR was run to assess the effects on financial efficiency of this possible modification to Alternatives B through E. Alternatives B, C, and D, originally designed to respond to **Issue 1: Timber Supply and Economics** (including varying emphases), have cruised volume ranging from 26.6 MMBF sawlog and utility (Alternative D) to 62.0 MMBF (Alternative C) (see Table 2).

Alternative E's volume is 24.5 MMBF. When only the units within the roaded portion of Alternatives B through E were considered, the range in volumes was considerably narrowed, with reduced volumes ranging from 8.4 MMBF (Alternative E) to 16.6 MMBF (Alternative C). Alternative F's volume (13.1 MMBF) falls within the middle of the range of volumes of the roaded portion of the alternatives.

While all alternatives are currently showing as deficit, Alternative F's indicated bid value is about \$28.74/MBF to \$61.49/MBF more economical than the other FEIS action alternatives (see Table 2). Although considering only roaded units improved the indicated bid value per MBF for Alternatives B through E, FASTR still indicates that they may appraise deficit. An economic comparison showed Alternative F's indicated bid value/MBF about \$5.55 to \$8.46 more economical than Alternatives B, C, or E if modified, and about \$9.46 less

economical than Alternative D if modified. As explained in the FEIS, alternatives which show as deficit in current FASTR runs may become more economical in future markets or a portion of the units may become economical. Timber sales on the Tongass are not advertised until they appraise with positive values.

Alternative E, which included harvest in inventoried roadless areas, was designed to respond to **Issue 2: Wildlife Habitat Fragmentation** by not harvesting timber in the area between Anita Bay and the head of Burnett Inlet. Modifying Alternatives B through E to exclude harvest activities in inventoried roadless areas would result in less effect on interior habitat, coarse canopy, and patches of old-growth habitat than these alternatives in the FEIS, due to fewer acres of harvest and roadbuilding. However, Alternatives B, C, and D still harvest units within the roaded portion of the Anita Bay area. Alternative F still has less harvest in the Anita area than would Alternative B, C, or D if modified, retaining part of the low-elevation POG corridor due to greater retention (50 percent) in Unit 67, and deleting a portion of Unit 70.

The volume and economic results of modifying Alternatives B through D were similar to Alternative F, and they would not address any issues not already addressed by Alternative F. Modifying Alternative E was most similar to the TWS and SEACC proposals, which were considered but eliminated during the informal appeals resolution process. Therefore, this modification was not analyzed in further detail.

Alternatives Considered in Detail

Alternatives considered in detail are described in the FEIS, pp. 2-9 to 2-15. Four of the five action alternatives considered in detail include timber harvest in inventoried roadless areas, while one action alternative (Alternative F) and the no-action Alternative A do not. As a result of the July 29, 2015 Ninth Circuit Court of Appeals ruling vacating the Tongass exemption from the roadless rule, at the present time the roadless rule remains in effect in Alaska.

Although the Tongass at this time can only implement timber harvest and road construction activities within the roaded area, the Responsible Official could select Alternative F or Alternative A, or choose an action alternative that proposes activities in an IRA and then defer any timber harvest units and road construction within an IRA. Deferring timber harvest and road construction in IRAs in Alternative B, C, D, or E differs from modifying these alternatives, since deferred activities could still be implemented in IRAs should the Tongass exemption be reinstated.

Chapter 3

Land Divisions

The FEIS, pp. 3-1 to 3-2, lists the land divisions used in the FEIS as well as in the updated resource analyses. However, when the additional analyses were done on the new information as described in this appendix, additional levels of land divisions were sometimes used for analysis areas, and are described in this

appendix.

Cumulative Effects - Past, Present, and Reasonably Foreseeable Projects

The IDT reviewed the status of other projects within the project area since 2009. These projects were considered in the section “Cumulative Effects” on pages 3-2 to 3-4 of the Navy FEIS, and are updated here.

Fishtrap Salvage Timber Sale authorized the harvest of approximately 208 MBF of cedar decline and blown down sawtimber and utility volume from 240 acres adjacent to existing roads. This sale was sold in 2007 and harvested in 2011.

North Etolin Salvage Timber Sale authorizes the harvest of approximately 200 thousand board feet (MBF) of cedar decline, blown down sawtimber and utility volume along the existing road system. This sale, which had a decision in August 2008, is located to the north on the Honeymoon road system (Road 6549), outside the project area but is within the wildlife analysis area. This sale has not been offered for purchase at this time of the analysis.

The decision on **Wrangell District Roadside Timber Sales** (March 2011) authorizes salvage harvest of dead, dying, and blown down timber, and green sawtimber sales of less than 50 MBF each and green fuelwood sales within 1,200 feet of the existing road systems of Wrangell, Zarembo, and Etolin Islands. There may be multiple small sales whose total combined volume would not exceed 500 MBF on an annual basis from the three islands combined. No sales have been identified on the Anita Bay road system that accesses the Navy project area at this time.

Road reconditioning on Road 6539 was completed and addressed the sediment concerns in the Thru-cut/Goose Lakes Creek watershed. Periodic maintenance including brushing, ditch clearing, and some resurfacing where needed has been completed for Road 6543.

The resurfacing of **Burnett Inlet Portage Trail** at the head of Burnett Inlet was completed in the summer of 2013. As stated in the FEIS (page 3-3), this project is not expected to contribute to cumulative effects to any resource.

In 2014, the **Sealaska land bill** land legislation was passed by Congress as a rider to the National Defense Authorization Act for FY2015 (PL 113-291, Sec. 3002). Previous versions of the Sealaska bill had been introduced but not passed for the past several years, and the proposed acquisition was not considered as a “reasonably foreseeable future action” in the FEIS. This bill allowed Sealaska Corporation to acquire 70,075 acres of roaded, managed National Forest System (NFS) timberlands, and “futures sites” including bays, shorelines, and other areas for economic development on the Tongass, in place of their final Alaska Native Claims Settlement Act (ANCSA) entitlements which they filed for conveyance in June 2008 with the Bureau of Land Management (BLM). There are no acquisition areas in the vicinity of the Navy project area that are anticipated to affect or be affected by timber harvest

operations on the Navy Timber Sale.

The **deer model reanalysis** analyzed effects to wolves by considering deer density at the Etolin Island and Vicinity biogeographic province level. Projects considered at the biogeographic province level analysis included Baht, Backline, and Wrangell Island projects.

Issue 1 - Timber Supply/Sale Economics

This section updates the Timber Supply and Economics section in Chapter 3 of the FEIS (pgs. 3-7 to 3-18).

Since 2009, there have been changes regarding direction on the Regional export policy, changes in mill infrastructure affecting the projected costs and revenues of the project alternatives, and the development of a new financial efficiency model, among other changes, as described below.

Region 10 Limited Export Policy

Direction in export of timber sale volume has changed since the FEIS has been completed.

The Navy FEIS financial efficiency analysis included adjustments for the limited interstate shipping policy at that time. Since then, the Regional Forester approved time-limited shipment of unprocessed hemlock and Sitka spruce logs and provided additional options for purchasers. Export increases timber sale value due primarily to lower manufacturing costs. On February 28, 2014, the Regional Forester reaffirmed the 2012 memo approving increased export for timber purchasers supplying Alaska yellow-cedar for domestic processing. Purchasers who provide Alaska yellow-cedar to small business operators who will process the timber locally may be approved, on a case-by-case basis, to increase export of an equivalent amount of hemlock and spruce volume from the sale(s) involved, over and above existing policy limits. This approval will support businesses by improving access to timber and promoting the manufacture of products in the State of Alaska.

Changes to Southeast Alaska's Mill Infrastructure

Since the publication of the FEIS, there have been changes to the Southeast Alaska mill infrastructure, as mentioned above. The original Navy financial efficiency analysis appraisal point destination was the Silver Bay Mill on Wrangell Island. However, Silver Bay Logging dismantled their mill in 2010. Another potential destination, the Pacific Log and Lumber Company's mill in Ketchikan, closed in 2011. The financial efficiency analysis was recalculated to the Viking Mill in Klawock on Prince of Wales Island. As a result, the round-trip tow distance increased, increasing the stump-to-mill cost for all alternatives. On average, the barging costs were estimated to be \$99/MBF, a \$19/MBF increase over previous analysis.

Timber Volume Estimates

The volumes in the following Comparison of Alternatives in Table 1, below, have been updated with more-precise estimates based on cruised net timber volume, as compared to the volume estimates in Table 3-6 in the FEIS, even though the total harvest acres by alternative are unchanged, except as noted

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below under “Harvest Acres Totals”. Timber volume estimates in the FEIS were based on stand exam data. Stand exams are measured on a one plot to 10 acre intensity, with at least three plots per unit being installed. Stand exam plots are useful for stand characteristics, including species composition and forest health, and estimating volumes for comparison between alternatives at the EIS stage. Timber volume for the 2015 ROD uses updated volumes based on a more-intensive inventory - a timber cruise - of a subset of the units. In a timber cruise, more measurement plots per acre are installed (in this case one plot per 7 acres). In addition, individual (32-foot logs) logs are graded and defects removed from each, which further refines the volume estimates, resulting in a more-accurate portrayal of timber found in each of the units and hence a better comparison of the alternatives. The relative ranking by volume of the alternatives has changed very slightly – in the FEIS, Alternative E was higher than Alternative D by 1.2 MMBF, and in the update Alternative D is 2.1 MMBF higher than Alternative E. During implementation, minor adjustments may be made to the number of acres, and between acres of conventional and helicopter yarding. Reduction of the volume estimates in the FEIS to the cruise data is not a change relevant to environmental concerns or on-the-ground implementation.

Harvest Acres Totals

Minor adjustments in the acres by harvest system, as well as refinements in the geographic information system (GIS) information used, resulted in very slight changes in the overall number of harvest acres by alternative when they were rerun for the updated analysis. Alternatives B, C, and D were reduced by 9, 13, and 8 acres respectively, and Alternatives E and F showed an increase of 2 and 1 acres, respectively, as compared to the harvest system acres in Table 3-6 of the FEIS. See Table 1, below.

Acres by silvicultural system shown in the FEIS Table 3-24 reflect a difference of 1 to 13 acres (depending on alternative) as compared to the updated harvest system acres, due to mapping precision in GIS as explained above. This does not affect the effects analysis or conclusions.

Table 1 (updates p. 3-17 of Navy FEIS)
 Comparison of Alternatives – Harvest System, Harvest Volume and Roads

Harvest System	Unit of Measure	Alt A	Alt B	Alt C	Alt D	Alt E	Alt F (Sel. Alt.)
Conventional ¹	Acre	0	1,282	2,519	1,255	554	643
	Net Saw MMBF	0	18.4	36.6	18.2	8.0	8.6
Helicopter	Acre	0	1,922	3,575	1,106	2,772	609
	Net Saw MMBF	0	9.6	18.8	5.6	13.9	3.1
Harvest Volume²							
Net Sawlog	MMBF	0	28.1	55.4	23.8	21.9	11.7
Utility	MMBF	0	3.3	6.6	2.8	2.6	1.4
Total	MMBF	0	31.4	62.0	26.6	24.5	13.1
Roads							
New System	Mile	0	6.6	12.1	4.8	2.2	0.6
New Temporary ³	Mile	0	5.8	13.6	5.0	2.7	2.7
Reconstruction ⁴	Mile	0	0.8	2.1	0.4	0.8	0.8
LTF ⁵ Construction	#	0	0	1	0	0	0

¹ Includes cable and shovel yarding systems

² Some volume totals may not exactly match their sums due to rounding.

³ In some cases, old temporary roads that have been decommissioned still have a discernable road prism. These road beds will be reused to minimize environmental effects.

⁴ Reconstruction (periodic maintenance) has occurred on some roads since the FEIS, resulting in fewer road miles planned for reconstruction.

⁵ Log transfer facility

Financial Efficiency Analysis

The NEPA Economic Analysis Tool Residual value (NEATR) program was used for financial analysis in the FEIS. On March 28, 2011, the Financial Analysis Spreadsheet Tool – RV (FASTR) was approved by the Regional Forester to replace the NEATR as a financial efficiency analysis tool for use in timber planning. The model version October 21, 2013 was used to compare alternatives for the Navy project. See Table 2, below.

The FASTR model is designed from the R10 RV-FM appraisal program using readily available or regional averages for data. FASTR outputs are useful to gauge current economic conditions for a timber sale and provide a relative comparison between alternatives. These results are not meant to serve as an actual appraisal or provide actual costs and values at the time of offering since these will fluctuate with timber markets. The FASTR tool should not be viewed as a complete answer but as one tool that can be used for information about timber resources, alternatives and trade-offs between costs and benefits. Actual salability is determined at Gate 4 (advertisement) using the Official R10 RV-FM Appraisal and statistically sound cruise data.

The FASTR model uses the same logging costs and manufacturing costs per

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thousand board feet (MBF) developed for the Alaska Region timber sale appraisal program. Costs reflect production studies and data collected from timber sale purchasers in Southeast Alaska.

Table 2 (updates p. 3-11 of Navy FEIS)
Financial Efficiency Analysis –Volumes, Costs, and Values¹

	Alt A	Alt B	Alt C	Alt D	Alt E	Alt F (Sel. Alt.)
Volume – Sawlog (MBF)						
Sitka Spruce	0	6,997	13,885	5,876	5,715	2,916
Hemlock	0	15,393	29,416	13,166	11,557	6,416
Western Red Cedar	0	2,851	6,061	2,394	2,223	1,188
Alaska Yellow Cedar	0	2,810	6,083	2,360	2,390	1,171
Total Sawlog Volume (MBF)	0	28,051	55,445	23,796	21,885	11,691
Utility Volume (MBF)	0	3,324	6,597	2,793	2,588	1,386
Total (Sawlog and Utility)	0	31,375	62,042	26,589	24,473	13,077
Pond Log Value \$/MBF	\$0	\$629	\$637	\$626	\$645	\$629
Stump to Mill Cost \$/MBF	\$0	\$574	\$563	\$548	\$555	\$513
Indicated Bid Value²	\$0	(\$2,122,721)	(\$3,145,327)	(\$1,226,945)	(\$938,925)	(\$165,567)
Indicated Bid Value \$/MBF³	\$0.00	(\$75.68)	(\$56.73)	(\$51.56)	(\$42.90)	(\$14.16)

Source: FASTR version October 21, 2013

¹ () Indicates negative value

² Indicated bid value

³ Indicated bid value/MBF

Changes in the overall costs and values by alternative since the FEIS are due to various factors such as reductions in the estimated volume for all alternatives, changes in selling values by species, updates in the average Forest Service costs per MBF for sale preparation, administration, and engineering support, and updates in production costs and revenues. The cost of environmental analysis and documentation (NEPA) is no longer factored into the total project costs used to calculate indicated bid value, since that cost has already occurred. In addition, market fluctuations reflect an improvement in the current pond log value. Some costs, such as log haul, increased when the log destination was reappraised to Viking Mill in Klawock.

As in the FEIS (FEIS p. 3-11), all alternatives are shown to be deficit. The indicated bid value of the alternatives in the FEIS ranged from -\$88.47/MBF (Alternative F) to -\$163.65/MBF (Alternative C) (FEIS Table 3-2). The updated indicated bid values per MBF show an improvement for all alternatives, and now range from -\$14.16 (Alternative F) to -\$75.68/MBF (Alternative B). Alternative F is still the most economical alternative. The FEIS explains (FEIS p. 3-11) that alternatives which show as deficit may become more economical in future markets or a portion of the units may become economical in current markets, as markets fluctuate. For instance, in a recovering U.S. economy, widespread new home construction raises the demand (and price) for sawn wood products. In Alaska, the species most

sensitive to booms in housing construction is Western redcedar. When the range of alternatives includes differing amounts of Western redcedar, the ranking of alternatives can quickly change in 2 years due to the widely fluctuating Western redcedar market. A complete timber sale appraisal is needed to determine the actual economics of the timber offered for sale. As stated in the FEIS (p. 3-11), no timber sale would be offered if it appraises deficit.

Forest Products Employment

Data in the FEIS showed employment figures for years 2002 through 2006 (Table 3-1 FEIS p. 3-9) in the number of logging, sawmill, and related industry jobs across Southeast Alaska. This information has been updated to include data from 2007 through 2011 (see Table 3, below). Since 2006, forest products employment data show a downward trend until 2010 when it appears to have stabilized.

Table 3 (updates Table 3-1, p. 3-9 of Navy FEIS)
 Forest Products Industry Employment in Southeast Alaska 2002-2011

Year ¹	Tongass Logging ²	Tongass Sawmill ²	Total Tongass-related Employment	Other Sawmill	Other Logging	Total Other Timber Employment	Total Industry Employment
2002	63	110	173	40	299	339	512
2003	108	91	199	64	298	362	561
2004	82	95	177	53	220	273	450
2005	88	96	184	52	263	315	499
2006	81	77	158	46	217	263	421
2007	44	70	114	63	225	288	402
2008	52	70	122	24	118	142	265
2009	48	39	87	19	110	129	216
2010	61	46	107	7	133	140	247
2011	62	47	109	3	150	153	262

¹Calendar years

²Estimated based on the ratio of Tongass timber harvest to total timber harvest in SE Alaska. Source: Alaska Department of Labor, Kilbourn et al. 2014, Brackley et al. 2006b, Brackley and Crone 2009, Alexander and Parrent 2010, Alexander 2011, Alexander 2012, Alexander and Parrent 2012, and Parrent 2012. Data on file with: Regional Economist, Ecosystems Planning, USDA Forest Service, PO Box 21628, Juneau, AK 99802-1628.

The number of timber-related jobs and income is related to the net harvest volume as well as how much timber is processed locally and how much the timber purchaser exports, under the terms of the Tongass Export Policy. More local sawmilling jobs are supported if a purchaser chooses to process logs locally, while more transportation/other services jobs are supported if a purchaser exports timber. The number of jobs and related income shown in the table below are based on assumptions that all units and volume will be harvested across each action alternative. These estimates will likely change as actual timber offerings are packaged that would include some or all of the

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units. The jobs per MBF used for this estimate are based on an average from operators and may vary depending on who buys the sale and how much volume is processed locally and how much is exported.

Table 4 below displays estimated direct logging, sawmilling, and transportation/other services-related employment and income for the alternatives, generated with FASTR Version October 21, 2013. Due to a lower estimated harvest volume, calculated using cruise runs for the project units, the number of potential jobs is lower than those estimated in the FEIS.

The first number in the range of Total Jobs in the table assumes that all Alaska yellow-cedar (AYC), plus hemlock-spruce export (50 percent total sale net sawlog volume) is exported (all allowable export). The second number in the range of Total Jobs assumes domestic processing of all the volume. Exporting all the timber allowable results in fewer domestic sawmilling jobs, but more transportation service jobs such as stevedoring.

The ranking of alternatives, in terms of potential jobs, has changed slightly since the FEIS. In the FEIS, Alternative C supported the greatest number of jobs, followed by Alternatives B, E, D, and F (in that order). The updated information shows Alternative D supports slightly more jobs than Alternative E, due to slightly greater volume. Alternative F supports the fewest potential jobs, the same ranking as in the FEIS.

Table 4 (updates p. 3-14 of Navy FEIS)
Estimated Project Employment and Income in Alaska

Projected Alaskan Employment and Income ¹	Alt A	Alt B	Alt C	Alt D	Alt E	Alt F (Sel. Alt.)
Logging	0	63	125	54	49	26
Sawmilling	0	30-68	57-133	25-57	23-52	12-28
Transportation/Services	0	33-20	65-40	28-17	26-16	14-8
Total Jobs²	0	126-151	248-298	107-128	98-117	52-63
Direct Income (\$ Millions) ³	\$0	\$6,676,937	\$13,171,248	\$5,661,694	\$5,200,980	\$2,780,997
Direct Income (\$ Millions) ⁴	\$0	\$7,152,369	\$14,119,764	\$6,068,408	\$5,573,655	\$2,981,335

Source: FASTR Version October 21, 2013)

¹ Memo Employment Coefficients and Indirect Effects, for NEPA planning: 2012 Update.

(Source: Susan Alexander, Alaska Region Economist)

² Number of jobs first number lists number of jobs with all allowable export, then number of jobs with 100 percent hem/spruce domestic processing. Total jobs, when summing logging and sawmill export manufacturing, may not add up exactly due to rounding.

³ With Allowable Export, current export policy

⁴ With 100% hem/spruce domestic processing

Forest Service Costs

The Forest Service costs estimates are averages from the Alaska Region's budget allocation process. The totals of the average costs (which are based on alternative volume) are subtracted from indicated bid values to estimate net present value of each alternative.

The Forest Service cost averages per MBF have changed slightly since the

FEIS. Sale preparation cost has gone from \$23/MBF in the FEIS to \$20.78/MBF; sale administration cost has gone from \$9/MBF in the FEIS to \$12.18/MBF; and engineering support cost has gone from \$28/MBF in the FEIS to \$22.67/MBF.

In the FEIS, the analysis and documentation costs (\$1,634,753) were included in the total project costs for each alternative. However, in this updated analysis, FASTR assumes that the cost of environmental analysis, at \$47.97/MBF, has already incurred at Gate 2, and this figure is no longer factored into the present value of cost for the alternatives. The costs of processing the appeals received in 2009 and this supplemental analysis are also not factored into the cost of this project.

Table 5 (updates p. 3-13 of Navy FEIS)
Estimated Forest Service Financial Costs and Revenues

Forest Service Costs ¹	Alt A	Alt B	Alt C	Alt D	Alt E	Alt F (Sel. Alt.)
Sale Preparation	\$0	\$582,879	\$1,152,144	\$494,471	\$454,767	\$242,964
Sale Administration	\$0	\$341,649	\$675,318	\$289,829	\$266,558	\$142,411
Engineering Support	\$0	\$635,893	\$1,256,935	\$539,444	\$496,130	\$265,062
Total Project Costs	\$0	\$1,560,421	\$3,084,397	\$1,323,745	\$1,217,455	\$650,437
Indicated Bid Value²	\$0	(\$2,122,721)	(\$3,145,327)	(\$1,226,945)	(\$938,925)	(\$165,567)
Net Present Value³	\$0	(\$3,683,142)	(\$6,229,724)	(\$2,550,690)	(\$2,156,380)	(\$816,004)

1 Based on Alaska Region’s average budget allocation for cost centers.

2 () indicates negative value.

3 Indicated bid value minus total project costs, () indicates negative value.

Source: N Stearns, FASTR version October 21, 2013.

Payments to the State of Alaska

On October 2, 2013, Congress passed a one-year reauthorization of the Secure Rural Schools (SRS) and Community Self Determination Act, as part of Public Law 113-40. The one-year reauthorization provided for payments to states, which are distributed to counties in which national forests are situated. SRS expired at the end of FY2013. More information is available at <http://www.fs.usda.gov/pts/>. As of April 16, 2015, a two-year reauthorization was passed by Congress and if signed into law, would provide about \$12 million to communities in Southeast Alaska over 2015 and 2016.

Issue 2 – Wildlife Habitat Fragmentation

There is no new information for the Wildlife Habitat Fragmentation section in Chapter 3 of the FEIS (pp. 3-19 to 3-33). The FEIS included analysis on fragmentation, corridors and the area between Anita Bay and Burnett Inlet (FEIS pp. 2-3 and 3-20 thru 3-33). The FEIS analysis for patch sizes and fragmentation was reviewed and no new information was found that would further affect the fragmentation in the areas or the analysis of patch size or fragmentation.

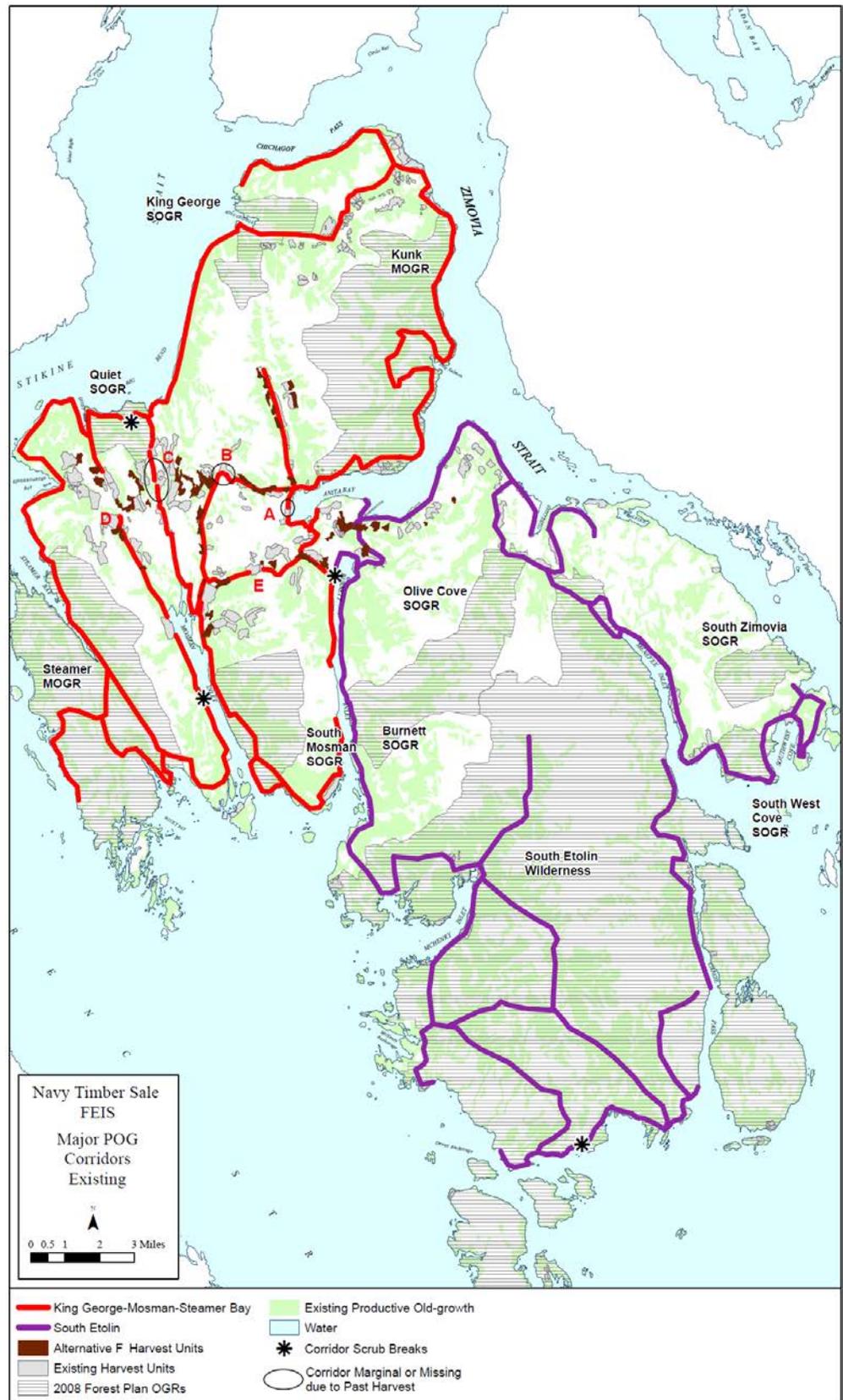
Figure 3-5 on page 3-29 of the FEIS displays existing POG corridors with the locations of the units for all alternatives. The existing POG corridor map (Figure 1, following page) was rerun to display the location of only the

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Selected Alternative, Alternative F, units. The bold red letters A through E on the map refer to the discussion of corridors on page 3-28 in the FEIS.

The FEIS, p. 3-33 discloses that Alternative F proposes the least harvest of the action alternatives of interior habitat and coarse canopy, and has the least effect on large patches of old-growth habitat. It has less harvest in the Anita area than Alternatives B, C, and D, with 50 percent retention in Unit 67 to retain part of the low-elevation POG corridor which would be completely severed in Alternatives B, C, or D, and deleting a portion of Unit 70.

Figure 1. Existing Landscape-level POG Corridors on Etolin Island



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Issue 3 – Inventoried Roadless Areas

This section updates the Inventoried Roadless Area (IRA) section in Chapter 3 of the FEIS (pgs. 3-34 to 3-44). On March 4, 2011, the Federal District Court, District of Alaska ruled in *Organized Village of Kake, et al. v. US Department of Agriculture* (D.C. No. 1:09-cv-00023 JWS), that the Tongass is no longer exempt from the 2001 Roadless Rule. On appeal, the Ninth Circuit Court of Appeals reversed that decision on March 26, 2014, finding that the USDA was reasonable, in 2003, when it exempted the Tongass from the roadless rule. In August 2014, the Ninth Circuit Court of Appeals granted another hearing, held in December 2014, before an eleven-judge panel to rehear the appeal. On July 29, 2015, the Ninth Circuit Court issued its en banc decision in *Organized Village of Kake v. U.S. Dept. of Agriculture*, 11-35517, upholding the Alaska District Court’s reinstatement of the roadless rule, which remains in effect and applies to the Tongass.

The current analysis considers effects to 2001 Roadless Rule inventory areas, rather than the 2008 Forest Plan inventory which was used in the 2009 FEIS analysis. The size and characteristics of the 2001 Roadless Rule roadless inventory (120,367 acres) and the 2008 Forest Plan roadless inventory on Etolin Island (127,176 acres) are similar (see Figure 2). A main difference is that the 2008 Forest Plan roadless inventory included many of the shoreline units harvested during the beach logging era (pre-1960s) since they had regained their roadless characteristics. Alternative F does not propose any timber harvest or road construction within either the 2008 Forest Plan roadless inventory areas or the 2001 Roadless Rule inventoried roadless areas.

The FEIS only considered the cable- and shovel-yarded units, but did not apply a buffer to helicopter units, consistent with the inventory done for the Forest Plan SEIS. This updated analysis includes the helicopter-yarded units as well, reflecting a more-conservative analysis that includes indirect effects such as noise or visual disturbance from helicopters. In addition to proposed roads and units themselves, an area within 1,200 feet of existing and proposed roads and 600 feet of proposed units was considered to assess indirect effects such as temporary disturbance from the sights and sounds of harvest-related activities, and the loss of interior habitat. Although there is no change to the activities proposed or to the effects from any alternative, including the helicopter units in the updated analysis increased the number of acres affected due to indirect effects for all action alternatives.

Alternative F indirectly affects about 1 percent of the zone inside of the IRA boundary, as a result of proposed units and roads adjacent to or nearby (but not within) the IRA boundary, even though there are no direct effects from harvest activities. The 566 “Total Acres Affected” for Alternative F (Table 6) reflects only indirect effects and reside solely in the zone of influence. The “Total Acres Affected” for the other action alternatives includes both direct effects (from units and roads themselves) and indirect effects (from the zone surrounding the units and roads). No unique features of the roadless areas would be affected under any alternative, and the areas would remain eligible for potential wilderness consideration.

Table 6 updates the information in Table 3-8 on page 3-39 of the Navy FEIS. The number of actual harvest acres in the FEIS’s 2008 Forest Plan roadless inventory, used in the FEIS Table 3-8, appears larger than the 2001 Roadless Rule inventory acres below. This is because some units fall in areas that are designated as roadless under the 2008 Forest Plan roadless inventory, but not designated as roadless under the 2001 Roadless Rule inventory. Conversely, the number of affected acres appears larger under the 2001 Roadless Rule inventory than the 2008 Forest Plan roadless inventory, because the updated analysis included the 600-foot zone around helicopter units as “affected” while the FEIS analysis did not include the zone around helicopter units.

When the March 2011 court ruling vacated the Tongass exemption from the roadless rule, the portions of Alternatives B through E that proposed activities in inventoried roadless areas were no longer viable to implement. The roadless rule currently remains in effect in Alaska. If the Responsible Official were to select Alternative B, C, D, or E, he could choose to defer all activities in inventoried roadless areas.

Table 6
Effects to the 2001 Roadless Rule Inventory Acres by Alternative

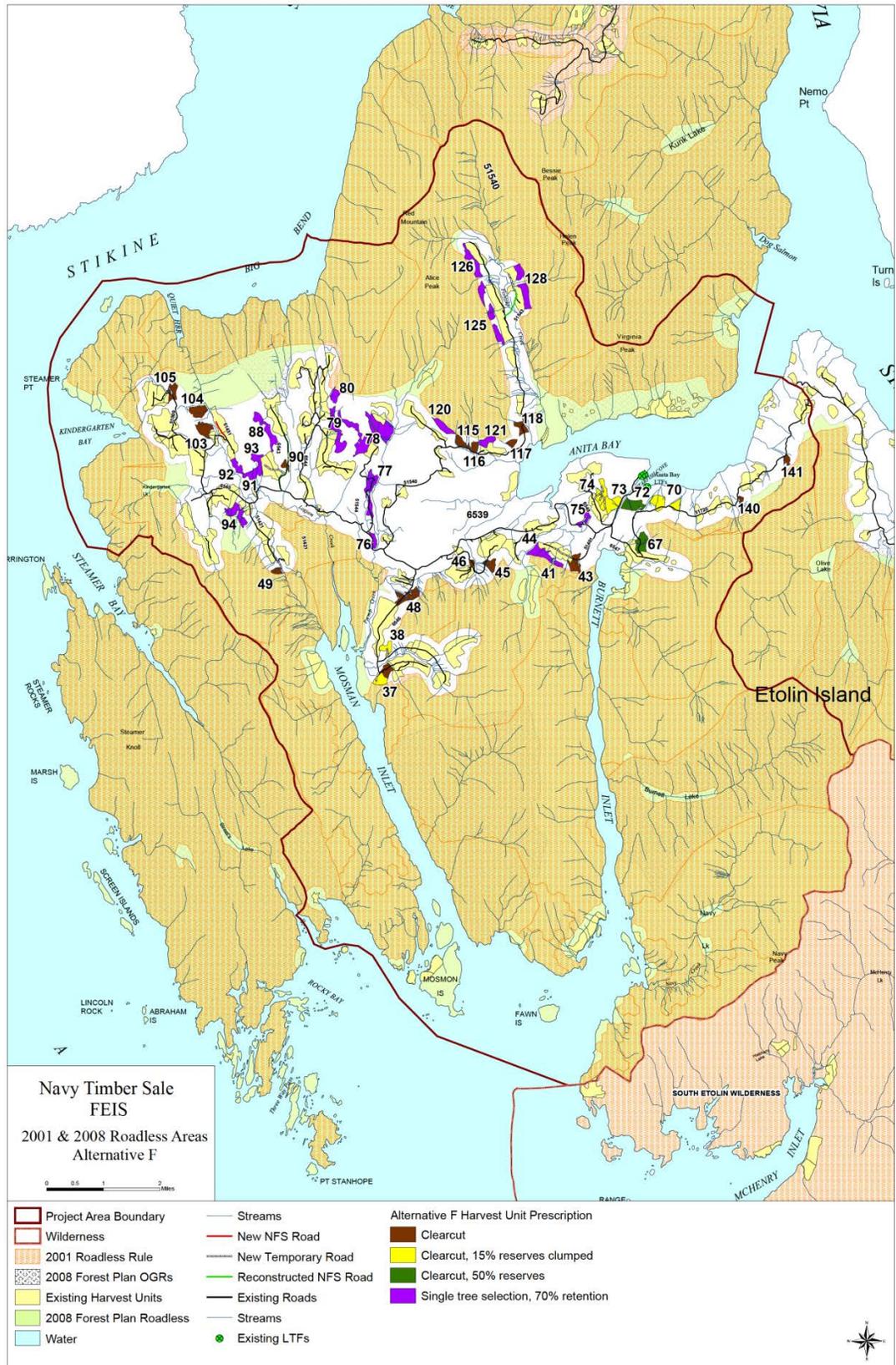
Roadless Acres	2001 Roadless Rule inventory	Percent of Roadless Acres in the Project Area Affected: 2001 Roadless Rule inventory
Total Roadless Acres ¹	120,367	
Roadless Acres within project area	53,848	
Acres Affected by Alternative	Total Acres Affected²	
Alt A	0	0
Alt B	5,963	11
Alt C	12,117	22
Alt D	3,120	6
Alt E	6,272	12
Alt F	566	1
	Proposed Timber Harvest within 2001 Roadless Areas	Proposed Total Miles in 2001 Roadless Areas³
Alt A	0	0
Alt B	2,200	6.3
Alt C	4,463	16.8
Alt D	1,094	4.3
Alt E	2,219	1.7
Alt F	0	0

¹ Mosman Roadless Area, North Etolin Roadless Area, and South Etolin Roadless Area.

² Acres affected by alternative includes the zone of influence defined as 1,200 feet from existing and proposed roads, and 600 feet from all harvest units including the helicopter units.

³ Miles of new road proposed includes NFS roads and temporary roads.

Figure 2. 2001 and 2008 Roadless Areas with Alternative F



Other Resources

Botany

An updated biological evaluation (BE) for plants was prepared to more clearly disclose the effects by alternative for plants on the 2009 sensitive species list. There are no new effects disclosed.

The determination, for some sensitive plants, remains “May adversely impact individuals, but not likely to result in a loss of viability in the planning area, nor cause a trend toward federal listing” has not changed. Other plants will not be affected at all.

A resource report was prepared that focused on rare plants, and whether the project actions could result in the loss of viability for rare plants known to occur in the project area. Two plants which were analyzed as sensitive plants in the 2008 report are analyzed as rare in the 2013 updated report. There has been no new information to analyze and no other changes since the 2009 FEIS. The updated BE and resource report are in the project record.

No federally-listed threatened, endangered or proposed plants are known to occur in the project area.

Heritage

There have been no changes to the heritage resource since the 2009 FEIS. In 2004, 2005 and 2006 Forest Service archaeologists conducted a cultural resource survey of the project area and determined a finding of No Historic Properties Affected. The State Historic Preservation Officer concurred with our recommendation.

Recreation

There has been no new information to the recreation resource since the 2009 FEIS that would warrant reconsideration of the conclusions in that analysis. While current outfitter guide use information and reported use changes annually since the recreation resource report was written, this does not change any of the conclusions in the analysis. The Burnett Inlet Portage Trail at the head of Burnett Inlet (inventoried recreation place 62.01) had surfacing work completed in the summer of 2013.

Scenery

Additional activities completed since 2009 include the Fishtrap Salvage Sale and road closures; neither adds significantly to the cumulative visual effects of Navy. The salvage sale is either not seen from any visual priority routes, or only seen at an angle in the background distance zone.

A map showing the project area’s scenic integrity objectives (SIO) adopted by the decision on the 2008 Forest Plan has been added to the project record to illustrate the previous report’s discussion of SIOs within the project area. This map presents no additional information that would change the conclusions in the FEIS regarding scenery.

A review determined that the conclusions drawn for the 2009 Navy Timber Sale FEIS (see pages 3-90 to 3-97) are accurate and remain relevant to current issues. Additional analysis was done for Unit 70, which can be seen from Anita Bay and lies within the Modified Landscape LUD. Unit 70, which is 49 acres, meets the 40-60 acre opening Scenery Standard and Guideline for High

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Visual Absorption Capacity (Forest Plan p. 4-58), particularly as it is divided into two smaller settings and will have 15 percent of the stand retained. While the Forest Plan allows for harvest to dominate the characteristic landscape, it also states that units will be designed to borrow from naturally existing form and line. To achieve Forest Plan direction, the reserve trees will be grouped and located to reduce the straight borders of the settings. This will give the unit a more natural appearance.

The 1,157-foot Burnett Inlet Portage Trail runs from the head of Burnett Inlet to Road 51401. This portage route is not identified in the Forest Plan as a Visual Priority Route, and the Forest Plans Standards and Guidelines do not apply. While management activities proposed in the Selected Alternative could increase the degree of visual disturbance along this route, this increase is considered minimal because portage users are accustomed to seeing the effects of harvest activities and road-based motorized recreation use.

Other foreseeable future activities do not have viewpoints or viewsheds in common with Navy, have been considered in previous analysis, or will not increase the visual impact.

Silviculture

There is no new information which would affect the silviculture analysis for the 2009 FEIS. The silviculture resource report was reviewed and included the following clarifications:

- The King George and Honey George sales, listed as previous timber sale acres harvested, are north of and outside the Navy project area so reference to these projects has been removed.
- The Etolin Porcupine precommercial thinning project in 2010 and 2011 resulted in 573 acres of thinned stands on the island,
- A thinning project done in the 1980s has been identified and information added to the report.
- A previous planting of Alaska yellow-cedar has been identified in the project area.

Also, more information on Alaska yellow-cedar harvest, regeneration, and post-thinning composition has been added to the resource report. Alaska yellow-cedar conservation and promotion strategies include retaining seed trees, single-tree selection, favoring cedar during thinning, and inter-planting of cedar. Natural regeneration is prolific on the Tongass as average stocking conditions show all species regenerate 2,000 total trees per acre (TTPA) in the Central Zone (Draft Report *Exploring the Sustainable Yield Capacity of the Young Growth Lands on the Tongass National Forest while Evaluating the Impact of Acreage Reductions and Rotation Age*, prepared for USDA Forest Service and Juneau Economic Development Council, 2011). The Navy project area is located in the Central Zone, where regeneration survey data show Alaska yellow-cedar comprises 7 percent of the total TTPA. It is fully expected that all species, including Alaska yellow-cedar, will naturally regenerate following timber harvest in the Navy project area.

Soils, Karst, and Wetlands

There are no changes to the soil, karst and wetland analysis for the 2009 FEIS. There have been minor changes in on-the-ground conditions, with the addition of three new landslides. However, all of these occurred in natural setting areas not associated with management activities and do not change the results of the landslide analysis, nor do they affect the proposed roads or units in the Selected Alternative.

The cumulative impact to wetlands in the project area will be very slightly higher due to the recent surfacing of the Burnett Inlet Trail, near the head of Burnett Inlet, completed in summer 2013. Trail improvements included fill on approximately 0.5 acre of wetlands.

Subsistence

A subsistence evaluation was conducted for the six alternatives in accordance with Alaska National Interest Lands Conservation Act (ANILCA) Section 810. An ANILCA 810 subsistence hearing was conducted in Wrangell, Alaska in June 2008. Based on that evaluation, in the FEIS it was determined that in combination with other past, present, and reasonably foreseeable future actions, all of the action alternatives could result in a slight increase in the possibility of a significant restriction on subsistence use of deer. This is consistent with the Forest Plan's determination based on the cumulative effects of full implementation of the Forest Plan (FEIS, p. 3-122).

The wildlife and subsistence addendum (2012) updated deer model capability information and incorporated more-recent hunter harvest data (2005-2010) from Alaska Department of Fish and Game (ADFG) (Table 21, Wildlife and Subsistence ROD Addendum). Deer model results for all alternatives are shown in Tables 7 and 8 in the Wildlife: Sitka Blacktailed Deer section, below. For Alternative F, in wildlife analysis area (WAA) 1901, neither the direct 4 percent decline in deer habitat capability (DHC) from current condition at stem-exclusion phase, nor the 14 percent cumulative change in DHC from historic condition at stem-exclusion phase would constitute "*a substantial reduction*" or "*large reductions in abundance or major redistribution*". Current deer density of just under 16.0 would be reduced to 15.4 at stem-exclusion phase.

Hunter demand at 0-25 years post-harvest (stand initiation phase) which was estimated to be 2.4 percent of DHC for WAA 1901 (FEIS, Table 3-29) has been updated to an estimated 7.0 percent of DHC for Alternative F. At stem-exclusion phase (after 25 years post-harvest), it is estimated at 7.2 percent of DHC. These figures are based on the updated assumption of 144 deer harvested per year (the FEIS assumption was 78 deer per year). Although the 2008 Forest Plan did not include a 36 percent reduction factor for predation at the request of the State of Alaska, these figures include this reduction factor, since it was used in the Navy DEIS and FEIS and produces a more-conservative result. Even with the 36 percent reduction for predation, hunter demand is below the 10 percent of winter carrying capacity that is considered sustainable and provides a reasonably high level of hunter success.

Based on the information in the FEIS and the new information analysis, at a

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project level, direct effects within the foreseeable future from the Navy Timber Sale project alone would not result in a significant possibility of a significant restriction on any subsistence resources, including deer.

However, since additional timber harvest may occur at some future time in the development LUDs in WAA 1901, cumulatively there may be a significant possibility of a significant restriction on subsistence use of deer in WAA 1901 in the future due to additional reductions in habitat capability. This is consistent with the Forest Plan finding that full implementation of the Plan could lead to a significant possibility of a significant restriction on subsistence use of deer. The potential foreseeable effects, directly and cumulatively, from the project alternatives will not have a significant possibility of a significant restriction on subsistence uses for other resources including bears, furbearers, marine mammals, waterfowl, salmon, other finfish, shellfish, and other foods such as berries and roots.

Transportation

There is no new information regarding transportation policy since the FEIS was published; however, there are some minor updates and changes documented in the addendum to the transportation report in the project record.

Implementation of the 2008 Etolin Island Road Closure contract work included closing 1.5 miles (roads 6560 and 51011) and decommissioning 0.4 mile (road 51000) of road. Roads 6539 and 6543, identified for reconstruction in the FEIS, have since had this work completed, which consisted of reconditioning/periodic maintenance including resurfacing, compaction, and seeding.

Watershed

In April 2012, the Forest Service issued National Core BMPs. Directives for using these BMPs are currently in development. The Navy Timber Sale will implement the most current BMP guidance at the time of implementation. Currently, this project cites the Alaska Region BMPs, which are fully described in FSH 2509.22. A crosswalk between the current Alaska Region BMPs and these National BMPs has been placed in the project record for reference.

The addendum for the watershed resource report identified several items of updated or clarified information including:

- Road reconditioning on Road 6539 that addressed some sediment concerns in the Thrucut/Goose Lakes Creek watershed was completed in 2011. The condition of this road was identified in the resource report as a contributor to sediment risk in the Thrucut/ Goose Lakes Creek Watershed. Removal of landslide material, ditch-cleaning, and installation of a new culvert resolved these concerns.
- Updates identifying road storage, closure, and stormproofing work completed through implementation of the Wrangell Ranger District ATMP.
- Clarification of effects of road reconditioning in Fishtrap Creek watershed: Alternative F would recondition 0.35 mile of existing system road on Road 51543, including re-installation of one bridge at a

Class II stream in the upper Fishtrap Creek watershed. Reconditioning would also occur on 0.42 mile of existing Road 51540. Road reconditioning would result in short-term increases in sediment. The temporary increase would not degrade water quality or fish habitat. Implementation of BMPs described in the road cards is expected to maintain water quality and minimize impacts to fish habitat. This correction would not change the relative ranking of alternatives.

- Clarification, FEIS page 3-153, Environmental Effects: Two of the eleven red pipes in the project area are located on Maintenance Level 1 roads that are used to access Alternative F units: Road 6544 MP 2.569 and Road 51544 MP 0.226. When these roads are stored, the removal of these red pipes would restore an estimated 4000 feet of mostly anadromous fish habitat access in Pump Creek and 4400 feet of resident fish habitat in Upper Big Bend watershed. The removal of these two pipes would substantially reduce the habitat affected by red pipes in the project area. An additional gray pipe at MP 0.586 (potentially affecting over 3,000 feet of anadromous fish habitat) could also be removed during storage of Road 6544. These roads would be high priority for storage and red pipe removal during implementation of the Access and Travel Management Plan (ATMP).
- Fish passage at road/stream crossings and removal or replacement of red pipes: In the Navy project area, eleven (not ten as stated in the FEIS) culverts did not meet current fish passage standards in 2009. One of the eleven culverts is mainly affected by beaver debris and may only be temporarily red (personal communication Dennis Reed, Wrangell RD Fish Biologist). Since 2009, an additional culvert was determined to be red and was replaced by a bridge in 2011. In addition, review of FEIS Table 40 determined that the column “Feet of Fish Habitat Affected” was displaying units in meters, not feet. New information from recently completed stream edits has also been added to update FEIS Table 3-40, shown here:

Watershed Name	# of Red Culverts	Feet of Fish Habitat Affected
Kindergarten Lake	2	Class II - 2,650
Pump	5	Class I - 6,195 Class II – 6,565
South Anita Bay Frontal	1	Class II - 650
Duckbill Creek	1	Class II – 2,385
Upper Big Bend Frontal	1	Class II – 4,410
West Burnett Frontal	1	Class II - 590
Total	11	Class I – 6,195 Class II – 17,255

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Wildlife

The wildlife and subsistence resource report has been reviewed and updated. The Navy biological assessment/biological evaluation (BA/BE) was also updated. Updated analysis is based on the Selected Alternative (Alternative F) unless otherwise noted.

No information that would affect the decision was revealed in these analyses. The FEIS states that the Alternative F would have the least effect on wildlife habitat of any action alternative, due to having the least acres of harvest and miles of roadbuilding. A summary of the updated analyses is included below.

Sitka Black-tailed Deer

The deer model was designed for use at the Forest Plan level and has undergone changes in the settings used as more information is known. These changes are described in the paper “Tongass Interagency Deer Winter Habitat Suitability Index Model” located in the project record.

Direction as to how the deer model is to be used for analysis was updated in 2011. This direction was used to reanalyze the effects for Navy FEIS, and the reanalysis is detailed in the Wildlife and Subsistence Addendum 2012 in the project record.

Deer habitat capability: Deer habitat capability was reanalyzed for all alternatives using the October 2011 direction for the deer model which was developed jointly by the interagency wildlife biologists. The differences between FEIS model run and the 2011-direction model run deer habitat capability (DHC) results are largely due to how partial harvest was treated in the analysis. In the FEIS, if volume removal was less than or equal to 30 percent, the stand was considered to have some remaining volume and an adjustment was made to the results of the deer model. The reanalysis models all harvest, including partial cuts, as clearcut, to provide a more-conservative scenario. Also, in the FEIS, non-federal ownerships were included in the analyses for both direct and cumulative effects; the 2011 model runs used NFS-only lands in WAA 1901 for direct effects, and all lands on Etolin Island for cumulative effects analysis.

Table 7, below, updates Table 3-48 in the FEIS (p. 3-170) for deer habitat capability, including some minor formatting changes. In Table 3-48, the 26-150 year figures show the decline from 1900 (cumulative), but in updated Table 7, the figures for all years (0-25 and 26-150) show the decline from existing condition.

The reanalysis shows a greater percentage of decline than the FEIS. As in the FEIS, Alternative F has the least effect of the action alternatives, and Alternative C the greatest effect. Alternative F shows a 2 percent decline in deer habitat capability from existing condition at 0-25 years post harvest (the FEIS showed a 1 percent decline), and 4 percent decline from existing condition at 26-150 years.

Table 7
2012 Direct Effects on Sitka Black-tailed Deer Habitat Capability (DHC) by Alternative for WAA 1901¹ (updates Table 3-48 in the FEIS)

Time frame	Deer Habitat Capability ² (and percent change) by Alternative						
	Existing	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F
0-25 years (% change) ³	3,271 (N/A)	3,253 (-1%)	3,105 (-5%)	2,991 (-9%)	3,146 (-4%)	3,087 (-6%)	3,199 (-2%)
26-150 years (% change) ⁴	3,271 (N/A)	3,200 (-2%)	3,052 (-7%)	2,937 (-10%)	3,093 (-5%)	3,034 (-7%)	3,145 (-4%)

¹ National Forest System (NFS) lands only in WAA 1901 with partial harvest modeled as clearcut. Includes existing managed stands.

² Deer habitat capability expressed as number of deer

³ 0 – 25 years represents the immediate effect of project implementation.

⁴ 26 – 150 years represents the effects of the project once harvested areas are regenerated and the canopy closes, reducing the amount of understory forage for deer.

The cumulative effects were also reanalyzed to show the reduction in DHC from historic (1954) conditions on all lands (Table 8, below).

Table 8
2012 Cumulative Effect on Sitka Black-tailed Deer Habitat Capability (DHC) by Alternative for WAA 1901 and Etolin Island¹

Scale / Time Frame	Deer Habitat Capability ² (DHC) by Alternative							
	Historic (1954)	Existing	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F
WAA 1901 0-25 years (% change) ³		3,271 (-11%)	3,253 (-11%)	3,105 (-16%)	2,991 (-19%)	3,146 (-14%)	3,087 (-16%)	3,199 (-13%)
WAA 1901 26-150 years (% change) ⁴	3,675	3,271 (-11%)	3,200 (-13%)	3,052 (-17%)	2,937 (-20%)	3,093 (-16%)	3,034 (-17%)	3,145 (-14%)
Etolin Island 0-25 years (% change) ³		6,024 (-8%)	6,006 (-8%)	5,859 (-11%)	5,744 (-12%)	5,899 (-10%)	5,840 (-11%)	5,952 (-9%)
Etolin Island 26-150 years (% change) ⁴	6,557	6,024 (-8%)	5,953 (-9%)	5,805 (-11%)	5,690 (-13%)	5,846 (-11%)	5,787 (-12%)	5,899 (-10%)

¹ Includes both NFS and non-NFS lands with non-NFS land assigned zero habitat capability and partial harvest modeled as clearcut (most conservative scenario). Includes existing managed stands, present, and reasonably foreseeable actions.

² Deer habitat capability expressed as number of deer

³ 0 – 25 years represents the immediate effect of project implementation

⁴ 26 – 150 years represents the effect of the project once harvested areas are regenerated and the canopy closes, reducing the amount of understory forage for deer.

Similar to direct effects, the results for cumulative effects show a greater percentage of decline than does the FEIS; however, the relative ranking of the alternatives is almost the same as in the FEIS. Alternative F has the least effect of the action alternatives. At the WAA level, Alternative F shows a 13 percent

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decline in deer habitat capability from historic (1954) condition at 0-25 years post harvest, and 14 percent decline at 26-150 years (the FEIS showed a 8.7 percent decline from historic (1900) condition) at 26-150 years.

Deep snow habitat: Although winter habitat was considered by the project biologist during the analysis for the FEIS, the deer model was not designed to model deep snow winters (severe winters). Therefore, additional analysis was done for the Alternative F at both the WAA 1901 and also the all-Etolin Island scale to predict the results of the potential effects on deer for deep snow habitat. Deep snow habitat is classified as productive old-growth (high-POG) less than 800 feet in elevation on south aspects for this analysis. There would be a direct effect of 2 percent reduction of deep snow habitat in WAA 1901 from the current levels for Alternative F, which is proportional to the overall habitat capability reduction, and a cumulative effect of 24 percent reduction from historic conditions. At the Etolin Island scale, the current condition shows a 14 percent reduction from historic levels, with no measurable change resulting from Alternative F.

Wolves

Deer density and road density were analyzed in the FEIS, with wolves considered in relation to road density. To more-thoroughly assess project effects on wolves, three analyses were recalculated, for: 1) Deer density to estimate the effects on the wolves' primary food source, including analysis at the biogeographic province scale for Alternative F, 2) Road density to evaluate the effect of increased roads on the potential hunting/trapping pressure, including recent road closures and removing non-NFS lands from direct effects, and 3) Consideration of wolf harvest data for a more-detailed analysis of potential effects to wolves.

Theoretical **deer density** (deer/mi²) was recalculated based on the deer habitat capability derived from the model using the 2011 direction for all alternatives (see discussion under Sitka black-tailed deer). This is an indicator to assess the ability of an area to support theoretical deer populations capable of maintaining sustainable wolf populations and meeting human harvest demands.

All deer densities for WAA 1901 are less than 18 deer/mi² (see Tables 9 and 10, below). Historically, neither WAA 1901 nor Etolin Island supported a very high deer density, approximately 18 deer/mi², according to this analysis. As a result, the area may be at higher risk of not supporting deer populations capable of maintaining both wolf populations and meeting human harvest demands, where deer are the primary prey of wolves. Elk on Etolin Island may be fulfilling part of the role as prey for wolves. WAA 1910 on the south end of Etolin Island is dominated by the South Etolin Wilderness, which will maintain habitat into the future.

Results of the deer density by alternative reanalysis were somewhat lower (0.4 to 0.9 deer/mi² for direct effects at WAA 1901) than those shown in the FEIS; however, the ranking was the same, with Alternative F having the least effect of the action alternatives.

Table 9
2012 Direct Effect on Sitka Black-tailed Deer Density (deer/square mile)
WAA 1901¹ (updates portions of Table 3-51 in the FEIS)

	Existing	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F
0-25 years (% change) ²	16.0 (N/A)	16.0 (0%)	15.2 (-5%)	14.6 (-9%)	15.4 (-4%)	15.1 (-6%)	15.6 (-2%)
26-150 years (% change) ³	16.0 (N/A)	16.0 (0%)	14.9 (-7%)	14.3 (-10%)	15.1 (-5%)	14.8 (-7%)	15.4 (-4%)

¹ Deer density based upon DHC / **NFS land acres** at all elevations; does not include freshwater. They do not reflect actual, known densities of deer.

² 0 – 25 years represents the immediate effect of project implementation

³ 26 – 150 years represents the effect of the project once harvested areas go into stem exclusion.

Table 10
2012 Cumulative Effect on Sitka Black-tailed Deer Density (deer/square mile)
WAA 1901 and Etolin Island¹ (updates Tables 3-51 and 3-54 on p. 3-177 and 3-179 of Navy FEIS)

Scale / Time frame	Deer Density by Alternative							
	Historic (1954)	Existing	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F
WAA 1901 0-25 years (% change) ²	17.9 (N/A)	15.9 (-11%)	15.8 (-11%)	15.1 (-16%)	14.6 (-19%)	15.3 (-15%)	15.0 (-16%)	15.6 (-13%)
WAA 1901 26-150 years (% change) ³	17.9 (N/A)	15.9 (-11%)	15.6 (-13%)	14.8 (-17%)	14.3 (-20%)	15.0 (-16%)	14.8 (-17%)	15.3 (-15%)
Etolin Island 0-25 years (% change) ²	18.1 (N/A)	16.6 (-8%)	16.6 (-8%)	16.2 (-11%)	15.8 (-12%)	16.3 (-10%)	16.1 (-11%)	16.4 (-9%)
Etolin Island 26-150 years (% change) ³	18.1 (N/A)	16.6 (-8%)	16.4 (-9%)	16.0 (-11%)	15.7 (-13%)	16.1 (-11%)	16.0 (-12%)	16.3 (-10%)

¹ Deer density based upon DHC / **total NFS and State land acres** at all elevations; does not include freshwater. They do not reflect actual, known numbers of deer.

² 0 – 25 years represents the immediate effect of project implementation

³ 26 – 150 years represents the effect of the project once harvested areas go into stem exclusion.

Further analysis, based on Alternative F, was used to examine the effects on the availability of deer for both wolf and human harvest by considering deer density at the **Etolin Island and Vicinity biogeographic province** level in accordance with the Forest Plan guideline. In 1954, there were four WAAs (1904, 1905, 1906, and 1910) in this biogeographic province where deer density was 18 deer/mi² or greater, with WAA 1901 just slightly below, at 17.9 deer/mi². Currently there is one WAA (1906) with at least 18 deer/mi²; it would remain so into the foreseeable future. These results are similar to those predicted in the Forest Plan. While subsistence hunting could be affected

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sometime in the future, all WAAs in the Etolin biogeographic province are projected to remain above five deer/mi², the level thought needed to sustain a viable wolf population. Therefore, deer densities on Etolin are expected to contribute to maintaining viable wolf populations on the Tongass (Suring et al. 1993 VPOP Strategy). Shown below are the deer densities for cumulative effects, based on Alternative F, on the WAAs in the Etolin Island and Vicinity biogeographic province. The Navy project is within WAA 1901; Etolin Island includes WAAs 1901 and 1910.

Table 11
Cumulative Effects of Alternative F Timber Harvest on Deer Habitat¹

WAA	Historic	Existing	Implementation 0-25 years	Stem Exclusion 26-150 years
1901	17.9	15.9	15.6	15.3
1903	12.0	10.3	9.5	9.4
1904	25.6	16.7	16.7	16.5
1905	18.5	14.4	14.1	13.9
1906	41.1	26.3	26.1	24.5
1910	18.4	17.5	17.5	17.5

¹ Includes other projects within the biogeographic province.

Source: DMRerunBioprovince13ResultsUpdate20120530.xlsx

Roads and Wolf Harvest

To determine the effects of roads for the potential of increased hunting/trapping pressure on wolves, **road densities** were recalculated, based on Alternative F, to remove State and other non-NFS lands from direct effects and to reflect recent road closures. Results changed slightly from those shown in the FEIS, Table 3-52. Cumulative effects were analyzed for all ownerships on Etolin Island.

Except for the life of the sale, open road density below 1,200 feet elevation for WAA 1901 for Alternative F would remain the same as existing condition, at 0.39 mi/mi². Total road density would increase, from 0.64 to 0.67 mi/mi² below 1,200 feet elevation for WAA 1901 with the implementation of Alternative F. Therefore, even during the life of the sale, road densities would continue to be below the Forest Plan wolf road density standard and guideline of 0.7 to 1.0 mi/mi², recommended for “areas where road access and associated human-caused mortality has been determined...to be a significant contributing factor to locally unsustainable wolf mortality” (Forest Plan p. 4-95).

The open and total road densities were also recalculated for Etolin Island. The open road density would be 0.22 mi/mi² during the life of the sale and 0.21 mi/mi² after the roads are closed, same as the existing condition. The total road density for Etolin Island would be 0.41 mi/mi² with the implementation of Alternative F.

Harvest Rate of Wolves

The methodology developed jointly by the Forest Service and ADFG was used to analyze mortality for individual wolf packs (Person and Logan 2012). This

analysis estimated the following **harvest rate** of wolves:

Table 12
Estimated average harvest rate of wolves for years 1986 through 2013

	Harvest rate of individual wolf packs
WAA 1901	2.2 individuals
WAA 1910	2.0 individuals
Etolin Island	2.1 individuals

Harvest (hunting and trapping) of ≥ 7 wolves in a pack in 1 year is considered “pack depletion” and “high risk of depletion” if this persists for 2 or more years. Harvest of ≥ 3 wolves per year (estimated to be about a third of the population) within an average pack home range (about 116 mi²) is considered unsustainable and “chronic unsustainable harvest” if this persists for 5 or more years. For the years between 1986 and 2013, WAA 1910, on the south end of Etolin Island, dominated by the South Etolin Wilderness and outside the project area, had unsustainable annual harvests of wolves 31 percent of the time during this time period (8 out of 26 years). WAA 1910 also had annual harvest rates of ≥ 7 wolves (pack depletion) three times or 12 percent of the time during the reporting period, probably since much trapping (over 75 percent) occurs on the shoreline from boats.

WAA 1901 has had an unsustainable annual harvest of wolves at least 27 percent of the time during this period (7 out of 26 years). WAA 1901 also had annual harvest rates of ≥ 7 wolves (pack depletion), only once, in 2010. This supports the concept that the Anita Bay road system is not used as much for trapping, since it is not connected to a community and is not snow-plowed. Neither WAA 1901 nor Etolin Island as a whole has met or exceeded the parameters for chronic unsustainable harvest or pack depletion.

Average wolf harvest has remained within sustainable levels (ADFG Navy DEIS comment letter 2008). This is attributed to the relatively low accessibility of this area by nearby communities; however, there may be a concern for potential overharvest during the active portion of the timber sale.

Marten

In the FEIS, marten were analyzed as an MIS species at the WAA scale (WAA 1901). Additional habitat analysis, based on Alternative F, has been conducted at the value comparison unit (VCU) scale since marten have smaller home ranges in this area, generally a third-order watershed or a 10,000-acre landscape approximately the size of an average VCU. For this additional analysis, all timber harvest was considered as clearcut, even though partially cut stands may provide habitat during some years since the stands would retain about 70 percent of the stand structure.

Two measures were used to analyze the effects to marten: high-value habitat at the VCU level, and road density using NFS-only lands less than 1,500 feet in

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elevation.

High-value marten habitat includes low-elevation (below 1,500 feet) high-volume old-growth stands. Direct impacts to high-value marten habitat for Alternative F would result in a decrease of 0 to 9 percent for all VCUs in the project area, and WAA 1901 would experience a 2 percent decrease.

Cumulative effects with past harvest are more substantial, with a decrease of 4 percent to 36 percent within the project area VCUs, with VCUs 4640 and 4670 showing a 35 and 36 percent decrease, respectively, and VCU 4650 showing a 25 percent decrease. VCUs where timber harvest has reduced high-value habitat by 25 percent or more are less capable of supporting marten during deep-snow winters and could lead to larger home ranges and higher rates of predation. Cumulative decrease is 19 percent for WAA 1901 (calculated as 17 percent in the FEIS) and 14 percent for Etolin Island.

Cumulative reduction in POG would range from 1 percent to 22 percent for project area VCUs under Alternative F. Total POG would continue to decline from historic habitat, but none of the individual VCUs or WAA 1901 would exceed the 25-30 percent of reduction in POG which research has determined to be a threshold in other areas of the country. Therefore, there may be affected individuals, but overall populations appear, and should remain, stable.

Road density effects were considered, since roads provide access to marten trapping. Road density for marten has been updated using NFS-only lands less than 1,500 feet in elevation. As stated in the FEIS, p. 3-180, marten densities begin to decline in areas where road density exceeds 0.2 mile of road per square mile (mi/mi^2) of land and may be reduced as much as 90 percent when road density approaches $0.6 \text{ mi}/\text{mi}^2$ (Suring, et al 1992). Two of the five VCUs in the project area (4640 and 4670) exceed $0.6 \text{ mi}/\text{mi}^2$ for open road density, and three VCUs (4640, 4650, and 4670) exceed $0.6 \text{ mi}/\text{mi}^2$ for total road density, both for existing condition and under Alternative F. For WAA 1901, open road density under Alternative F would be $0.4 \text{ mi}/\text{mi}^2$ during the life of the sale, then revert back to $0.3 \text{ mi}/\text{mi}^2$ (existing condition). Both existing and Alternative F total road density is $0.6 \text{ mi}/\text{mi}^2$ (estimated at $0.4 \text{ mi}/\text{mi}^2$ in the FEIS, p. 3-183). However, roads on Etolin Island are not connected to a community and are not generally plowed during the winter trapping season. This may partially reduce the effects of road density on the Etolin Island marten population. Full implementation of the Wrangell ATM Plan will lower the open road density in WAA 1901 by roughly 50 percent; it would not change the total road density.

Cumulative impacts for road density are roughly the same for project area VCUs and for WAA 1901 as the direct effects, but lower for Etolin Island at $0.2 \text{ mi}/\text{mi}^2$. While there may be localized effects, overall populations are less susceptible to overharvest from road density. Unroaded State parcels and National Forest System lands, plus the South Etolin wilderness augment marten chance of survival on Etolin Island.

Seasons and bag limits (unlimited) have remained unchanged in the past years

and no closures of the marten trapping season have occurred within the last 90 years in GMU 3, except for Kuiu Island where marten trapping was closed in 2008. ADFG has expressed concern that increasing road access on several islands in GMU 3 may necessitate future restrictions. No specific islands were mentioned and concerns most likely apply to areas accessible from communities.

Bald Eagle

Bald eagle protection requirements (50 CFR Part 22.26) have changed from what was in the former Bald Eagle MOU and analyzed in the FEIS. Variances no longer exist; “take” permits in accordance with the Bald and Golden Eagle Protection Act would be required if disturbance to nesting bald eagles would occur. Listed below are the required distances to avoid disturbance to nesting eagles. All nests are considered active March 1 through May 31; protections extend until August 31 unless nests are proven to be inactive.

- Avoid clear-cutting or removal of overstory trees within 330 feet (100 meters) of both active and alternate nests at any time (same as MOU).
- Avoid timber harvesting operations, including road construction and chain saw and yarding operations, during the nesting season within 660 feet (200 meters) of the nest.
- Avoid construction of log transfer facilities and in-water log storage areas within 330 feet (100 meters) of active and alternate nests.
- Avoid operating helicopters or fixed-wing aircraft within 1,000 feet (305 meters) of the nest during the breeding season, except where eagles have demonstrated tolerance for such activity.
- Avoid blasting and other activities that produce extremely loud noises within 1/2 mile of active nests (or within 1 mile in open areas).

Bald eagle protection requirements have been updated in the unit cards.

Additional MIS

As explained in the FEIS p. 3-165, other MIS (black and brown bears, brown creepers, red squirrels, hairy woodpeckers, red-breasted sapsuckers, river otters, Vancouver Canada goose, and mountain goats) were not analyzed in detail in the 2008 wildlife report or FEIS, mainly because much of their habitats are protected by Forest Plan Standards and Guidelines. However, some of the preferred habitat outside old-growth reserves and areas protected by Forest Plan Standards and Guidelines would be affected by the action alternatives. At an appellant’s request, analysis was expanded to include the MIS listed above, with the exception of mountain goats, which do not occur in the project area. All results are based on Alternative F, unless otherwise specified.

Black and brown bears: Black bears occur in the project area, and brown bears typically occur on the south end of Etolin outside the project area. Both bears use a variety of habitats from sea level to alpine. Estuaries, riparian

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areas, and forested coastal areas have the highest value; young clearcuts, muskegs, small openings, and subalpine meadows provide high levels of forage. Riparian areas and salmon-bearing streams are important during the spring and late summer.

Direct effects (reduction of existing habitat) were calculated for WAA 1901 (NFS lands only), with POG representing black bear denning habitat, and all habitats except older young growth in stem exclusion as foraging habitat. Cumulative effects (reductions to historic 1954 condition) were calculated for both WAA 1901 and Etolin Island (NFS and non-NFS land). See table below. This level of change is not expected to limit overall bear populations.

Table 13
Black and brown bear habitat direct (existing) and cumulative (historic) effects

Analysis Area	Habitat type	Percent reduction from existing/historic acres	
		Existing	Historic
WAA 1901	POG (denning)	2%	11%
WAA 1901	All habitat (forage)	1%	4%
Etolin Island	POG (denning)	-	7%
Etolin Island	All habitat (forage)	-	3%

Brown creepers: Brown creepers nest and forage in old growth. They are negatively affected by edge resulting from fragmentation from logging, and densities are consistently lower in edge habitat. Effects to brown creepers were analyzed using changes in interior POG habitat and patch size to represent changes in brown creeper habitat.

Alternative F would reduce current interior habitat by 2 percent. The 2 percent reduction in habitat could have localized impacts on nesting and dispersal, but is not likely to limit brown creepers at the WAA scale. The Navy DEIS (Chapter 3, pp. 16, 25-26) contained additional information on fragmentation effects.

Red squirrels: Red squirrels rely on mature conifer forests with large cone-producing trees and cavities for nest sites. Spruce trees in mature to old-growth forest provide the highest value, but red squirrels can survive fairly well in older cone-producing young growth. They are considered a “species of least concern” and there is no trapping or shooting harvest limit or closed season for squirrels in GMU3.

Direct effects (reduction of existing habitat) to red squirrels were calculated using changes to POG and older young-growth habitat both by VCU and overall to WAA 1901. Cumulative effects were calculated using changes to POG and older young-growth habitat by VCU, for WAA 1901, and for Etolin Island, from historic (1954) condition. See table below. While there may be

localized changes in squirrel home ranges and /or density, minimal effects have occurred at the island scale, and habitat for red squirrels will improve as younger stands reach cone-producing age.

Table 14
Red squirrel habitat direct (existing) and cumulative (historic) effects

Analysis Area	Habitat type	Percent reduction from existing/historic acres	
		Existing	Historic
VCUs (WAA 1901)	POG/older young growth	0 - 7%	0 - 21%
WAA 1901	POG/older young growth	2%	10%
Etolin Island	POG/older young growth	-	6%

Hairy woodpeckers: Hairy woodpeckers are uncommon on the Tongass, preferring high-volume POG stands with patches greater than 500 acres considered optimal habitat. Both hairy woodpeckers and red-breasted sapsuckers are cavity nesters preferring large trees for nesting. Effects to both species are similar except for the type of POG affected.

Direct effects (reduction of existing habitat) were analyzed for the percent reduction in high-POG by VCUs in the project area and also for WAA 1901. Cumulative effects (reductions to historic 1954 condition) were also analyzed for the percent reduction in high-POG by project area VCUs and for WAA 1901. See table below. Cumulative effects on preferred hairy woodpecker habitat may represent localized gaps in distribution.

Table 15
Hairy woodpecker habitat direct (existing) and cumulative (historic) effects

Analysis Area	Habitat type	Percent reduction from existing/historic acres	
		Existing	Historic
VCUs (WAA 1901)	High-volume POG	0 - 8%	0 - 35%
WAA 1901	High-volume POG	2%	18%

Red-breasted sapsuckers: Red-breasted sapsuckers are common on the Tongass. This cavity excavator uses snags and partly dead trees in coniferous, deciduous, or mixed forests for nesting and forage. It prefers low-and-medium volume POG and can be found along clearcut edges as well.

Direct effects (reduction of existing habitat) were analyzed using the percent reduction for low and medium-POG by VCUs in the project area and overall for WAA 1901. Cumulative effects (reductions to historic 1954 condition) were also analyzed for low and medium-POG by project area VCUs and

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overall for WAA 1901. See table below. Impacts to red-breasted sapsucker habitat are less than those to hairy woodpecker habitat, due to limited past logging in lower volume classes.

Table 16
Red breasted sapsucker habitat direct (existing) and cumulative (historic) effects

Analysis Area	Habitat type	Percent reduction from existing/historic acres	
		Existing	Historic
VCUs (WAA 1901)	Low/med-volume POG	0 – 7%	0 – 11%
WAA 1901	Low/med-volume POG	2%	4%

River otters: In Southeast Alaska, river otters are associated with coastal and fresh water aquatic environments and the old-growth forest immediately adjacent (within 100-500 feet). Their primary habitat is protected by Forest Plan Standards and Guidelines, including Beach and Estuary Standards and Guidelines, and Riparian Standards and Guidelines. No harvest is scheduled in these habitats. All habitat within a minimum of 100 feet of Class I and II streams is protected by standards and guidelines and Tongass Timber Reform Act (TTRA).

For this analysis, effects to security and denning habitat were calculated based on the effects to POG within 100 to 500 feet of fish-bearing streams (Class I and II) for all ownerships and elevations. Since protected coastal areas provide the highest-quality habitat, direct project effects (reduction of existing habitat) are expected to be minimal.

Cumulative effects (reduction to historic 1954 condition) to otters are more substantial than direct effects. See table below. Freshwater riparian denning and foraging security cover has been previously reduced from historic condition. Past harvest has also occurred in beach habitat, and these older clearcuts may receive some use by otters, but are not considered optimal habitat. No formal population surveys have been conducted, but according to Lowell 2010, river otter trends appear stable.

Table 17
River otter habitat direct (existing) and cumulative (historic) effects

Analysis Area	Habitat type	Percent reduction from existing/historic acres	
		Existing	Historic
VCUs (WAA 1901)	POG 100'-500' from fish streams	0 - 6%	2 - 23%
WAA 1901	POG 100'-500' from fish streams	2%	14%
Etolin Island	POG 100'-500' from fish streams	-	10%

Vancouver Canada goose: Vancouver Canada goose habitat on the Tongass includes low-productivity forest and wetlands in estuary, river, and upland areas (FEIS p. 3-165). They also use overstory canopy for cover. No harvest is scheduled in the majority of these habitats (FEIS p. 3-165) which are protected by Forest Plan Standards and Guidelines.

However, for this analysis, effects were calculated based on the reduction to forested muskeg, non-POG, SD5H, and SD4H lands. Direct effects (reduction of existing habitat) to these lands were calculated by VCU and overall for WAA 1901. Cumulative effects (reductions to historic 1954 condition) were calculated by VCU, overall for WAA 1901, and at the Etolin Island scale. See table below.

Table 18
Vancouver Canada goose habitat direct (existing) and cumulative (historic) effects

Analysis Area	Habitat type	Percent reduction from existing/historic acres	
		Existing	Historic
VCUs (WAA 1901)	Forested muskeg, non-POG, SD5H and SD4H	0 - 2%	1 - 4%
WAA 1901	Forested muskeg, non-POG, SD5H and SD4H	1%	2%
Etolin Island	Forested muskeg, non-POG, SD5H and SD4H	-	1%

Federally-listed Threatened, Endangered and Candidate species (TES) and Alaska Sensitive Species

A Biological Assessment (BA) was completed in 2009 and concurrence was obtained. The list for Threatened, Candidate and Endangered species was reexamined on the NMFS and USFWS Alaska websites on December 28, 2011, and includes both species managed by USFWS and those managed by NMFS. Species not occurring within Southeast Alaska inside waters and/or the southern portion of the Tongass National Forest were dropped from further analysis. Species occurring within the action area were analyzed further.

Three candidate species not previously analyzed in 2009 were considered in the 2012 Biological Assessment/Biological Evaluation. These species are Pacific

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herring, yellow-billed loon, and Kittlitz's murrelet.

- Pacific herring (*Clupea pallasii*) within the Southeast Alaska DPS were designated a candidate species in April 2008 (Federal Register 2008a). A determination of “not likely to jeopardize candidate species, or adversely modify proposed critical habitat” was made for Pacific herring. Disturbance at Anita Bay LTFs and offshore barge locations would be unmeasurable compared to the range of the population. The project may adversely affect individuals but is not likely to result in a loss of viability in the planning area nor cause a trend toward federal listing. Since that time, the National Oceanic and Atmospheric Administration (NOAA) Fisheries concluded on April 2, 2014 that listing of the Pacific herring is not warranted at this time.
- Yellow-billed loon (*Gavia adamsii*) was added as a candidate species (March 2009). A determination of “no effect” was made for yellow-billed loons due to incidental occurrence and lack of its habitat disturbance. Since that time, on October 1, 2014, the USFWS issued a 12-month finding on the petition to list the yellow-billed loon, and determined that listing as a threatened or endangered species is not warranted (79 FR 59195-59204).
- Kittlitz's murrelet (*Brachyramphus brevirostris*), was proposed as a candidate species in May 2004. Found in glacial habitats, it has only incidental occurrence south of LeConte Bay, about 50 miles north of the project area. A determination of “no effect” was made for Kittlitz's murrelet. Since that time, on October 3, 2013 the USFWS issued a 12-month finding on the petition to list the Kittlitz's murrelet and determined that listing as a threatened or endangered species is not warranted (78 FR 61764-61801).

The updated BA was submitted to NMFS for review on August 29, 2012. The Forest Service is not required to consult with USFWS on the no effect determination for the candidate species, yellow-billed loon and Kittlitz's murrelet. Concurrence was received on September 7, 2012. The 2009 determination that the Navy Timber Sale “may affect, but not likely to adversely affect” federally listed species (humpback whale and Steller sea lion) remains unchanged per that concurrence letter. Since that time, the eastern distinct population segment Steller sea lion was delisted per a Final Rule published in the Federal Register November 4, 2013 and effective December 4, 2013 (78 FR 66139), but will continue to be protected under provisions of the Marine Mammal Protection Act.

The Endangered, Threatened, and Candidate Species under NMFS authority in Alaska list was updated in March 2013, and includes two fish species not previously on the list: the Lower Columbia River coho salmon (*Oncorhynchus kisutch*) and the green sturgeon (*Acipenser medirostris*). The Navy BA addresses the coho among the “Fourteen stocks of salmon [that] have been identified as potentially migrating into the marine waters of the Tongass (Forest

Plan FEIS Appendix F)”, with a “low probability that some may occasionally be present in inside waters”. The BA concludes there will be “no effect to listed salmon and trout species.” Critical habitat for the green sturgeon does not occur in Alaska and the species’ northernmost known range is British Columbia, although incidental marine presence could occur in the project area. A determination of “no effect” has been made for the green sturgeon, as well as the Lower Columbia River coho salmon. NMFS concurred on March 15, 2014 that due to the no-effect determination, no consultation was required.

The Sensitive Species list for the Alaska Region was revised in February 2009 and the updated list was incorporated in the Navy FEIS. No updates have occurred since then.

On March 31, 2014 the USFWS published a Notice of Petition Finding and Initiation of Status Review in the Federal Register (79 CFR 17993) for the Alexander Archipelago wolf. Pursuant to a 2011 petition by Greenpeace to list the Alexander Archipelago wolf (*Canis lupus ligoni*) as a threatened or endangered species and to designate critical habitat under the Endangered Species Act of 1973, as amended (Act), the USFWS 90-day review found that the petition presents substantial scientific or commercial information indicating that listing the wolf may be warranted. As a result of a positive 90-day finding, the USFWS initiates a 12-month status review. Pursuant to an Agreement in *Center for Biological Diversity et al. v Jewell et al.* filed September 22, 2014, the USFWS will issue a decision by the end of 2015 on whether listing the wolf is warranted.

On April 10, 2015 the USFWS published a Notice of Petition Finding and Initiation of Status Review in the Federal Register (80 CFR 19263) for the Alaska yellow-cedar (*Callitropsis nootkatensis*). Pursuant to a 2014 petition by Center for Biological Diversity, The Boat Company, GSACC, and Greenpeace to list the *Callitropsis nootkatensis* as a threatened or endangered species under the Endangered Species Act of 1973, as amended (Act), the USFWS 90-day review found that the petition presents substantial scientific or commercial information indicating that listing the yellow-cedar may be warranted. As a result of a positive 90-day finding, the USFWS initiates a status review. At the conclusion of the status review, the USFWS will issue a 12-month finding as to whether the Service believes that listing is warranted.

Appendix A Reasons for Scheduling the Environmental Analysis of the Navy Timber Sale

Portions of Appendix A have been deleted, updated, or added since 2009 to include current agency direction and information. Figures and tables have been updated with the most current Forest-wide timber program information. A complete, updated Appendix A is in the project record and online on the project website at http://www.fs.fed.us/nepa/nepa_project_exp.php?project=14556.

Appendix B

Updated Response to Comments

Introduction

Appendix B of the FEIS includes responses to comments received for the Navy Timber Sale Draft Environmental Impact Statement (DEIS). As part of the interdisciplinary team review for the 2015 Decision for the Navy project, these responses were reviewed and updated as necessary. Only the portions of the comments which were updated are included in this appendix. The original response is included in Appendix B of the FEIS.

Comment letters are included in Appendix B of the FEIS and are annotated with an associated commenter acronym and a number. Responses to these comments are identified with a corresponding acronym and number in the Forest Service Response following each letter. Annotations (ie, “ACMP-7”) precede each response and correspond to the annotations on the original letters of comment to the Draft EIS in Appendix B of the Navy FEIS.

Appendix B of the FEIS includes the annotated original letters and response to those comments.

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

ACMP-7

Updated Response: The response states “At this time, the Forest Service plans to replace one red culvert in the Pump Creek watershed during implementation of the Navy Timber Sale.” This statement is an error. No red culverts will be replaced as part of the Navy Timber Sale. A ‘red’ culvert is a road crossing structure for a stream that does not allow juvenile fish passage during the full range of water flows. These culverts would be replaced through other funding mechanisms.

ACMP-30

Updated Response: Since 2009, roads 51011 and 51000 within the project area have been stored and road 6560 within the project area has been stormproofed. These roads are not planned for use in the Navy project.

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

ADFG-11

Updated Response: Limitations of the model were disclosed in the FEIS (pp. 3-168-169); discussions with ADFG on the deer model resulted in updated direction in 2011.

ADFG-12

Updated Response: Based upon 2011 direction, the deer model was re-run for the ROD with all units modeled as clearcut to model the most-conservative scenario. You are correct - since there are no agreed-upon coefficients for the other silvicultural prescriptions used from the Navy project. The 2011 direction was updated to be more in line with the how the deer model was run for the 2008 Forest Plan Amendment analysis and was done

with input from USFWS and ADFG. The 2012 addendum to the wildlife and subsistence report for this ROD explains how the model was used for the updated analysis.

ADFG-13

Updated Response: Discussions with ADFG on the model resulted in updated direction in 2011. A separate analysis of deep snow winter habitat during severe winters was added in the 2012 addendum to the wildlife and subsistence report for this ROD.

ADFG-14

Updated Response: The wolf section was updated in the 2012 addendum to the wildlife and subsistence report for this ROD. The Forest Service acknowledges that current deer density of 16 deer/square mile is below the Forest Plan guideline of 18 deer/mi² recommended to sustain both wolves and meet estimated human deer harvest demands (where deer are the primary prey of wolves) and may be theoretically reduced by another 2 percent under the Selected Alternative. It is not known to what extent elk are being killed by wolves, but predation of elk by wolves is documented in the ADFG elk management report for GMU 3.

ADFG-17

Updated Response: Theoretical deer density was updated in the 2012 addendum to the wildlife and subsistence report for this ROD using the information of the updated deer model information.

ADFG-18

Updated Response: The 2012 addendum to the wildlife and subsistence report for this ROD includes additional risk analysis of wolf mortality based upon methodology in Person and Logan 2012.

ADFG-27

Updated Response: The Selected Alternative does not harvest timber in roadless areas; therefore no directly affected acres would be within an inventoried roadless area. Additional marten analysis was included in the 2012 addendum to the wildlife and subsistence report for this ROD, and includes analysis by VCU, WAA, and Etolin Island as a whole.

Forest Service Response to Environmental Protection Agency (EPA)

Comments:

EPA-2

Updated Response: The new NPDES permit was received, with an authorization effective date of April 15, 2009.

Forest Service Response to Glen Ith (GI) Comments:

GI-4

Updated Response: The quartile method is no longer used to display the results of the deer model. Additional discussion is under ADFG 12 and 13.

GI-4c

Updated Response: The deer model was run again using the 2011 direction, and the results are in the 2012 addendum to the wildlife and subsistence report in the project record. Also discussed in response to comments ADFG-12 and 13.

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GI-4f

Updated Response: Also discussed in response to comments ADFG-12 and 13.

GI-5

Updated Response: Although effects to individual patch size were not displayed in detail in the FEIS, the 2008 Old Growth resource report included changes to the number of blocks and average block size by category from historic to resulting condition (Table OG-6).

Forest Service Response to SE Alaska Conservation Council (SEACC)

Comments:

SEACC-1

Updated Response: Updated market demand is calculated annually, with the estimate used as a guideline in setting annual timber sale goals. Predicting likely timber purchases and offer levels on the Tongass for Fiscal Year 2014 can be referenced at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5447816.pdf (Feb 3, 2014).

SEACC-3

Updated Response: The 5-year timber sale plan has information on when and how much estimated volume is planned from the Navy project; however, the preliminary timber cruise volume data for the Navy alternatives show a lower available volume. The information in Appendix A has been updated from FY 2009 to FY 2014 based on the estimated amount of market demand for FY 2014. See response to comments SEACC-1, and SEACC- 9 to SEACC-13. The market demand is updated annually.

SEACC-11

Updated Response: Brackley et al. was estimating timber demand and not the timber to be offered since the availability of timber to be offered is dependent on various factors. The FY 2013 timber demand was estimated at 143 MMBF. The volume that was offered was 115 MMBF.

SEACC-12

Updated Response: Although in 2009, Silver Bay Logging, Inc. had been in negotiations to sell the Wrangell mill; prospective purchasers had 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. In 2010, Silver Bay Logging dismantled their mill. The indicated bid value was recalculated to the Viking Mill in Klawock on Prince of Wales Island in the updated FASTR analysis.

SEACC-13

Updated Response: Appendix A of the Navy FEIS has been updated with current information.

Forest Service Response to Sealaska Corporation (SC) Comments:

SC-2

Updated Response: The NEPA Economic Analysis Tool-Residual Value, or NEATR program, used for modeling financial analysis in the FEIS, has been superseded by the Financial Analysis Spreadsheet Tool – RV, (FASTR). Like NEATR, FASTR provides a relative comparison of anticipated project costs and revenues for a range of project alternatives. The FASTR model uses the same logging costs and manufacturing costs

developed for the Alaska Region timber sale appraisal program. FASTR was used during the updated FEIS analysis to analyze and compare the alternatives. At this time, the action alternatives still show deficit returns. Inputs into the FASTR program are rough estimates and the output is not intended to be used as a timber sale appraisal.

SC-3

Updated Response: With the decision of the *Organized Village of Kake, et al. vs. US Department of Agriculture (1:09-cv-00023 JWS)*, the Tongass exemption for the roadless rule was vacated and the roadless rule's application to the Tongass was reinstated on March 4, 2011. A subsequent ruling on March 26, 2014 by the Ninth Circuit Court of Appeals reversed that District Court decision concerning the exemption of the Tongass from the roadless rule. The Ninth Circuit Court also remanded the case to the District Court to decide whether a supplemental EIS is required for the Tongass exemption. In August 2014, however, the Ninth Circuit Court of Appeals granted another hearing, held in December 2014, before an eleven-judge panel to rehear the appeal of the March 2011 decision. The Ninth Circuit Court has issued its en banc decision in *Organized Village of Kake v. U.S. Dept. of Agriculture, 11-35517*, upholding the Alaska District Court's reinstatement of the roadless rule, which remains in effect and applies to the Tongass.

Forest Service Response to Sitka Conservation Society et al (SCS)

Comments:

SCS-2

Updated Response: See updated response to SC-3.

SCS-3

Updated Response: The Navy project presents a range of alternatives, including a no-action alternative, that responds to the issues identified. The range of volume among the action alternatives has been recalculated to be estimated at 13.1 MMBF (Alternative F) to 62.0 MMBF (Alternative C), with the other action alternatives falling in this range.

SCS-8

Updated Response: The referenced link has been updated to <http://www.fs.fed.us/pnw/pubs/brackley/index.shtml>.

SCS-9

Updated Response: Appendix A has been updated for FY 2014. The updated market demand estimate calculations for FY 2014 can be referenced at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5447816.pdf.

SCS-16

Updated Response: On March 28, 2011, Financial Analysis Spreadsheet Tool – RV (FASTR) was approved by the Regional Forester to replace the NEPA Economic Analysis Tool Residual Value (NEAT_R) version 2.16 as the Forest Service, Alaska Region, financial efficiency and economic analysis tool for use in modeling timber volume during planning. The Financial Efficiency Table (FEIS Table 3-5 TM-5) has been updated using the FASTR analysis modeling tool and is documented in the addendum to the timber economics report.

Forest Services cost averages per MBF have been updated as discussed under Issue 1, Timber Supply and Economics (see subsections Financial Efficiency Analysis and Forest

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Service Costs) in this appendix.

SCS-18

Updated Response: In November 2009, the Regional Forester approved time-limited shipment of unprocessed hemlock and Sitka spruce logs and provided additional options for purchasers. The export policy is reviewed annually by the Regional Forester. An updated (February 2014) letter regarding the current export policy is in the project record.

SCS-19

Updated Response: See also the updated response to comment SCS-18 regarding limited interstate shipment policy.

SCS-20

Updated Response: FASTR, used in the updated analysis, reflects 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 FEIS used the Residual Value 3rd Qtr., 2007 appraisal bulletin and the updated analysis used the FASTR version October 21, 2013 using the Residual Value 4th Qtr, 2012 to compare alternatives.

SCS-21

Updated Response: Table 3-2 has been updated in the timber report addendum (Table 1), using data generated by FASTR and updated employment coefficients for logging and sawmilling.

Timber cruise data collected since the 2009 FEIS showed less volume than the stand exam volume estimates in the FEIS, with employment figure estimates decreased accordingly (Table 3 in the timber report addendum, in the project record).

SCS-34

Updated Response: See updated response to SC-3.

SCS-35c

Updated Response: Regarding the roadless component of the Navy project area, almost 54,000 acres are roadless (2001 Roadless Rule inventory) - about 80 percent of the total project area. Alternative C would directly affect the most vegetation by harvesting timber in cable-harvest units and clearing roads within the roadless acres, about 1,572 acres and 17 miles of new NFS and temporary roads within the inventoried roadless areas. To reflect a more conservative, complete analysis of direct and indirect effects to inventoried roadless areas, helicopter units were included in the updated analysis. Alternative C would harvest about 2,891 acres with helicopter yarding; however, these units leave 70 percent of the timber stand intact and do not require any roadbuilding.

Alternative B would remove timber from over 583 acres with cable yarding and 7 miles of roads, and 1,617 acres by helicopters. Alternative D has a similar amount of cable yarding units, about 487 acres and 5 miles of road, but less than 607 acres of helicopter harvest. Alternative E has 0 acres of cable unit harvest with just under 2 miles of road, but 2,219 acres of helicopter harvest within the Navy project area (2012 roadless area analysis addendum). Alternative F, the Selected Alternative, does not harvest any timber or build any roads in IRAs.

With the decision of the *Organized Village of Kake, et al. vs. US Department of*

Agriculture (1:09-cv-00023 JWS), the Tongass exemption for the roadless rule was vacated and the Roadless Rule's application to the Tongass was reinstated on March 4, 2011. A subsequent ruling on March 26, 2014 by the Ninth Circuit Court of Appeals reversed that District Court decision concerning the exemption of the Tongass from the roadless rule. The Ninth Circuit Court also remanded the case to the District Court to decide whether a supplemental EIS is required for the Tongass exemption. In August 2014, however, the Ninth Circuit Court of Appeals granted another hearing, held in December 2014, before an eleven-judge panel to rehear the appeal of the March 2011 decision. The Ninth Circuit Court has issued its en banc decision in *Organized Village of Kake v. U.S. Dept. of Agriculture*, 11-35517, upholding the Alaska District Court's reinstatement of the roadless rule, which remains in effect and applies to the Tongass.

SCS-37

Updated Response: Appendix A to the FEIS annually updates the timber demand figure. Due to the export policy and good overseas markets, in addition to recovering domestic markets, in 2014 this is based on the "Expanded Lumber, Scenario 2", with the goal for volume of timber to be offered at 142 MMBF.

SCS-41

Updated Response: The Navy project is fully compliant with the requirements of NFMA. The silvicultural prescriptions are designed to:

- The even-aged management prescriptions will regenerate cedar, and pre-commercial thinning will give preference to cedar young growth to maintain or increase the cedar composition.
- For the uneven-aged prescriptions, where 70 percent of the original basal area will be left, no more than 50 percent of the cedar and spruce basal area will be harvested. Species diversity and the cedar component will be maintained. Alaska yellow-cedar and western redcedar regeneration is considerable in many of the stands previously harvested. A summary of pre- and projected 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 western redcedar and Alaska yellow-cedar retained as seed trees to provide a seed source for the future stand. This will 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 in the silvicultural prescriptions and can be implemented if Alaska yellow-cedar is not regenerating in the stand. This is costly and usually not necessary with the prolific natural regeneration that occurs in Southeast Alaska. It is fully expected that all species, including Alaska yellow-cedar, will naturally regenerate following timber harvest in the Navy project area.

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- 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.

The Navy project is not proposing any vegetation type conversion requiring justification by an analysis showing biological, economic, social, and environmental design consequences, and the relation of such conversions to the process of natural change.

SCS-42

Updated Response: Alaska yellow-cedar (AYC) decline is recognized and discussed in the silviculture section of the FEIS on pages 3-99 to 104 and in the 2012 updated silviculture resource report. The silviculture report identifies the units where yellow-cedar decline was found to occur. As described in SCS-41, above, several measures can be taken to ensure that species mix, including Alaska yellow-cedar and western redcedar, is maintained, and these are specified on the unit cards where prescribed.

Paul Hennon et al.'s Dynamic Conservation Strategy discusses the complex causes of AYC decline and reduces it to two factors for landscape modeling: snow cover and drainage. AYC had reached its greatest competitive advantage in poorly and moderately drained soils but is now only healthy at these sites where snow-cover levels are adequate to offer protection. Within zones in which the snow cover is sufficient, AYC's niche has been limited to better-drained soils where its roots can penetrate deeper. Hennon et al identified dynamic maladapted, persistent, and migration zones for AYC. There is guidance and options for conservation and management in the paper, *Shifting Climate, Altered Niche, and a Dynamic Conservation Strategy for Yellow-Cedar in the North Pacific Coastal Rainforest* (Hennon et al 2012).

Ongoing efforts to develop a comprehensive conservation and management strategy for AYC in Southeast Alaska are nearly complete. This strategy provides:

- a thorough review of the knowledge on the extensive mortality to AYC, including the role of climate,
- options for the conservation and active management of AYC on lands that are considered either suitable or unsuitable for AYC,
- the use of risk models and yellow-cedar distribution to evaluate, quantify, and map areas of habitat suitability for AYC, both now and in the future century.

Risk of decline to AYC by the year 2080 varies considerably by geography in coastal Alaska. Some areas are already heavily impacted by decline and risk is not expected to increase appreciably; other areas are currently unimpacted, but are expected to develop decline; still other areas are expected to remain healthy.

The coastal rainforest environment around the range of AYC in Alaska is divided into 33 geographic zones to produce a more fine-scale view of AYC's current and expected future health status and associated prospects for conservation and management. Within the Etolin Island Management Zone, where the Navy project is located, the percentage of AYC forests expected to be at high risk doubles from 11 to 23 percent between 2020 and 2080. High-risk areas are initially concentrated on southern, western, and eastern portions of this

management area and then encroach to higher elevations and more-northerly latitudes. Several areas known to have AYC decline now do not show high risk until 2080 (e.g., the valley between Alice Peak and Helen Peak). AYC forests rated at low risk decrease from 67 percent in 2020 to 34 percent in 2080. Low-risk forests in 2080 are well distributed, but are mainly found at high elevations and interior areas of Etolin Island.

Conservation goals for AYC can be met in the large South Etolin wilderness area in the southern portion of the island. There, extensive AYC decline occurs now and is expected to progress upslope, but extensive areas of low to medium risk persist at higher elevations through 2080. Some areas that are currently impacted by decline are not projected to be at high risk to decline until 2080; therefore, relative risk may be underestimated somewhat for other parts of this management zone. Succession to other species, including western redcedar, is expected in these impacted forests. Within the Navy project area, there are good opportunities for active management, given road systems and land-use status. Additional AYC could be planted on well-drained soils, as was done in 1986 at Anita Bay (Hennon Et.al [n.d]). This is included as an option in the silvicultural prescriptions for the Navy project.

SCS-58

Updated Response: Open and total road density calculations were updated in the 2012 addendum to the wildlife and subsistence report for this ROD.

SCS-60

Updated Response: Since 2009, road maintenance work has been accomplished within the project area. In 2008, a road maintenance contract closed 1.5 miles of Roads 6560 and 51011 and decommissioned 0.4 mile of Road 51000. Sections of the 6539 and 6543 roads which were identified for reconditioning in the FEIS have had periodic maintenance work completed.

SCS-62

Updated Response: See updated response to SCS-60.

SCS-85

Updated Response: Although not required, additional MIS analysis was included in the 2012 addendum to the wildlife and subsistence report for this ROD. Information on TES species was updated in BA/BE for this ROD.

SCS-89

Updated Response: The single-tree selection prescriptions will not eliminate spruce from the stand. No more than 50 percent of the basal area of the spruce in the stand will be removed. Deal, et al (2001) found that partial cutting maintained stand structures similar to uncut old-growth stands, and the cutting had no significant effect on tree species composition (FEIS p. 4-27).

Deer modeling assumptions used for the FEIS are found in the Wildlife section in Chapter 3. The 2012 addendum to the wildlife and subsistence report outlines the assumptions used for the deer model as rerun using 2011 direction. See also updated response to ADFG-12 and 13.

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SCS-113

Updated Response: See updated response ADFG 11-13.

The deer model was rerun using 2011 direction, as described in the 2012 addendum to the wildlife and subsistence report in the Navy project record.

SCS-115a and 115b

Updated Response: See updated response to ADFG-12 and 13.

SCS-116

Updated Response: See updated response to ADFG-12 and 13.

SCS-118

Updated Response: See updated response to ADFG& 12 and 13.

SCS-120

Updated Response: See updated response to ADFG-12.

SCS-121

Updated Response: See also updated response to ADFG-12.

SCS-122

Updated Response: See updated response to ADFG-12.

Uneven-aged stands are created through uneven-aged systems or small-scale natural periodic disturbances that allow for recruitment/release of understory trees resulting in a multi-storied stand structure.

SCS-123

Updated Response: See updated response to ADFG-12.

SCS-124

Updated Response: The silviculture resource report defines an uneven-aged stand and the objectives of uneven-aged management, the silviculture system implemented with the single-tree selection partial harvest prescription. See also updated response to ADFG-12.

SCS-126

Updated Response: See also updated response to ADFG 11 and the Forest Plan (pp. 3-231 to 232 and 3-265 through 3-268).

SCS-127

Updated Response: See updated response to ADFG 11-13 and SCS 126.

SCS-128

Updated Response: See updated response to ADFG 11-13 and SCS 126.

SCS-129

Updated Response: See updated response to ADFG-13.

SCS-130

Updated Response: See updated response to ADFG 11-13 and SCS 126.

SCS-131

Updated Response: Since the 2009 FEIS, the quartile method is no longer in use. See additional discussion under ADFG-12 and 13.

SCS-132

Updated Response: See updated response to ADFG-14 and 18.

SCS-134

Updated Response: See also updated response to ADFG-14 and 18.

SCS-135

Updated Response: Total and open road densities were updated in the 2012 wildlife and subsistence report for the ROD.

Forest Service Response to The Wilderness Society (TWS) Comments:

TWS-1

Updated Response:

See updated response to SC-3.

TWS-4

Updated Response: In November 2009, the Regional Forester approved time-limited shipment of unprocessed hemlock and Sitka spruce logs and provided additional options for purchasers. The February 2014 letter from the Regional Forester for the annual review of the export policy is in the project record. Timber markets are subject to the global marketplace and are very dynamic.

TWS-6

Updated Response:

See updated response to SC-3.

Forest Service Response to George Woodbury (GW) Comments:

GW-1

Updated Response: While market fluctuations show an improvement in the economics of all alternatives, as compared to the FEIS, the modeled indicated bid value for all alternatives including the Selected Alternative is currently deficit, based on the historic market conditions and current cost collection numbers. However, these values may not reflect the future market conditions at the time of the contract offering. An alternative may or may not become more economical in future markets, or a portion of the units may be economical in current markets. If the contract appraises deficit at the future time of offering, it will not be advertised until market conditions improve.

References

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Appendix ROD-3

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