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Central Kupreanof Timber Harvest

Final Environmental Impact Statement

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Abbreviations and Common Acronyms

ANILCA	Alaska National Interest Lands Conservation Act
ASQ	Allowable Sale Quantity
BMPs	Best Management Practices
CCF	Hundred Cubic Feet
CEQ	Council on Environmental Quality
DBH	Diameter at Breast Height
DEIS	Draft Environmental Impact Statement
EFH	Essential Fish Habitat
FEIS	Final Environmental Impact Statement
Forest Plan	Tongass Land and Resource Management Plan 2008
GIS	Geographic Information System
HSI	Habitat Suitability Index
IDT	Interdisciplinary Team
LTF	Log Transfer Facility
LUD	Land Use Designation
MBF	Thousand Board Feet
MIS	Management Indicator Species
MMBF	Million Board Feet
MMI	Mass Movement Index
NEAT_R	NEPA Economic Analysis Tool
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NFS	National Forest System
POG	Productive Old Growth
RMA	Riparian Management Area
RMO	Road Management Objective
ROS	Recreation Opportunity Spectrum
SHPO	State Historic Preservation Office
VCU	Value Comparison Unit
WAA	Wildlife Analysis Area

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Final Environmental Impact Statement

Tongass National Forest
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Abstract:
The USDA Forest Service proposes to harvest up to 70.2 million board feet (MMBF) of timber in the Central Kupreanof project area on Kupreanof Island, Petersburg Ranger District, Tongass National Forest. Timber volume would be offered through the Tongass timber sale program. The actions analyzed in this Final Environmental Impact Statement (FEIS) are designed to implement direction contained in the 2008 Tongass Land and Resource Management Plan (Forest Plan) and the Tongass Timber Reform Act (TTRA). The FEIS describes four alternatives, which provide different combinations of resource outputs and spatial locations of harvest units. The action alternatives would make between 28.1 and 70.2 MMBF of timber available for harvest within the project area. The significant issues addressed by the alternatives include: Timber Economics, Roadless and Road Management/Access. Also analyzed in this document are Projects Common to All Action Alternatives. They are analyzed as common to all action alternatives and include such possible activities as; culvert replacement, second growth thinning, and road, cabin and trail maintenance. These projects will provide potential stewardship contracting opportunities in the local area.

Summary

Introduction

The Central Kupreanof Timber Harvest project area is located on the western portion of Kupreanof Island, on the Petersburg Ranger District of the Tongass National Forest, Alaska Region (Region 10) of the Forest Service, an agency of the U.S. Department of Agriculture (see Vicinity Map, Figure 1-1).

This chapter discusses the background of the Central Kupreanof Timber Harvest. The actions analyzed in this FEIS are designed to implement the direction contained in the 2008 Tongass Land and Resource Management Plan (Forest Plan). It includes the steps taken to identify environmental issues and public concerns related to implementation of the project.

Purpose and Need

The purpose and need for the proposed action responds to the goals and objectives identified by the Tongass Land and Resource Management Plan, and helps move the area toward the desired conditions as described in the Forest Plan. The Forest Supervisor is the Responsible Official for this action and will decide whether or not to harvest timber from the Central Kupreanof Timber Harvest area, and if so, how this timber will be harvested. The decision will be based on the information that is disclosed in the environmental impact statement. The Responsible Official will consider comments, responses, the disclosure of environmental consequences, and applicable laws, regulations, and policies in making the decision and will state that rationale in the Record of Decision.

Proposed Action (Alternative 2)

The proposed action, as published in the Federal Register, provides for multiple timber sale opportunities and would result in the production of approximately 40 million board feet (MMBF) of timber from approximately 2,025 acres of forested land. Up to 11.1 miles of

National Forest System (NFS) roads and 7.0 miles of temporary roads may be necessary for timber harvest. Through two field seasons and the interdisciplinary process, the proposed action has been adjusted to respond to on the ground conditions and resource concerns while remaining within the scope of the original proposed action. The Proposed Action for this project still provides for multiple timber sale opportunities and will result in the production of approximately 46.8 MMBF (about 39.4 MMBF of sawlog and 7.4 MMBF of utility) from 2,506 acres of forested land. Up to 7.3 miles of new NFS and up to 3.9 miles of temporary road would be constructed for timber harvest. A range of alternatives, responsive to significant issues, has been developed and includes a no action alternative.

The interdisciplinary team has identified several projects within the project area that could serve as stewardship opportunities along side the timber harvest proposal. These projects consist of:

- Recreation- maintain hiking trails in the area and perform annual cabin maintenance for the cabin located in Big John Bay.
- Silviculture and Wildlife- precommercially thin 325 acres of second growth.
- Transportation- perform maintenance on 94 miles of open road. Maintenance would include blading, brushing, and clearing culverts.
- Fisheries/Hydrology- any fisheries or hydrology projects are tied to the analysis and decisions to be made with the PRD ATM EA.
- Invasive Plants- handpulling a small population of spotted knapweed, with the possible inclusion of other weed populations if they were discovered.
- Microsales- timber sales consisting of dead or down timber which has been proposed by a prospective purchaser, and the District Ranger agrees to offer for bidding using an informal advertisement and short bid form. The maximum size of a Microsale would be 50 MBF.

These projects will be analyzed as common to all action alternatives. A complete description of the projects can be found in Chapter 2 (pages 7 and 8), and map of these projects is also provided in Chapter 2 (Figure 2-5).

The Purpose of the Central Kupreanof Timber Harvest Project is to:

- Manage the timber resource for production of sawtimber and other wood products from suitable lands made available for timber harvest on an even-flow, long-term sustained yield basis, and in an economically efficient manner.
- Seek to provide a timber supply sufficient to meet the annual market demand for Tongass National Forest timber and the market demand for the planning cycle.
- Provide for a diversity of opportunities for resource uses that contribute to the local and regional economies of Southeast Alaska.

Appendix A of this document provides information on how this project relates to the overall Tongass National Forest timber sale program, and why the project is being scheduled at this time.

Decisions to be Made

Based on the environmental analysis in this EIS, the Forest Supervisor will decide whether and how to implement activities within the Central Kupreanof Project Area in accordance with Forest Plan goals, objectives, and desired conditions. The decision may include the following:

- The location, amount, and method of timber harvest, road construction, marine access facilities, and silvicultural practices.
- Road management objectives for constructed, reconstructed and existing roads associated with the timber sale.
- Any necessary project-specific mitigation design, mitigation measures and monitoring requirements.
- Whether to implement the Projects Common to all Action Alternatives, including a Microsale program along existing NFS Roads 6030, 6040, 6314, 6314S, 6326, 6328, 6334, 6336, 6339, and 6367.
- A determination of whether there may be a possibility of a significant change in subsistence uses and access.

Significant Issues

Significant issues are used to formulate and design alternatives, prescribe mitigation measures, and analyze significant effects. Significant issues for the Central Kupreanof Timber Harvest have been identified through public and internal scoping. Similar issues are combined where appropriate. Issues can arise from a variety of sources, including:

- Issues, concerns, and opportunities identified in the Forest Plan,
- Issues identified for similar projects (past actions)
- Current internal issues,
- Changes in public uses, attitudes, values, or perceptions,
- Issues raised by the public during scoping, and
- Comments from other government agencies.

Measures of the significance of an issue are based on the extent of the geographic distribution, the duration of the related effects, or the intensity of interest or resource conflict surrounding the issue. For an issue to be considered significant at the project level, it must be relevant to the specific project so that it can be appropriately addressed at the project level. Some issues have already been resolved through national level direction or analyzed at the Forest Plan level.

Once a significant issue is identified, measures are developed to analyze how each alternative responds to the issue. Measures are chosen that are quantitative (where possible), predictable, responsive to the issue, and linked to cause and effect relationships. These measures describe how the alternative affects the resource(s) at the heart of the issue. Monitoring and mitigation of the anticipated environmental effects of the project are also designed to be responsive to significant issues.

These issues are addressed through the proposed action and the alternatives.

Issue 1 – Timber Supply and Sale Economics

Issue statement: Optimizing volume and net return on timber harvest will provide for flexibility, in both the long and short term, for offering economically viable timber sales.

This issue relates to the viability of the local economies, both on Kupreanof Island and within Southeast Alaska. It concerns proposed timber sales, the potential employment and revenues generated by the project, and the ability of smaller companies to compete for timber sales in the project area. It also relates to the availability of a timber supply and overall ability to respond to ever-changing future markets. This issue addresses both maximizing timber harvest and “best” economics. While looking at financial efficiency analysis is one tool to

gauge economics, a greater number of units/larger volume available allows for greater diversity and flexibility in responding to future market demands and to appropriately package potential sales. Also, with the 2008 Forest Plan decision and implementation of the adaptive management strategy, timber economics must consider maximizing opportunities in the Phase 1 land base.

Units of Measure

The unit of measure to compare alternatives will include timber volume measured in million board feet (MMBF), logging costs per thousand board feet (MBF), indicated bid in dollars per MBF, employment in number of direct job years, direct income based on projected employment, and logging systems by harvest method (acres). The unit of measure will also include a qualitative discussion of an alternative's ability to provide for greater diversity and flexibility in responding to future market demands and packaging a variety of potential sales.

Issue 2- Inventoried Roadless Areas

Issue statement: Timber harvest and building roads in inventoried roadless areas will reduce roadless acres within the project area and may affect roadless values.

This issue relates to timber harvest and the related construction of new roads to facilitate timber harvest in inventoried roadless areas. Additional roads and harvest would result in reducing acres of roadless area in the project area, and could affect roadless values as identified in the 2003 Forest Plan SEIS. Nationally, inventoried roadless areas are considered to have valuable qualities. Several comments were received from the public concerning management of roadless in the project area. Three of the four inventoried roadless areas within the project area may be directly affected by proposed activities.

Unit of Measure

Comparison of alternatives will include acres of inventoried roadless areas affected, percent of inventoried roadless areas affected, and the effects to the roadless values of each inventoried roadless area as identified in the 2003 Forest Plan SEIS.

Issue 3- Road Management/ Access

Issue statement: Road building, reconstruction and closures associated with the timber sale may change access within the project area.

The construction and use of forest roads is the focus of much concern on both a national and local scale. Comments ranged from requesting no more new roads and closure of most existing roads to requests to increase access by new roads and opening more existing roads. Decisions made from the analysis in this EIS will include proposed road construction in each alternative (new construction and reconstruction), use of existing NFS roads, and the status of these roads after timber harvest.

Roads influence wildlife populations, water quality, subsistence use, and the type of recreational opportunities available. Concerns were also expressed over the ability to maintain open roads. The District will look at road management objectives across the district, including the entire Kake Road System during the Petersburg Ranger District Access and Travel Management Environmental Assessment (PRD ATM EA). Recommendations for roads not associated with the proposed activities have been carried forward and analyzed through the District's ATM by 2009.

Units of Measure

Comparison of alternatives will include miles of road (NFS and temporary) constructed, miles of reconstructed road, miles of road to be left open, miles of road to be closed associated with timber harvest activities, miles of new NFS and temporary road to be constructed in inventoried roadless areas, cost of maintenance for open roads, reconstruction, and new (NFS and temporary) road construction.

Changes Made Between Draft and Final EIS

- Stream and crossing information on the Road Cards in Appendix B were corrected with field data or gaps identified and criteria disclosed. A correction from 61 red fish crossings to 54 crossing occurs in the FEIS due to more recent road maintenance information. Also, based on available stream information, short span log stringer or modular bridges were recommended to reduce effects on some stream channels (including Class III streams). Prior to actual construction of roads and stream crossings, final locations, structure types and design will be completed. All applicable Forest Plan Standards and Guidelines, Forest Service manual and handbooks, best management practices and the MOUs with Alaska Department of Fish and Game (when applicable) will be incorporated during design, construction and maintenance of roads.
- In response to concerns about the red crossings within the project area, an upstream assessment of fish habitat was completed and is included in the FEIS Aquatics section. Consequently, the number of red fish crossings was updated. This analysis supports the original DEIS analysis.
- Field methods were better documented for several resources including aquatics and transportation.
- A more detailed discussion of effects to stream flows is also included in the FEIS.

- Road densities were calculated at multiple scales and included in the analysis.
- In document discussions, corrections were made to the road numbers and miles of currently open NFS roads that would be closed with this project. Road cards, maps and related road numbers were correct in the DEIS.
- The timber sale economics and supply analysis was updated due to the use of NEAT_R version 2.15 as well as a better description of the small sales available and greater flexibility in the larger volume alternatives.
- The wildlife section was updated to include a more complete discussion of the rationale for choosing POG as the unit of measure and method of analysis.
- The Subsistence section was updated to include better information on use areas, preferences, access, and use of multiple subsistence resources.
- The cumulative effects analysis for POG within multiple WAAs was updated to exclude the Threemile Timber Harvest units as the decision for this project was vacated.
- Updates to the Region 10 Sensitive Species List (2009) were noted in the sensitive plants section. However, the Central Kupreanof project is exempt from applying the 2009 revisions due to the project's advanced stage when the list was approved and signed. The difference would be fewer effects to sensitive species in the area with the revisions since the two known species were removed from the list and none of the new species were found in the project area.
- The Yellow-billed loon was added as a Federal Candidate Species; the Black oystercatcher and Aleutian Tern were added to the Sensitive Species list, and evaluated in the analysis for the FEIS.
- Biological Evaluations have been published in this FEIS in Appendix E.
- The total acres affected for Rocky Pass IRA was corrected.
- On May 28, 2009, the USDA Secretary reserved decision making authority over the construction and reconstruction of roads and the cutting, sale or removal of timber in Inventoried Roadless Areas. This project will be sent to the Secretary of Agriculture for review.
- The acres of detrimental soil conditions caused by temporary road construction were underestimated for all action alternatives. The increase, however, did not change the percentage of the harvest area affected.

- The miles of reconstructed, temporary and system roads crossing wetlands were underestimated for all action alternatives, as well as the existing condition of system roads crossing wetlands. The underestimation was by a factor of three due to a unit conversion error. This does not change the conclusion regarding the cumulative effects of roads crossing wetlands.
- The Southeast Alaska Conservation Council (SEACC) submitted an alternative for consideration after the 45 day comment period for the DEIS was over. The alternative was considered but not carried forward (see page 2-11 for more discussion).
- Additional information and minor corrections were added, where appropriate, as requested through comments on the DEIS.

Alternatives Considered in Detail

The No-Action Alternative (Alternative 1), Proposed Action (Alternative 2) and two other action alternatives (Alternatives 3 and 4) are considered in detail in this chapter. Alternatives 3 and 4 provide alternate means of satisfying the Purpose and Need for this project than does the Proposed Action. They respond differently to the significant issues that are discussed in this chapter. Maps of all alternatives considered in detail are provided at the end of Chapter 2. The map for Alternative 1, the No-action Alternative, represents the current condition of the project area (See Figures 2-1 through 2-4, at the end of this chapter, for maps of each alternative. Larger-scale maps of the alternatives are contained in the project record.)

Alternative 1 (Figure 2-1)

This alternative represents the existing condition against which the other alternatives are compared.

Alternative 1 proposes no new timber harvest or road construction in the Central Kupreanof project area at this time. It does not preclude future timber harvest or other activities from this area. The Council on Environmental Quality (CEQ) regulations (40 CFR 1502.14d) requires that a "No Action" alternative be analyzed in every EIS.

Alternative 2 (Figure 2-2)

Alternative 2 is the Proposed Action and was designed to meet the Purpose and Need for this project, and to address concerns related to timber economics and deer habitat. It would offer up to 46.8 MMBF (sawlog and utility) of timber from 2,506 acres. It would consist of 2,031 acres (81%) that would be clearcut (CC), 33 acres (1%) that would be clearcut with reserves (CCR), and 442 acres (18%) that would be uneven-aged management. There would be 7.3 miles of new

NFS roads constructed, 2.9 miles of reconstructed road, and 3.9 miles of temporary road construction to access timber.

Alternative 3 (Figure 2-3)

Alternative 3 would provide the largest amount of volume of all the alternatives. It proposes harvesting 70.2 MMBF (sawlog and utility) from 3,647 acres. It would consist of 3,127 acres (86%) that would be clearcut (CC), and 520 acres (14%) that would be uneven-aged management. This alternative proposes helicopter yarding for those units where access by road construction is not feasible. Ground based systems and associated road construction are analyzed for this alternative. There would be 25.1 miles of new NFS roads constructed, 9.1 miles of reconstructed road and 6.1 miles of temporary road constructed.

This alternative would respond to maximizing timber harvest opportunity while meeting Forest Plan Standards and Guidelines. It addresses the timber economics issue by maximizing the proposed volume available and would allow the Forest Service the flexibility to respond to current and future market demands.

Alternative 4 (Figure 2-4)

Alternative 4 was developed in response to public concerns about the impacts of increased access, timber harvest, and road building on inventoried roadless area characteristics. This alternative offers the lowest amount of volume at 28.2 MMBF (sawlog and utility) from 1,327 acres. All units would be clearcut (CC). There would be no new NFS road construction; 2.6 miles of road would be reconstructed and 2.2 miles of temporary road construction.

Alternative 4 addresses all of the significant issues to some extent. It does not propose harvest and road building within the boundary of any Inventoried Roadless Area, although there would be effects to the zone of influence. Harvest would be limited to units in close proximity to existing roads. No new NFS roads and 2.2 miles of temporary road are proposed, which addresses concerns related to increased access. Less road building results in shorter haul distances which also satisfies timber economics concerns related to today's market, but does not take into account the need for flexibility in the long term.

Design Criteria Common to All Action Alternatives

All alternatives are consistent with the 2008 Tongass Land and Resource Management Plan (Forest Plan). All applicable Forest Plan Standards and Guidelines have been incorporated into the design of the proposed units and alternatives. While some alternatives have been designed to provide a greater measure of protection than is required by the Forest Plan for some resources, such as additional consideration for potential wildlife travel corridors, all alternatives were designed to

meet Forest Plan Standards and Guidelines for these and all other resources. Additional direction comes from applicable laws and Forest Service manuals and handbooks. A complete collection of site-specific descriptions and resource considerations for each potential harvest unit (unit and road cards) were published in Appendix B of the DEIS. In this FEIS road cards can be found in Appendix B, and the unit cards associated with the selected alternative are located in Appendix 2 of the ROD. These cards serve as the prescription or design narrative for the project as well as detail design elements for the construction and reconstruction needed for existing National Forest System roads.

Roads

Temporary (or NFS) roads were proposed in all units where shovel-yarding distances exceeded 500 feet to provide a surface for log hauling. Temporary road locations on the maps are estimated. Temporary road locations are subject to approval by the Forest Service. Temporary road decommissioning will be part of the timber sale contract.

Road closures will occur up to ten years after the completion of timber harvest. Road closure, storage and decommissioning are described in the Road Management/Access section in Chapter 3 and in the Glossary of Chapter 4.

Rock Quarries

Existing rock quarries may be expanded or new rock quarries may be developed to support new road construction and maintenance. Quarry sites would be developed within 500 feet of a road and avoid Class I and Class II stream buffers, old-growth habitat reserves, eagle and goshawk nest tree buffers, and non-development LUDs. With either the expansion of an existing quarry or the development of a new site, the area footprint would not exceed five acres.

Prior to quarry development a Site Development Plan will be reviewed and approved by resource specialists and the District Ranger.

Logging Camp

No land camp is proposed in the project area for any of the alternatives. The town of Kake or a floating camp could be used during harvest activities. Appropriate permits would need to be acquired by the operator for use of a floating camp.

Stewardship Contracting

In developing the projects common to all action alternatives, the District considered the potential of using stewardship contracting with proposed timber harvest activities. The District worked with Kake to identify projects where existing equipment and infrastructure could be used to accomplish the work. Funding for project contracting may come from a combination of timber receipts and other appropriated dollars. The receipts from the value of the timber could be used to

finance the contractual requirements, and a priority listing of the project area activities could be included in the contract. These projects would either be accomplished as part of the contract or independently. There would be a list of mandatory projects to be completed with timber receipts, combine with the possibility of using other appropriated dollars available at the time to maximize the number of project completed.

Projects Common to all Action Alternatives

The following projects were identified by the Interdisciplinary Team as possible stewardship opportunities within the project area. These projects are not design criteria or mitigation measures to reduce the effects of the alternatives, but could be used to improve or enhance resources or to complete obligations within the project area. These projects are common to all action alternatives and are suitable for potential stewardship contracting opportunities.

See Figure 2-5 for more information regarding Projects Common to All Action Alternatives.

Fisheries/ Hydrology

During this project, the Roads Analysis Process (RAP) was updated and recommendations for road management objectives for the entire Kake road system were made. Recommendations for roads not associated with the proposed timber harvest activities have been incorporated into the Petersburg Ranger District Access Travel and Management Plan Environmental Assessment (EA). Roads identified for closure include roads with red fish crossings. Ultimate closure of those roads will depend on the decision made from that EA (expected in 2009). Implementation of road closures would result in the removal of culverts that do not meet fish passage standards and could be accomplished through stewardship contracts associated with an action alternative.

Recreation

Maintain the four recreational hiking trails in the area: Cathedral Falls (0.5 mi.), Goose Lake (0.75 mi.), Hamilton Creek (1.0 mi.), and Big John Bay (1.75 mi.). The total length of all trails combined is about four miles. The work could include annual brushing, condition surveys and replacement of gravel as needed. Structure work on the trails could also be included depending on the extent and difficulty of the work. Gravel for trail maintenance in the past has been obtained locally in Kake.

Conduct annual maintenance for the Big John Bay Cabin including preparing it for occupancy in the spring and winterizing it at the end of the season. In addition, deferred maintenance and repairs could also be considered for this project. The cabin can be accessed by hiking the 1.75-mile trail off Road 45001or by boating to Big John Bay.

Invasive Plants

Hand-pull a small population of spotted knapweed located on the 6337 Road. Work could involve up to a half-day of work annually for at least five years and possibly monitoring and/or hand-pulling beyond that depending on how well the plants respond to hand-pulling. Proper disposal of the pulled weeds would be specified as part of the project design, most likely burning in a controlled manner. Other roadside weed populations could also be included, if new populations are discovered.

Silviculture/ Wildlife

Currently there are 325 acres of precommercial thinning to accomplish in second growth stands that could potentially be done under a stewardship contract on the Kake road system. These stands are approximately 25 years old. Thinning prescriptions would use traditional thinning methods, and may vary to include spacing from 14 x 14 to 18 x 18 feet. Thinning in these stands would also benefit wildlife as it would provide cover and allow side lighting to reach the forest floor. (See Figure 2-5)

Transportation

There are approximately 114 miles of Forest Service System roads in the Kake road system, which encompasses the Central Kupreanof EIS project area. Of those 114 miles of roads there are approximately 94 miles of open roads that need maintenance to remain open. This maintenance generally includes brush cutting, blading of the road surface, ditching and cleaning of culverts to keep proper drainage. Of the 94 miles of open road there are approximately 38 miles of mainline roads (6040, 6328, 6314, 6314S) that take first priority for maintenance.

Petersburg Ranger District historically has approximately $70,000 per year to spend on road maintenance in Kake. On the average it costs $2,000 per mile to maintain roads, which equates to 35 miles of road per year that can be done in Kake. Generally, two thirds of the mainline roads are done and the remaining portion is spent on selected side roads.

Microsales

A Microsale is a timber sale consisting of dead or down timber which has been proposed by a prospective purchaser, and the District Ranger agrees to offer for bidding using an informal advertisement and short bid form. The maximum size of a Microsale would be 50 MBF. Microsales are generally associated with a small number of trees. Dead or down trees within a distance of approximately 200 feet from one of the listed roads, and are harvestable under Forest Plan (2008) Standards and Guidelines, may be eligible as a Microsale opportunity within the project area.

On site evaluation will be conducted when trees have been identified for Microsale opportunities. For all action alternatives, Microsales authorized by the District Ranger would be allowed to occur along NFS roads 6040, 6314, 6314S, 6326, 6328, 6334, 6336, 6339 and 6367.

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