



File Code: 1570

Date: February 17, 2006

Subject: Emerald Bay Record of Decision and Final Supplemental Environmental Impact Statement

To: Appeal Deciding Officer

This is my recommendation, as Appeal Reviewing Officer, on the action you should take, as Appeal Deciding Officer, on the pending appeals of the Emerald Bay timber sale project. The following appeals were filed under 36 CFR 215:

- No. 06-10-00-0001 – Jill Jacob
- No. 06-10-00-0002 – Southeast Alaska Conservation Council, Sitka Conservation Society, Greenpeace, Juneau Group of the Sierra Club, Natural Resources Defense Council, and The Wilderness Society

The decision being appealed is the decision by the Tongass Forest Supervisor, Forrest Cole, to authorize the sale of timber and the construction of roads in the Emerald Bay project area on the Cleveland Peninsula. The 7,845-acre project area is located in the Emerald Creek and Wasta Creek watersheds, about 40 air miles north of Ketchikan, Alaska. The selected alternative, Alternative B, would allow the harvest of approximately 601 acres (providing approximately 16.4 million board feet (MMBF) of timber), and the construction of 5.8 miles of classified road, of which 2.2 miles would cross a medium old growth reserve, 0.4 mile of temporary road, and the construction of one land-to-barge log transfer facility.

Background

The Emerald Bay project first appeared on the Tongass National Forest quarterly schedule of proposed actions in the spring of 1997, and a Notice of Intent (NOI) to prepare an environmental impact statement (EIS) was published in the Federal Register on August 17, 1998. The Draft EIS was released for public comment on January 28, 2000. This Draft EIS disclosed the potential effects of three alternatives: the no-action alternative (Alternative A); a maximum timber volume alternative with traditional road construction (Alternative B); and the proposed action, which included uneven-aged management and helicopter harvest only (Alternative C). The proposed action, Alternative C, was identified as the preferred alternative in the Draft EIS.

In March 2000, after the Draft EIS had been released but before the close of the public comment period, a new alternative was developed. This alternative (Alternative D) included the uneven-aged harvest prescriptions proposed under Alternative C and the construction of 3.8 miles of road and one log transfer facility. This alternative was developed, in part, because further analysis of Alternative C had demonstrated it to be economically infeasible under any market scenario. A public information meeting was held on March 2, 2000, to introduce the new alternative, and on March 20, 2000, a project update letter was sent to all agencies, organizations,



and individuals on the project mailing list. This letter described the new alternative and extended the comment period on the Draft EIS to May 5, 2000.

On September 13, 2001, the Tongass Forest Supervisor signed the Record of Decision (ROD) for the Emerald Bay project, selecting Alternative D. The Southeast Alaska Conservation Council and the Wilderness Society; Robert and Jacquelyne Hunley; the Tongass Conservation Society; and the Sitka Conservation Society and Forest Conservation Council appealed the ROD. The Forest Supervisor's decision was reversed on appeal because the EIS did not adequately consider the potential effects of the project on roadless area values and wilderness characteristics.

A project update letter announcing the preparation of a Supplemental EIS (SEIS) was mailed October 2002. The Notice of Availability of the Final SEIS (FSEIS) was published in the Federal Register on November 18, 2005, and legal notice of decision was published in the Juneau Empire on November 21, 2005.

My review of these appeals was conducted pursuant to 36 CFR 215.19. The appeal and project planning records have been carefully reviewed in my consideration of the objections raised by the appellants and their requested relief. My recommendation hereby incorporates the entire administrative record for the project.

Appeal No. 06-10-00-0001 – Jill Jacob

The issues raised by Ms. Jacob all relate to the economic viability of the Emerald Bay project as it relates to road costs, local employment, impacts to the local recreation based businesses (e.g., a local fishing lodge), and impacts to the economy of the fishing industry. I believe these issues are dealt with adequately in my discussions of Issues 1, 2, 18 and 19 of the appeal filed by SEACC, et. al., below. As indicated in these discussions, I believe the analysis in the FSEIS and project record is sufficient to affirm the Forest Supervisor's decision with respect to these issues.

Appeal No. 06-10-00-0002 – Southeast Alaska Conservation Council, et. al:

Issue 1. Whether the public investment analysis is adequate.

Appellants assert that the projections of costs and revenues associated with the Emerald Bay timber sale are inaccurate and misleading, in violation of the National Environmental Policy Act (NEPA). They assert that the "Public Investment Analysis" section of the FSEIS does not accurately compare the value of the timber with the cost of preparing the timber sale because it relies on inaccurate budget estimates rather than on available monitoring data. Appellants contend that there is no support in the record for the Forest Service estimated cost of \$50.50/CCF, and that a more accurate estimate of cost incurred in administering the Tongass timber sale program between 1998-2003 (derived from the Monitoring Reports) averaged \$259/CCF. Appellants assert that the costs of administering the sale presented in the FSEIS grossly understate the actual expenses incurred by the agency.

Discussion

I disagree with appellants' assertion that NEPA requires the disclosure of public investment costs associated with a proposed timber sale project. NEPA requires the disclosure of effects on the human environment, not the administrative costs of managing timber sale projects. The task for the agency is to weigh the economic and other benefits of the project against its *environmental costs*. The Forest Service is not required to consider, as part of the NEPA process, the administrative costs of preparing EISs, sale layout, and sale administration. Moreover, depending on the perspective, the cost of NEPA compliance might be considered a cost of undertaking the project, a cost of protecting the environment, or a cost of public land management.

Even though NEPA does not require it, the administrative costs associated with implementing the Emerald Bay project are addressed. The Emerald Bay FSEIS uses the average costs across the Alaska Region for administering timber sales [FSEIS, p. 3-64]. These costs are based on calculations outlined in the Declaration of Forrest Cole [Decision Document #838]. The Forest Service must use estimates of costs and revenues for timber sales in project NEPA documents as the actual costs and revenues will not be finally determined until the sales are sold.

Appellants go on to argue that the actual cost of administering sales is based on expenditures by budget line item (BLI). The table on page 7 of the appeal includes total expenditures by the Forest Service in various categories, derived from tables of expenditures by BLI from Tongass National Forest monitoring reports, 1998 through 2003. Although total expenditures by BLI include on-the-ground costs of timber sale planning, sale preparation, engineering support, and sale administration, timber sale costs to the Forest Service constitute only a portion of the various BLI totals. The expenditures in a BLI are the expenditures for the entire National Forest in a given category in a given year, and cannot be attributed to specific projects. As outlined in the Declaration of Forrest Cole lodged with the District Court in *NRDC v. Forest Service*, Case No. J04-010CV (JKS) [Decision Document #838], timber sales are multi-year projects, and these BLIs include numerous other Forest Service projects and programs beyond timber sales.

In response to comments raised by the appellants regarding this issue, the FSEIS points out that the purpose and need for the project does not mandate that the Forest Service will make money by offering timber for sale [FSEIS, D-159, Comb-5]. This point is further emphasized in the Forest Supervisor's declaration, where it states:

The Tongass National Forest is not managed to produce a maximum net revenue flow to the Treasury. Administrative costs of numerous Tongass programs, such as recreation, wildlife, fisheries, trails, and subsistence exceed the receipts from those programs.

The Forest Service is directed to sell commercial timber sales at not less than appraised rates. The Alaska Region implements this direction by established appraisal methodologies. In calculating what timber is worth, quarterly values are derived from timber product publications whereby logging and manufacturing costs for the timber sale projects conditions are subtracted from timber worth. Forest Service administrative costs play no part in the calculation of appraised value. If sales are determined to be deficit

following the appraisal methodologies, a base rate (lowest value the Forest Service will accept for the timber sale project) is established and the project is offered for bid.

[Decision Document #838].

In my opinion, the public investment analysis contained in the Emerald Bay FSEIS and project record meets all applicable requirements.

Issue 2. Whether the Forest Service violated NEPA by relying on outdated and demonstrably inaccurate projections of market demand.

Appellants assert that although the Ninth Circuit Court ruled in *Natural Resources Defense Council v. United States Forest Service*, 421 F.3d 797 (9th Cir. 2005), that the Forest Service's misinterpretation of market demand in the 1997 Tongass Land and Resource Management Plan (TLMP) ROD was arbitrary and capricious, the Emerald Bay FSEIS continues to rely on erroneous market demand calculations. Appellants assert that the Forest Service misinterpreted the demand projections prepared by agency economists during the Forest Plan revision process and that the agency compounded this error by incorporating these projections as an integral component of the timber sale procedures used to set the annual Tongass timber program offer levels. Appellants further assert that the Forest Service violated NEPA by relying on an incorrectly inflated market demand projection and by failing to disclose and evaluate changes in current timber market conditions. Finally, appellants assert that the Forest Supervisor's conclusion that there is currently a market demand for timber, a limited supply of timber from other sources, and an under-utilized mill capacity in the region is arbitrary as it runs counter to evidence before the agency.

Discussion

The projections of timber demand in question were made by David Brooks and Richard Haynes of the Pacific Northwest Research Center of the Forest Service in September 1997. Those projections are cited in FSEIS for the Emerald Bay Timber Sale and are used as one of the inputs in a methodology developed by Kathleen Morse for estimating annual demand for Tongass timber. The appellants object to both uses.

The Brooks and Haynes projections were at issue before the Ninth Circuit in *Natural Resources Defense Council v. U.S. Forest Service, (NRDC I)*, 421 F.3d 797 (9th Cir. 2005). The dispute in the appeal of the Emerald Bay timber sale is, however, totally different from the issue that was before the Ninth Circuit. The Ninth Circuit held that the revised TLMP was defective because the TLMP Record of Decision (ROD) and FEIS *misinterpreted* the Brooks and Haynes projections.

The appellants now argue that it was improper for the Forest Service to use the 1997 Brooks and Haynes timber demand projections because, according to the appellants, the projections were hopelessly outdated and demonstrably inaccurate. They do not argue that the Emerald Bay FSEIS misinterprets the 1997 Brooks and Haynes projections. Appellant's argument is premised on the erroneous assumption that if actual harvest is less than the demand projected by Brooks

and Haynes for a number of years, the demand projections are outdated and inaccurate. Brooks and Haynes themselves warned against equating timber demand with actual harvest:

As with our previous projections, the volume of projected National Forest harvest is neither the volume likely to be harvested nor, necessarily, the volume that ought to be offered for sale. It is the volume of National Forest timber harvest that is consistent with projected consumption of Alaska products. *** we do not intend to imply that ‘gaps’ will be created by levels of National Forest harvest that differ from our projections.

In deciding how much timber to offer for sale in any given year, the agency uses the methodology set forth in “Responding to the Market Demand for Timber Using Adaptive Management to Implement Section 101 of the 1990 Tongass Timber Reform Act” (Morse, April 2000). That methodology has the advantage of being self-correcting in that when actual harvest falls below demand projections, offerings for future years are reduced. The methodology also adjusts for changes in mill capacity due to openings and permanent closures of facilities. Appellants have not indicated a more credible source of information about future market demand for Tongass timber.

The effect of underestimating timber demand is much more serious than overestimating demand. When the agency underestimates timber demand, mills can close for lack of adequate timber supply. Conversely, if the agency prepares more timber than is demanded, the excess timber will not be sold and no environmental impacts will occur. Timber demand on the Tongass has always been volatile, and can differ significantly from actual harvest in any given year or series of years.

The existence of timber demand for the Emerald Bay timber sale is supported by the record. Comments from 24 individuals [FSEIS, Appendix D-14 through D-37] state a need for jobs and raw material for local processors. The 2003 TLMP SEIS documented that harvests within Southeast Alaska are the main source of raw materials for the region’s wood products industry. The vast majority of wood for local processors comes from the Tongass National Forest. Timber from the Tongass and Native Corporation lands essentially flow into different markets because the Native timber is not subject to a requirement that it be processed in Alaska [2003 TLMP SEIS, 3-250]. Brooks and Haynes (1997) likewise concluded that there is limited non-Tongass timber for Alaska mills. Under-utilized mill capacity, if it continues, can lead to mill closures. The TLMP SEIS reported an average utilization rate of 66 percent during the 1985-1994 period, compared to a 23 percent utilization rate in 2000 (68 MMBF) [2003 TLMP SEIS, 3-254]. Kilborne et al. (2004) (“Estimating sawmill processing capacity for Tongass timber,” PNW-RN-545) estimated that utilization of mill capacity in 2000 was 17 percent, and by 2002 had dropped to about 9 percent. The Emerald Bay project record contains documents referring to the annual demand estimate for 2005, and both describe an industry mill capacity that was calculated to be 11 percent, which was used in the low market scenario [Decision Documents #624 and 624a].

The Emerald Bay FSEIS contains a thorough discussion regarding timber economics addressing the decline in the Japanese market, improvements at sawmills in Southeast Alaska, the

development of Alaska grade stamps for lumber sawn in Southeast Alaska, the closure of the Ketchikan Pulp Company mill, and the potential for a pulp mill [FSEIS, pp. 3-59 through 3-61].

In my opinion, the record demonstrates that recent socioeconomic information relevant to market demand and the timber sale planning effort has been adequately considered.

Issue 3. Whether the ROD and FSEIS are consistent with the Clean Water Act (CWA).

Appellants assert that the timber harvest and road construction activities authorized in the Emerald Bay FSEIS/ROD will violate the State of Alaska's water quality standards for turbidity and sediment, in violation of the CWA. Appellants also assert that the analysis in the Emerald Bay FSEIS regarding turbidity is inaccurate and misleading, and that neither the ROD nor FSEIS discuss the potential violations of the sediment standard, in violation of NEPA.

Discussion

Section 313 of the CWA and Executive Order 12088 require the Forest Service to comply with all Federal, State, and local requirements relating to the control and abatement of water pollution [33 U.S.C. 1323(a)]. Section 319 of the CWA and Executive Order 12372 require that Best Management Practices (BMPs) be consistent with the State's Non-Point Source Pollution Control (NPS) program, and that they be used to mitigate the effects of land disturbing activities. The Memorandum of Agreement between the Alaska Department of Environmental Conservation (DEC) and the Alaska Region of the Forest Service recognizes that the Forest Service's BMPs are consistent with the State's NPS program.

Appellants assert that the Emerald Bay project will violate Alaska's Water Quality Standards (WQS) found at 11 AAC 70.020. Specifically, appellants assert that implementation of the Selected Alternative will result in violations of the turbidity standard found at 18 AAC 70.020(b)(12) and the sediment standard found at 18 AAC 70.020(b)(9); thus, the project violates the CWA and the FSEIS violates NEPA. As I understand it, this assertion is based on the fact that these provisions of the WQS do not specify whether or not the controlling measurements of turbidity and sediments are to be taken 48 hours after an action such as installation of a culvert is taken.

On this question, I believe that provisions of the Alaska Forest Practices Regulations [11 AAC 95] are controlling. Under the Alaska Forest Resources and Practices Act (FRPA), [AS 41.17.010], DEC has the authority to approve regulations promulgated under the FRPA. Upon approval, such regulations "establish the non-point source pollution requirements under state law and sec. 319 of the Clean Water Act" for forestry activities [AS 41.17.010(6)].

Coordination with the State of Alaska included the Division of Governmental Coordination, the Department of Fish and Game, and the Department of Environmental Conservation. The Forest Service determined that implementation of the Emerald Bay project will affect the coastal zone. Based on the analysis in the FSEIS, review of the Forest Practices Act, and comments from State agencies on the Draft SEIS, the Forest Service determined that the Emerald Bay project is consistent to the maximum extent practicable with the enforceable policies of the Alaska Coastal

Management Program (ACMP). The State concurred with this consistency finding in November 2004.

In keeping with the review process mandated by the Coastal Zone Management Act, the ACMP, and DEC's NPS program, several State agencies reviewed the Emerald Bay FSEIS for consistency with the ACMP. As part of that review, DEC reviewed the FSEIS for consistency with State nonpoint source pollution control requirements. Results of that review are contained in a Final Consistency Finding from the Alaska Division of Governmental Coordination (DGC), which states:

Based on an evaluation of the project by the Alaska Departments of Environmental Conservation, Fish and Game, and Natural Resources (Division of Mining, Land and Water, and Office of Habitat Management and Permitting), the State of Alaska concurs with the consistency certification submitted by the applicant, the U. S. Forest Service.

[Decision Document #580, p. 2]. No mention is made in DGC's finding of any water quality concerns or any potential violations of the WQS.

In addition, Alaska's Nonpoint Source Pollution Control Strategy (September, 2000), published by DEC (see <http://www.state.ak.us/dec/water/wnpnspc/pdfs/NPSstrat-appendixFINAL.pdf>), states that the Forest Practices Regulations have been approved by DEC:

In July 1993 the State promulgated revised regulations required by the 1990 revision of the Alaska Forest Resources and Practices Act (FRPA). The changes incorporated recommendations of the statewide Forestry Steering Committee. The revised regulations specify both administrative procedures and environmental standards for timber harvest activities on private, state and other public lands. The Forest Resources and Practices regulations were promulgated by [the Alaska Department of Natural Resources] and approved by DEC. DEC had approval authority of the regulations since provisions of the FRPA and the regulations establish the State's nonpoint source pollution control requirements under state law and Section 319 of the Clean Water Act for forest practices activities.

The Emerald Bay ROD discloses that:

The Forest Service must apply Best Management Practices (BMPs) that are consistent with the Alaska Forest Resources and Practices Regulations to achieve Alaska Water Quality Standards. The site-specific application of BMPs, with a monitoring and feedback mechanism, is the approved strategy for controlling nonpoint source pollution as defined by Alaska's Nonpoint Source Pollution Control Strategy (October 2000). In 1997, the State approved the BMPs in the Forest Service's Soil and Water Conservation Handbook (FSH Handbook 2509.22, October 1996) as consistent with the Alaska Forest Resources and Practices Regulations. This Handbook is incorporated into the Tongass Land and Resource Management Plan.

The design of harvest units for the Selected Alternative was guided by standards, guidelines and direction contained in the Forest Plan, and applicable Forest Service Manuals and Handbooks. The unit cards and road cards (Appendices 1 and 2 of the ROD) contain specific details on practices prescribed to prevent or reduce nonpoint sediment sources.

Monitoring and evaluation of the implementation and effectiveness of Forest Plan Standards and Guidelines and Best Management Practices will occur. Project activities are expected to meet all applicable State of Alaska Water Quality Standards.

[ROD, R-10 and R-11].

Based on the foregoing analysis, I believe the FSEIS and project record demonstrate that the Emerald Bay project complies with all applicable State nonpoint source pollution control requirements. Thus, there is no violation of the CWA.

Issue 4. Whether the ROD violates NEPA and the National Forest Management Act (NFMA) by foreclosing multiple use options other than timber development for the Emerald Bay project area.

Appellants assert that the decision in *NRDC v. U.S. Forest Service* requires the Forest Service to prepare a new forest plan for the Tongass and that NEPA specifically prohibits the Forest Service from making decisions that prejudice the ultimate decision on a programmatic EIS.

Appellants further assert that by issuing a second ROD approving logging and road building in the Emerald Bay project area prior to completing the court-mandated revision of the Tongass Plan, the agency prejudiced the likelihood that the project area would be considered for non-timber land use designation (LUD) status, including wilderness. Therefore, appellants contend that the decision to approve the Emerald Bay ROD and FSEIS before revising the Tongass Plan as mandated by the court violates NFMA and NEPA.

Appellants make several allegations related to this issue, including 1) the ROD illegally commits the roadless area to developed status, thereby eliminating options for preserving it for other multiple uses through the court mandated revision of the 1997 TLMP; 2) the ROD ignores overwhelming public support for managing the project area and the rest of the Cleveland Peninsula in an undeveloped state; and 3) the ROD and FSEIS violated NEPA by failing to carefully scrutinize the environmental impacts from committing the Emerald Bay project area to development uses.

Discussion

Forest plans are programmatic documents that guide future projects. The decisions to be made in a forest plan involve whether and how to change existing management direction. The status quo for a forest plan decision is the pre-existing management direction, not a complete cessation of all management activities. It would be counterproductive to sustainable management if all activities were shut down during the periodic revision of forest plans.

The law reflects this view of forest planning. In NFMA, Congress directed that forest management continue under existing plans while the first NFMA forest plans were being developed [16 U.S.C. 1604(c)]. Likewise under NEPA, the Council on Environmental Quality has recognized that the “no action” alternative for forest plans is the current management direction, not a halt of all activities [CEQ’s “40 Questions” #3]. Even if the Emerald Bay project is completed, the project area is still eligible to be designated as any of the land use designations, as harvested lands are included in reserve land use allocations. Timber from the Emerald Bay project may be needed to maintain existing mills during the plan amendment or revision process.

Only Congress can designate an area as Wilderness, and there are no Federal lands that are ineligible for designation as Wilderness by Congress. The Forest Service planning regulations adopted in 1982 required forest plans to evaluate certain areas and consider recommending these areas as potential Wilderness. The planning regulations adopted in 2005 do not have such a requirement. The entire Tongass was evaluated and reviewed for possible Wilderness recommendation in the 2003 TLMP SEIS. All Tongass National Forest lands were assessed to determine if they were suitable for wilderness consideration based on the Wilderness Act and procedures in the Forest Service’s forest planning directives. Appendix C (TLMP SEIS Volumes II and III) includes documentation of the analysis and evaluation for each inventoried roadless area, and describes the relative contribution each roadless area would make to the National Wilderness Preservation System. The SEIS documents the results of a very intensive additional roadless area evaluation for the Tongass conducted in 2002 and 2003. This included updated mapping and evaluation of all unroaded lands, which led to the 109 inventoried roadless areas analyzed in the Final SEIS. The Emerald Bay area was evaluated and not recommended for Wilderness.

Whether or not the amendment or revision of the Tongass forest plan undertakes a wilderness evaluation, it was not improper to sign the Emerald Bay ROD. It was not known at the time of the ROD, nor is it now, whether the Tongass will be required to undertake a Wilderness review as part of the court mandated revision of the Forest Plan, as the notice of intent for a plan amendment or revision has not been issued. In fact, under present regulations, a Tongass Forest Plan revision cannot be undertaken under the 1982 planning regulations that require a Wilderness review, though a proposed rule has been published that, if finalized, would allow the Tongass to complete the court mandated revision under the 1982 or the 2005 planning regulations [71 *Federal Register* 307].

Issue 5. Whether the FSEIS and ROD adequately respond to public comments on this project as required by law.

Appellants contend that the public has been raising issues related to the Emerald Bay project since its first inception, and that the Forest Service has continued to fail to respond to those comments as required by law. Appellants state that Appendix D of the FSEIS (Response to Public Comments) does not meet the quality of analysis required by 40 C.F.R. § 1503.4.

Discussion

As pointed out by appellants, the regulations implementing NEPA at 40 CFR 1503.4 state:

- (a) An agency preparing a final [EIS] shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses are to:
 - (1) Modify alternatives including the proposed action.
 - (2) Develop and evaluate alternatives not previously given serious consideration...
 - (3) Supplement, improve, or modify its analyses.
 - (4) Make factual corrections.
 - (5) Explain why the comments do not warrant further agency response.
- (b) All substantive comments received on the draft statement (or summaries thereof where the response has been exceptionally voluminous) should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement.

Appendix D of the FSEIS contains the Response to Comments on the Draft SEIS. As stated on page 1 of this Appendix, fifty-one agencies, organizations, and individuals submitted written comments on the Emerald Bay Draft SEIS. Appellants assert that the Forest Service has failed to respond to all substantive comments raised related to the Emerald Bay project since its inception, but the only example they provide to support this assertion is a claim that the agency failed to respond to all issues raised in the appeals of the 2001 ROD. Appellants acknowledge that the appeal decision addressed the issue of the potential impacts on roadless areas and wilderness characteristics, but object that no findings were made regarding other issues raised.

There is no requirement in NEPA or the implementing regulations of the Appeal Reform Act [36 CFR 215] that the Appeal Reviewing Officer (ARO) or Appeal Deciding Officer (ADO) must specifically address all issues raised in an appeal in the recommendation or decision. As discussed in response to Issue 6c below, the ADO directed the Forest Supervisor to review the concerns identified by the ARO related to impacts on roadless area values and to take appropriate action to address them [Decision Document #447]. In my opinion, the additional analysis presented in the FSEIS on this issue meets that direction. If appellants still had concerns regarding other issues raised in their appeal of the 2001 ROD, the appropriate time to raise those issues would have been in their comments on the Draft SEIS, which they did. Based on my review of their comments on the Draft SEIS and the Forest Service responses [FSEIS, pp. D-102 through D-168], I find that their concerns were adequately addressed.

Appellants refer to documents in the project record (P.R. 03_071503 and 03_081303) that they claim demonstrate that issues were not addressed. These documents are notes from an interdisciplinary team (IDT) meeting and a conference call between the T.E.A.M.S Enterprise Team and district personnel discussing the additional analysis needs identified by the team. I disagree with appellants' assertion that these documents demonstrate that issues have not been addressed. To the contrary, I believe these documents demonstrate that the IDT was thorough in identifying and responding to concerns raised by the public as well as those raised internally.

Based on my review of the record and Appendix D of the FSEIS, public comments on the Emerald Bay project were appropriately reviewed and considered. Summaries of these comments and the Forest Service response to these comments are included in Appendix D. Copies of all comments from Federal, State, and local agencies and elected officials are also included in this appendix, consistent with the NEPA regulations and Forest Service policy.

Issue 6. Whether FSEIS and ROD adequately consider the cumulative impacts of the Emerald Bay project.

Appellants assert that the cumulative effects analysis contained in the FSEIS fails to take an adequate hard look at the cumulative effects of the Emerald Bay project, when taking into account potential future development of the Cleveland Peninsula.

Issue 6a. Whether the FSEIS adequately discloses and analyzes the impacts from development plans for the Cleveland Peninsula.

Appellants assert that the Forest Service has had plans for future development of the Cleveland Peninsula for many years and that it failed to identify and analyze those plans in the FSEIS. Appellants point to several documents and plans to support their argument including 1) a 2000 memo from former District Ranger Jerry Ingersoll, which they contend indicates that the Emerald Bay project was part of larger development plans for the area; 2) the Emerald Bay Roads Analysis Map, which was dismissed in the DSEIS as being too far out in the future and too speculative to assess effects even though the map indicates that future plans for development include a road system covering each of the major drainages in the Cleveland Roadless Area; 3) the Southeast Alaska Transportation Plan, which identifies a transportation corridor across the Cleveland Peninsula; 4) the Canal-Hoya and Kuakan timber sale projects, which were discussed in the DSEIS but not in the FSEIS; 5) the special use permit for the Swan Lake-Tyee Intertie project which was not mentioned in the past, present or future sections of the FSEIS; and 6) the TLMP allocation of forest lands on the north and south shores of Spacious Bay for timber production, which appellants contend means that it is likely that timber projects will be proposed for those areas in the future.

Discussion

The Draft SEIS for the Emerald Bay project contained the following discussion regarding reasonably foreseeable actions considered in the analysis:

Potential additional projects on National Forest System land in the general vicinity of the Emerald Bay project include:

- The proposed Swan-Tyee Powerline, which is 19 miles north of the project area
- The Canal-Hoya Timber Sale, 22 miles north (sold in 2000)
- The Kuakan Timber Sale, located 10 miles to the north (sold in 2000)
- The Sunny Bay/Frosty Bay Timber Sales located 3 to 10 miles north (proposed for 2008)

- The Whale Tail Timber Sale located on Etolin Island, 19 miles to the northwest (proposed for 2010)
- The Recreational Commercial Guide EIS

The effects of the activities associated with the Emerald Bay project are not expected to add to the effects of, or be affected by, these projects. None of these actions would be located within VCU 7210 or the project area. All of these projects are separated from the Emerald Bay project area by topographical barriers and by a distance of at least 10 miles, with the exception of the Pt. Warde/Sunny Bay Sale, which is not scheduled.

[DSEIS, pp. 3-2 and 3-3].

The Emerald Bay FSEIS describes the changes between the Draft SEIS and FSEIS on pages 2-1 and 2-2. It describes the changes in the cumulative effects analysis as follows:

Geographic areas used for cumulative effects analysis for this project include VCU 7210, WAA 1817, or the Cleveland Roadless Area #528. Several projects identified in the Draft SEIS as reasonably foreseeable future actions in the vicinity of the Emerald Bay project area are located well outside any of these analysis areas and do not contribute to cumulative effects for any resources. These projects, the Swan-Tyee Powerline, the Kuakan Timber Sale, and the Pt. Verde/Frosty/Sunny Bay Project, were discussed in the Draft SEIS but are not discussed in the Final SEIS.

[FSEIS, p. 2-2].

The introduction to Chapter 3 – Environment and Effects defines direct, indirect, and cumulative effects and identifies past, present and reasonably foreseeable actions considered in the analysis. The discussion of reasonably foreseeable actions states:

Future additional projects in the general vicinity of the Emerald Bay project would not contribute to cumulative effects because of their distance and timing. These include:

Sunny Bay project, located approximately 1 mile north of the project area on the Wrangell Ranger District. It is on the 2004 Timber Sale 10-year Schedule as 20 MMBF to sell in 2011. No planning has begun yet for this project. The area is in a separate watershed and the future road system would not connect to the Emerald Bay project area because of steep rugged terrain (see Chapter 2, Alternatives Eliminated from Detailed Study).

[FSEIS, p. 3-2].

In my opinion, the FSEIS adequately discloses the effects of past, present and reasonably foreseeable projects and Forest Supervisor adequately explained his rationale regarding which projects would be considered in the cumulative effects analysis. See my response to Issue 6b for further discussion regarding proposed actions.

Issue 6b. Whether the FSEIS analysis areas for the cumulative effects analyses are appropriate.

Appellants contend that the FSEIS narrowly focuses its analysis on the Emerald Bay project area rather than the larger Cleveland Peninsula, even though there are clear plans for further development on the peninsula. Appellants disagree with the FSEIS statement that no analysis is required because “there is no proposal [for development]....” Appellants assert that limiting the cumulative effects analysis on productive old growth to WAA 1817 is inadequate because, as mentioned above, they believe that there is documentation supporting future plans for road development.

Discussion

It would appear that appellants believe the existence of documents discussing potential future development on the Cleveland Peninsula means those potential developments are proposed projects. I disagree. There are not yet any proposals for projects as that term is defined in the Council on Environmental Quality’s NEPA regulations, because the agency is not yet actively preparing to make a decision on one or more alternatives nor can the effects of any alternatives be meaningfully evaluated [See 40 CFR 1508.23]. Indeed, there has not been a Notice of Intent to prepare an EIS for any other projects on the Cleveland Peninsula. Effects of future projects on the resources of the Cleveland Peninsula are appropriately examined during the project planning process for those projects, in which appellants will have the opportunity to participate.

The cumulative effects analysis area is defined in the discussion for each resource area. As examples, the Biodiversity and Old Growth, and Wildlife cumulative effects analysis areas are defined as WAA 1817 [FSEIS, pp. 3-13 and 3-100]; for Silviculture and Transportation and Access Management the cumulative effects analysis areas are defined as the project area (VCU 7210) [FSEIS, p. 3-58 and 3-84].

In my opinion, the cumulative effects analysis areas were appropriately defined and considered for each resource area.

Issue 6c. Whether the FSEIS adequately addresses the inadequacies identified in the original Emerald Bay NEPA analysis.

Appellants assert that the FSEIS fails to analyze the impacts of the proposed Emerald Bay project on the entire Cleveland roadless area as required by the 2002 appeal decision.

Discussion

The Appeal Reviewing Officer (ARO) for the 2002 appeal of the Emerald Bay project found that the effects on the roadless area values and wilderness characteristics of the Cleveland Roadless Area were not adequately considered in the FEIS and project record and recommended that the decision be reversed. The Appeal Deciding Officer (ADO) concurred with the ARO and directed the Forest Supervisor to review the concerns identified by the ARO and to take appropriate action to address them [Decision Document #447].

In my review of the FSEIS, I find that the analysis and discussion of the impacts of the project on the roadless area values associated with the Cleveland Roadless Area have been sufficiently improved. The FSEIS includes a thorough discussion regarding the Cleveland Roadless Area affected environment, including its proximity to wilderness and other roadless areas, proximity to lands that could be developed, landscape character of the project area, diversity of plants and animals, social and recreational use, reference landscapes, and traditional cultural properties [FSEIS, pp. 3-40 through 3-46]. The FSEIS adequately discloses the direct, indirect, and cumulative effects on roadless area values on pages 3-46 through 3-50.

In my opinion, the Forest Supervisor has met the direction provided by the ADO in the 2002 appeal decision.

Issue 7. Whether the ROD and FSEIS are consistent with NFMA and NEPA and adequately analyze likely impacts to the old growth reserve (OGR).

Issue 7a. Whether development within the OGR is consistent with LUD objectives and standards and guidelines of the TLMP.

Appellants contend that the Emerald Bay ROD violates numerous TLMP standards and guidelines and undermines the intent of the reserve system by fragmenting the medium OGR with a road and allowing development of two rock pits, a log camp, a log sort yard, and a land-to-barge log transfer facility (LTF) all within the reserve. Appellants also assert that construction of a log dump within a bald eagle nest buffer and building a road within the estuary fringe violate TLMP LUD objectives and standards and guidelines. Finally, appellants note that while the FSEIS mentions a requirement for a landscape assessment of “old-growth forest habitat within large and medium reserves and other natural [LUDs],” there is no evidence that a review has been completed in the record.

Discussion

One of the goals for an OGR is to “[m]aintain areas of old-growth forests and their associated natural ecological processes to provide habitat for old-growth associated resources” [TLMP, p. 3-76]. Transportation standards and guidelines for the Old Growth LUD specifically state:

New road construction is generally inconsistent with Old-growth Habitat Land Use Designation objectives, but new roads may be constructed if no feasible alternative is available.

[TLMP, p. 3-81].

Further direction is provided when considering new road construction in an old-growth LUD:

Perform integrated logging system and transportation analysis (including Access and Travel management planning) to determine if other feasible routes avoiding this Land Use Designation exist during the project environmental analysis process. If no feasible alternative routes exist, locate, design, and construct roads in a manner which minimizes

adverse impacts to fish and wildlife resources to the extent feasible, and will be compatible with Land Use Designation objectives.

[Id., p. 3-81].

Similar direction is provided with regard to log transfer facilities:

Sites for Log Transfer Facilities may be considered in this Land Use Designation. If no other feasible alternative sites exist, locate, design, construct, and manage these facilities in a manner which will be compatible with Land Use Designation objectives.

[Id., p. 3-81].

Clearly, TLMP standards and guidelines indicate that while roads and facilities are to be limited to the extent feasible in OGRs, they are not prohibited. The road, LTF, sortyard, camp, and rock pits will physically alter about 23 acres (0.2 percent) of the 11,530-acre medium OGR [ROD, p. R-2]. Road design mitigation measures are described in the FSEIS [pp. 3-81 and 82], and include a narrower roadbed, less vegetative clearing and storage of the road after use. The Forest Supervisor provided his rationale for the need for development within the OGR by stating:

I considered the need to minimize disturbance in Old-growth Habitat LUDs while still meeting the goals, objectives, and desired condition of the Timber Production LUD in an economical manner. The interdisciplinary team (IDT) analyzed the feasibility of using helicopters to eliminate the need for road construction. Declining market values since 1998 made harvest by helicopter an uneconomical option. The Forest Plan allows road building in Old-growth Habitat LUDs if no other feasible means of access exist.

The IDT analyzed five alternate routes to access the project area. The alternate routes required two to three times more road miles at much greater cost, and were determined infeasible due to cost and environmental effects. Four of the alternate road routes also required road construction in Old-growth Habitat LUDs. The three routes leading north to either Sunny Bay or Frost Bay required road construction over steep, rugged terrain. I determined that the road proposed in the Selected Alternative is the most feasible way to access the Timber Harvest LUD.

[ROD, p. R-3].

With regard to appellants' assertion that building a road within the estuary fringe violates LUD objectives and standards and guidelines of TLMP, I disagree. The objectives for beach and estuary fringe habitat are described in TLMP [p. 4-4], and include maintaining ecological integrity and providing a relatively continuous forested corridor linking terrestrial landscapes. Management of beach and estuary habitat is governed by the LUD in which this habitat is located. In this instance, the beach and estuary fringe is located within a medium OGR, and permitted activities within this LUD are described above. TLMP standards and guidelines [p. 4-5] specifically state that road construction is discouraged but may be designated in beach and estuary fringes, and that LTFs may be constructed.

Appellants also object to construction of a log dump within a bald eagle nest buffer. Bald eagle habitat is managed in accordance with the Interagency Agreement between the Forest Service and the U.S. Fish and Wildlife Service (USFWS) that establishes a 330-foot no-disturbance zone around nest trees. When incompatible uses (in this case construction and use of a road and LTF, blasting, and helicopter overflights) encroach within this zone, a variance must be requested. The USFWS approved a variance that included recommendations to reduce potential disturbance to eagles [FSEIS, pp. A3-1 and A3-2], and these recommendations are incorporated into the decision [ROD, p. R-10].

I conclude that the construction and operation of the road and facilities as proposed in the OGR are within Forest Plan standards and guidelines.

With regard to appellants' contention that a review of old-growth forest habitat within large and medium reserves has not been completed, I disagree. Although brief, an analysis of old growth blocks within the planning area (including the OGR) is provided in the FSEIS [p. 3-8]. The text notes that any fragmentation is the result of natural vegetation structure or events, with the exception of 14 acres harvested 60-80 years ago. The FSEIS describes the habitat within the OGR affected by the road location and LTF, as well as ground disturbance in general [FSEIS, pp. 3-11 and 3-12].

Regarding connectivity between OGRs, it is clear that the beach and estuary buffer along the edge of the medium OGR provides a significant amount of connectivity. Most obviously, two small OGRs lie adjacent to each other, one of which (in VCU 7200) immediately abuts the medium OGR, providing direct connectivity between all three OGRs. The effects of the alternatives on productive old growth and connectivity are briefly described in the FSEIS on page 3-12. An interagency review of the small OGRs [Decision Document #217], one purpose of which is to assess connectivity between larger reserves, recommended no change to the OGRs adjacent to the planning area, indicating satisfaction with the apparent amount of connectivity.

Since there is currently little to no human-caused fragmentation of old growth blocks within the planning area or landscape, I conclude that the analysis of connectivity both within and among OGRs is adequate.

Issue 7b. Whether the FSEIS adequately assesses impacts from development within the OGR and reveals opposing views as required by law.

Appellants contend that the FSEIS continues to fail to meet NEPA requirements for disclosure or discussion of professional-level controversy regarding environmental impacts over the road and development within the old growth reserve.

Discussion

The Emerald Bay FSEIS discusses the impacts on biodiversity and old growth from planned activities [FSEIS, pp. 3-6 through 3-13]. The text discusses the effects of roads on small, less mobile species and the extent of edge effects [Id., p. 3-11]. This section also discloses and discusses the other ground-disturbing activities in the OGR, including impacts by alternative for

a land camp and rock pits [Id., p. 3-9] and a sort yard and LTF [Id., p. 3-12]. Cumulative effects are discussed on page 3-13 (paragraph 4).

Additionally, the potential effects of the road, and other associated construction on specific wildlife species are discussed in the Wildlife section of the FSEIS [pp. 3-90 through 3-102]. Effects on deer [FSEIS, p. 3-95], marten [Id., p. 3-97], brown bear [Id., pp. 3-97 and 98], bald eagles [Id., p. 3-99] and wolves [Id., pp. 3-99 and 100] are clearly disclosed. The cumulative effects of proposed activities (including timber harvest) on wildlife are disclosed on pages 3-100 through 3-102.

The Transportation and Access Management section of the FSEIS [pp. 3-81 through 3-84] discusses the road alternatives considered. This section contains a map showing alternative routes [Figure 3-9, p. 3-83] and a table that clearly displays the differences between alternatives [Table Transportation-1, p. 3-84]. The ROD discusses the reasons that the selected route was chosen rather than any other alternative [ROD, p. R-3].

Contrary to appellants' assertion, the FSEIS and supporting documentation disclose opposing views over developments within the OGR. Letters provided in Appendix D to the FSEIS document the opinions of some agencies and groups, notably the USFWS [FSEIS, Appendix D, p. D-9], Cascadia Wildlands Project [FSEIS, Appendix D, pp. D-71, 72, 74, and 75], and the Sierra Club et. al. [FSEIS, Appendix D, pp., D-148 through 150]. Responses to these concerns are also contained in Appendix D on pages D-12, D-89, D-91, D-164 and D-165. In addition, the planning record contains documents that note the divergence of opinions regarding actions proposed within the OGR (for example, Decision Document # 564, a letter from the USFWS to the District Ranger; Decision Document #147, a letter from the State of Alaska to the District Ranger; and Decision Document #565 containing notes from a March 18, 2004 interagency meeting). Based on my review of these concerns, I conclude that they were adequately considered and addressed in the FSEIS.

The controversy over developments within the OGR is disclosed in several locations in the FSEIS and ROD, as well as in the planning record. The FSEIS states that “[a] number of concerns were brought up through meetings, comment letters, and conversations. One concern is the construction of a road, LTF, sortyard and rockpits in the medium OGR and beach fringe” [FSEIS, p. 3-26]. The ROD includes the following statements: “Others were concerned that a precedent would be set by proposing to build a road through a medium old-growth reserve. They cited possible effects to fish and wildlife resources...” [ROD, p. R-5], and “[t]he purpose of the meeting was to address USFWS concerns about road building in the medium old-growth reserve, the LTF construction, eagle nests, other wildlife species concerns, and alternative silvicultural methods” [ROD p. R-6].

As discussed in response to Issue 7a, the Forest Supervisor acknowledged this controversy and explained the rationale for his decision in the ROD. In my opinion, the FSEIS and supporting documents adequately disclose and discuss the potential impacts of developments within the OGR and disclose opposing views.

Issue 7c. Whether the medium OGR design approved by the ROD is consistent with the TLMP requirement that reserves be a contiguous landscape of approximately 10,000 acres.

Appellants assert that the decision to build a road that splits the medium OGR into two parts of less than 10,000 acres each is not consistent with TLMP.

Discussion

Placing a road within an OGR is allowed, as discussed in response to Issue 7a above, and is consistent with TLMP standards and guidelines. The FSEIS acknowledges that the road would bisect the medium OGR and discloses the effects of the road on wildlife movement. The FSEIS states:

Although the road may create a barrier through the OGR, movement corridors would be maintained through the small OGR in VCU 7220 on the east side of the project area and within riparian buffers. The riparian buffer would provide a link from Emerald Creek into the Wasta drainage and provide a travel corridor around the road.

[FSEIS, p. 3-11].

TLMP Appendix K defines a medium OGR as a “[c]ontiguous landscape of approximately 10,000 acres of which 5,000 acres must be productive old-growth. At least 2,500 acres of the productive old growth forest component should be in the high volume class strata” [TLMP, K-1]. In my opinion, the overall characteristics of the medium OGR will continue to meet TLMP standards and guidelines even with the road. Additionally, the record clearly demonstrates that the Forest Supervisor considered different options for rerouting the road as well as options for making adjustments to OGRs due to concerns expressed by USFWS. Notes from a meeting with USFWS on July 7, 2005 [Decision Document # 606] lay out 4 options for moving medium the OGR, but all four options were dismissed because the Forest Supervisor believed “[t]he existing OGR still provided the best long-term habitat, since it had larger, more concentrated blocks of old growth and high volstrata old growth at lower elevations” [Decision Document #567].

In my opinion, the Forest Supervisor thoroughly considered various options and their effects on the medium OGR and made a reasoned choice that meets TLMP standards and guidelines.

Issue 7d. Whether the FSEIS and ROD reveal that feasible alternatives exist to building a road through the medium OGR.

Appellants contend that while the forest plan allows for road building within OGR reserves if no other feasible alternatives are available, the record fails to provide a full Access and Travel Management Plan for the Cleveland Peninsula. Appellants assert that four feasible options were presented to the Forest Supervisor but that he dismissed these alternatives without providing information to support his conclusion that the existing OGR would still provide the best long-term habitat.

Discussion

The ROD [p. R-3] and FSEIS [pp. 2-9 and 3-82] indicate that five alternative routes were evaluated with the main objective of avoiding road construction in the medium old-growth reserve. These alternative routes are described in the FSEIS [pp. 3-82 through 3-84] and summarized on page 2-9. Documents in the planning record support the additional efforts to evaluate alternative routes, including Decision Document #677 that describes two routes to Frosty Bay and routes to Bluff Point and Snail Point on Spacious Bay, and Decision Document #679 that describes a route to Sunny Bay. The FSEIS states:

None of the alternative routes would meet the policy of using the minimum road system necessary (FSM 7710.3). All of the alternative routes were deemed infeasible to access the Emerald Bay project because of one or more reasons: road construction costs, miles of road through an OGR, or the potential for resource damages involved with construction of roads on unstable soils and steep slopes. As a result, it was determined that the road route through the OGR to Emerald Bay represented the only feasible route.

[FSEIS, p. 3-82].

The planning record includes several documents that describe and discuss options for moving the medium OGR in order to avoid road construction through it. Decision Document #606 describes the positive and negative aspects of each of the four options considered, and a table in Decision Document #566 displays the total acres, productive old-growth acres and high volume strata acres for each option. The rationale for not moving the medium OGR is disclosed in the response to comments, where it states that the existing medium OGR "...encompasses some of the best habitat in terms of high-volstrata POG, it contains lower elevations and southerly aspects favoring deer winter range, and provides a corridor connection across the "pinchpoint" of the Cleveland Peninsula" [FSEIS, p. D-165].

In my opinion, an adequate transportation analysis was conducted, and the FSEIS and supporting documents offer adequate disclosure of alternatives considered for both the road route and possible old-growth reserve relocation. I believe that the Forest Supervisor made a reasoned decision regarding the route selected and retaining the medium OGR as selected in TLMP.

Issue 7e. Whether the FSEIS and ROD consider the direct, indirect and cumulative impacts to the old growth reserve system on the Cleveland Peninsula.

Appellants assert that the FSEIS violates NEPA because the Forest Service did not provide a specific, reasoned analysis of the cumulative effects to the OGR system on the Cleveland Peninsula. Appellants contend that the Forest Supervisor decided not to consider recommended changes to four small OGRs on the lower Cleveland Peninsula and that he failed to take a hard look at the effects of the project on biodiversity and wildlife in the Emerald Bay project area and surrounding lands.

Discussion

Old growth reserves were mapped as part of the TLMP process, and landscape-level considerations were evaluated at that time. The Goals and Objectives for old-growth reserves are described in TLMP [TLMP, p. 3-8]. Appendix K states “[w]here “non-development” Land Use Designations do not fulfill size, spacing, and composition criteria of the Forest-wide system of old-growth habitat reserves, add or modify old-growth reserves to meet criteria” [TLMP, Appendix K, p. K-1]. The medium OGR in the project area currently meets criteria outlined in TLMP, and although relocating it was considered (as discussed above), no changes were made. Adjustments to small old-growth reserves were considered, but no changes were suggested for those in the vicinity of the Emerald Bay project [Decision Document #565, p.1, and Decision Document #217].

The FSEIS discloses and analyzes the distribution of productive old growth outside of the OGR and connectivity between old-growth patches by alternative. The cumulative effects for the wildlife analysis area are also summarized in the FSEIS [FSEIS, p. 3-12 and Table Old Growth-3, p. 3-13].

The Responsible Official is not required to revisit broad-scale decisions that were made in the Forest Plan when evaluating effects of a specific timber sale in a specific area. I conclude that the analysis of old-growth reserves, old growth habitat and connectivity are adequate for the area considered in the Emerald Bay FSEIS.

Issue 7f. Whether the ROD adequately estimates the edge effects of the road on the medium OGR.

Appellants contend that the analysis of impacts of edge effects from slashing miles of permanent, classified road through the estuary buffer and medium OGR in the project area is incomplete and misleading. Appellants believe that the estimate for loss of interior habitat from introduced edge effects associated with the road should have been doubled to include both sides of the road. They refer to research conducted by Concannon (1995) which detected edge effects from clearcut edges 200 meters (656 feet) from the edge.

Discussion

The adequacy of the FSEIS discussion of potential impacts on the medium OGR has been discussed elsewhere in this recommendation (see response to Issue 7b). Regarding appellants’ specific point about the width of the corridor analyzed for possible edge effects, the text in the FSEIS itself is unclear. However, a review of GIS coverages for the road and the associated “effects corridor” clearly indicate that a 200 meter (656 feet) buffer was established on **each** side of the road (for a total width of 400 meters or 3012 feet) in order to calculate forested acres potentially affected by the new edge [GIS coverages available on CD in project record]. This analysis is in accordance with the research conducted by Concannon. I believe the appellant is mistaken in stating that Concannon’s research formation was incorrectly applied and the edge effects underestimated.

Issue 8. Whether the FSEIS and ROD take a hard look at the environmental impacts of the Emerald Bay project as required by NEPA.

Appellants cite several court opinions in discussing the requirement that federal agencies take a “hard look” at environmental consequences of proposed actions.

Discussion

Without citing specific instances related to the Emerald Bay project, appellants contend that the Forest Service failed to take the requisite hard look at the environmental effects of the project. I disagree. As demonstrated in my responses to issues throughout this recommendation, I believe that the Emerald Bay FSEIS adequately assessed and disclosed the impacts of the project on resources in the project area as well as the surrounding Cleveland Peninsula. The documentation contained in the project record supports the findings made in the FSEIS and ROD; therefore, I conclude that the “hard look” requirement of NEPA has been met.

Issue 9. Whether the FSEIS adequately discloses or discusses professional-level controversy over pinch points and low passes in the Emerald Bay project area.

Appellants contend that while the record demonstrates concerns from the public and other agencies about the importance and impacts of pinch points and low passes in the Emerald Bay area for wildlife, it fails to discuss the significance of the pinch point in the Spacious Bay-Ernest Sound area or the controversy developing around these important areas.

Discussion

The FSEIS contains several references to the “pinch-point” concern. The response to Cascadia Wildland Project (CWP) states, “[c]onnectivity analysis is recommended to be done at the landscape level, (Forest Plan, p. 4-120); however, it was addressed for this project to consider effects on a “pinchpoint” across the peninsula” [FSEIS, D-89, CWP-25]. The FSEIS contains the following discussion regarding the pinch-point:

The State of Alaska Central/Southern Southeast Alaska Area Plan (DNR 2000) identified the Spacious Bay-Ernest Sound area as a “bio-geographical pinchpoint.” The distance across from Emerald Bay to Spacious Bay is approximately 5 miles (linear distance); the area available for harvest is 1.75 miles wide and occurs in the west central area of the pinchpoint (Refer to Figure 1-1). Concern was expressed by the State over fragmenting this narrow isthmus through logging and road construction and thereby affecting the viability of certain species (deer, bear, wolf) on the lower Cleveland Peninsula (DGC letters 5/8/2000, 1/19/2001)

[FSEIS, pp. 3-100 and 3-101].

The FSEIS goes on to discuss the potential effects of the proposed timber sale on deer, brown bear and wolf movement, and concludes that movement would not be restricted for any of these species [FSEIS, p. 101]. Beach and estuary buffers, riparian corridors, and the small and

medium OGRs will facilitate movement in the “pinch point” area. The FSEIS concludes “the project would not inhibit use of travel corridors” [FSEIS, p. 3-47].

I conclude that the FSEIS adequately discloses the concern about “pinch-points” in the proposed sale area.

Issue 10. Whether the FSEIS adequately reveals the project’s impacts on forest types of particular rarity and/or importance to wildlife.

Appellants assert that FSEIS fails to quantify the loss of coarse canopy habitat (volume class 6 and 7) in the project area. Additionally, appellants contend that the FSEIS fails to discuss the occurrence or loss of volume class 5 habitat which appears to be preferred by goshawks and marten.

Discussion

A discussion of coarse canopy habitat can be found in the FSEIS [p. 3-8] where it discloses that, according to the Forest GIS database, there are 597 acres of mapped coarse canopy (volume class 6 and 7) stands within the OGR. The FSEIS also states, “[n]o harvest would occur in the 597 acres of mapped coarse canopy habitat” [FSEIS, p. 3-8]. Because of the patchy nature of Southeast Alaska forestland, small stands of coarse canopy trees are likely to be found in stands classified as lower volume classes. The FSEIS discloses that additional coarse canopy stands were found within units scheduled for harvest [FSEIS, p. 3-13]. Conversely, coarse canopy inclusions are also likely in portions of the sale area where no harvesting is planned.

Table Old Growth-3 [FSEIS p. 3-13] displays the acres remaining after harvest by volume strata. For the selected alternative, approximately 255 acres of high volume strata (old volume classes 5, 6 and 7 minus stands on hydric soils) will be harvested. Of the existing high volume strata, 89 percent will remain in the VCU after harvest. Given that the analysis relied on the appropriate GIS coverage, and the reduction of high volume productive old growth (only a portion of which may be volume classes 6 and 7) in the VCU appears to be small, I conclude that the level of disclosure and analysis is appropriate.

Appellants raise an issue related to the loss of volume class 5 habitats for the Queen Charlotte goshawk and marten. Regarding the goshawk, preferred habitat is described as “[h]igh-volume (vc 6 & 7) old growth forest ... followed by medium volume (vc 5) old growth...with most use on gentle slopes below 800 feet elevation” [FSEIS, p. 3-78]. Changes to preferred goshawk habitat are displayed in Table TES-3 [FSEIS, p. 3-79] by alternative. The FSEIS discloses that while all action alternatives would harvest stands capable of providing nesting and/or foraging habitat for goshawks, there will be no loss of viability on the planning area [FSEIS, p. 3-80].

With regard to marten, preferred habitat is described as “high volume strata, old growth forest below 1,500 feet elevation” [FSEIS, p. 3-92]. The FSEIS discloses that while high volume marten habitat would be reduced by 12 to 13 percent under the action alternatives and road impacts would be temporary, neither impact is expected to substantially reduce marten

populations within VCU 7210 or affect overall marten distribution. The FSEIS then provides adequate rationale for this conclusion [FSEIS, pp. 3-96 and 3-97].

In my opinion, the FSEIS adequately addresses the impacts of the proposed activity on preferred goshawk and marten habitat.

Issue 11. Whether the record supports the findings made in the FSEIS and ROD.

Appellants contend that the FSEIS and planning record fail to provide the supporting data for findings in the FSEIS. Appellants specifically refer to the wildlife resources report, which they claim is non-existent, and state that there is no supporting documentation for the findings regarding Management Indicator Species (MIS) or for any other wildlife analysis.

Discussion

The Wildlife section of the FSEIS contains numerous citations that support the statements, analyses, and conclusions presented. The text refers frequently to relevant and recent literature in discussions of individual species described in the text. Complete citations may be found in the Reference portion of the FSEIS [pp. 4-24 through 4-29]. Additionally, the Wildlife text references numerous discussions and analyses found in TLMP documents, including the Forest Plan and portions of the TLMP FSEIS.

Appendix B to the FSEIS contains the most recent Biological Assessment/Biological Evaluation for this project, and the planning record contains concurrences from the appropriate partner agencies. The planning record also contains the tables showing calculations for deer habitat capability [Decision Document #684]. Results of the marten model are summarized in a note to the files [Decision Document #323], although the model runs themselves are apparently not in the record. The Forest Supervisor should review the marten runs to ensure they support the analysis in the FSEIS and that they are available in the planning record.

There is no requirement for a Wildlife Resources Report, though it is helpful in providing more complete discussions and analyses that can then be summarized in the EIS. After review of the Wildlife portion and the Threatened, Endangered, and Sensitive Species portion of the FSEIS, I am satisfied that the discussion, analyses, and conclusions are adequately supported by citations and documentation in the planning record.

Issue 12. Whether the ROD follows the standards and guidelines of the Forest Plan and therefore violates NEPA.

Appellants raise several allegations related to the “Powell memos” which they claim unlawfully exempt many timber sales from TLMP’s survey requirements. The “Powell memos” include an April 1998 memo from former Forest Supervisor Powell, detailing approved field inventory techniques for wildlife and sensitive plant surveys on the Tongass during the 1998 field season, and the “Tongass Forest Plan Implementation Clarification Papers” (TPIT papers), released in August 1998 to clarify implementation of the forest plan standards and guidelines.

Issue 12a. Whether the Forest adequately surveyed for heron, raptors, and the Queen Charlotte goshawk.

Appellants assert that the Powell memo illegally changes TLMP standards regarding surveys for herons and raptors from a requirement to conduct project level inventories to specifically identify rookeries and nesting habitat to more general field observations and reporting by non-specialized field workers. Appellants contend that although the Forest Service has the ability to clarify TLMP standards and guidelines, the agency does not have the authority to do so without the appropriate public review process. Additionally, appellants claim that the record fails to provide documentation that goshawk surveys were completed or that any surveys for other raptors were performed.

Discussion

The Forest Plan's standards and guidelines include direction for Wildlife Habitat Planning. Subsection X A 1. provides direction to "[c]onduct project level inventories to identify heron rookeries and raptor nesting habitat using the most recent inventory protocols" [TLMP, p. 4-116]. The TPIT Papers [Decision Document #800] provide the "most recent inventory protocols."

Hérons

Regarding inventories for heron rookeries, clarification in the 1998 Powell Memo cited by appellants states that field-going personnel will be trained in great blue heron identification. The Powell memo also states that "[d]uring project field work from April to July, project personnel shall scan intertidal mudflats within the analysis area (preferably at mid/low tide) for the presence of foraging great blue herons" and that any sightings will be documented and followed up by a wildlife biologist. As appellants note, the FSEIS states that "[n]o herons were reported or rookeries found" [FSEIS, p. 3-94].

I conclude that inventories for heron rookeries were conducted according to current protocols. I find no basis for the appellants assertion that the Powell memo direction means that "[h]eron surveys are eliminated altogether," or that this protocol is inconsistent with the Forest Plan. Rather, the TPIT Papers merely describe the necessary protocols for implementing the standards and guidelines and other provisions of the Plan.

Raptors

Appellants also assert that "[t]he Planning Record shows no indication that surveys for any raptors except the Queen Charlotte goshawk were performed." This is incorrect, as the FSEIS describes efforts made to identify and protect raptor nests:

Surveys in June 2000 found three [bald eagle] nests located at or near the mouth of Emerald Bay (USFWS 2000). One additional nest is present toward the south end of the project area, one nest occurs on Easterly island, and over two-dozen nests are mapped in the vicinity of Vixen Inlet. No nests were found immediately north of Emerald Bay, but

approximately 10 nests are present in the Sunny Bay area. Aerial surveys of the Emerald nests in the summer of 2001 located two of the nests. They appeared dilapidated and unused (Spiering and Zelenak 2001). The third nest was not located. One nest was located during road review in 2005; it is located directly behind the proposed LTF. No activity was observed within the vicinity of Emerald Bay. Additional surveys were completed in June 2005. An eagle was observed in the nest nearest the proposed LTF. It was difficult to see into the second nest, but an eagle was perched nearby and was very vocal when the nest was approached on foot. From these indicators, both nests are considered active.

[FSEIS, pp. 3-93 and 3-94]. Surveys for bald eagles are also documented in the record [Decision Document #318]. As stated in the ROD, management activities within 330 feet of an eagle nest site are restricted by an Interagency Agreement between the Forest Service and the USFWS. The Forest Service requested and was granted a variance by the USFWS that will allow construction activities in the 330-foot nest buffer, except between March 1 and August 31 [ROD, p. R-10].

Regarding red-tailed hawks, the FSEIS states:

During the 2000 field season, crews observed concentrated activity by raptors in Unit 10. A survey by wildlife biologists in August 2000 resulted in finding an active red-tailed hawk nest in Unit 10. Surveys in 2001 found that there was a pair suspected to be nesting in the area, but was not using the nest from the previous year (Spiering and Zelenak 2001). Additional surveys in the spring of 2002 found the 2000 nest was not occupied.

[FSEIS, p. 3-94].

The text in the Unit Card for Unit 10 [FSEIS, p. A1-19] and ROD [FSEIS, p. R-2] clearly show that Standards and Guidelines for raptor nests will be applied for this red-tailed hawk nest.

The Biological Assessment/Biological Evaluation (BA/BE) in Appendix B of the FSEIS indicates that no ospreys have been observed in the project area.

I conclude that inventories for raptors were conducted according to current protocols. I find no basis for appellants' assertion that this protocol is inconsistent with TLMP standards and guidelines.

With regard to inventories for goshawks, clarification in the 1998 Powell memo cited by appellants' states that field-going personnel will be trained in goshawk identification. As noted in a response to a comment "[t]here has been a lot of field reconnaissance in the Emerald Bay project area in addition to goshawk surveys without locating any goshawk nests or goshawk activity" [FSEIS, p. D-94].

According to the established protocol, wildlife biologists will follow up on suspected observations, visit known or suspected nest sites, and survey a sample of potential nesting habitat where there is no reported evidence of goshawk nesting activity. For this project, biologists completed goshawk surveys in 15 potential habitat locations during 1998 [FSEIS, p. 3-78], completed surveys at 62 stations in 1998 [FSEIS, p. B-3], conducted additional surveys in 2000

[FSEIS, p. B-3], and completed one raptor survey (which would also have revealed a goshawk) in 2001 [Decision Document #318]. No goshawks or goshawk nests were found. The Forest Supervisor should consider consultation with the Forest biologist to determine the need for additional goshawk surveys prior to project implementation. If a goshawk nest is found before or during project implementation, standards and guidelines as described in the Forest Plan will be implemented.

I conclude that inventories for goshawks were conducted according to appropriate protocols and adequate for the project. Survey reports are in hard-copy format and within unit folders. The appellants may request this information from the Forest.

Issue 12b. Whether the ROD is consistent with the requirement of TLMP that wolf habitat and dens be protected and that interagency communication occurs.

Appellants assert that no records exist in the planning record to indicate that surveys for wolf dens have been completed in the project area or that interagency communication has occurred.

Discussion

The pertinent Forest Plan requirement regarding wolf dens is to “[m]aintain a 1,200-foot forested buffer, where available, around known active wolf dens” [TLMP, p. 4-117]. There is no requirement in the Forest Plan to conduct a survey to locate all wolf dens in the project area. It does require that, if a wolf den is found, certain standards and guidelines be observed [Id]. As noted in the FSEIS, “[t]here has been a lot of field reconnaissance in the Emerald Bay project area” [FSEIS, p. D-94]. Despite that, no wolf dens were found [FSEIS, p. D-163]. If a wolf den is found before or during project implementation, standards and guidelines described in the Forest Plan will be implemented.

In response to comments, the FSEIS notes the standard practice of contacting Alaska Department of Fish and Game (ADF&G) to inquire about any known wolf dens within a project area, and acknowledges that ADF&G was contacted concerning population trends of species found in the project area [FSEIS, pp. D-162 and D-163]. Information on wolf harvest in the area is reported on page 3-94 of the FSEIS, and includes references to a report [Decision Document #772] and personal communication with ADF&G biologist Boyd Porter.

I conclude that evidence of wolf dens was collected according to TLMP protocols and none were found. Contrary to appellants’ assertion, I also conclude that interagency communication between the Forest Service and ADF&G did occur.

Issue 12c. Whether the ROD is consistent with TLMP in protecting marbled murrelet nests.

Appellants contend that TLMP standards regarding protection of murrelet nests were violated because the record does not disclose any attempt to locate nests.

Discussion

The Forest Plan contains no requirement to survey for marbled murrelet nests. It does require that, if a marbled murrelet nest is found, certain standards and guidelines be observed [TLMP, p. 4-117]. As noted in the FSEIS [p. D-44], field personnel are trained in the identification of marbled murrelets and sightings are reported to a biologist for follow-up. No marbled murrelet nests have been recorded in the Emerald Bay vicinity [Id].

I conclude that evidence of marbled murrelet nests was collected according to TLMP protocols and none were found.

Issue 12d. Whether the Forest Service has satisfied its wildlife monitoring obligations under TLMP and can rely on those findings in the Emerald Bay ROD and FSEIS.

Appellants assert that the Forest Service has continually failed to implement the Forest Plan wildlife monitoring strategy, and that to date, the Forest Service has not attempted to evaluate population trends for any management indicator species (MIS) on the Tongass National Forest. Appellants also contend that the limited monitoring data that does exist shows that the standards and guidelines adopted in TLMP are not being applied properly on the ground at the site-specific level. Appellants state that the failure to monitor MIS species as required by law leads to failures in the ability to effectively analyze impacts of the Emerald Bay project on wildlife and insure wildlife viability is protected across the forest as required by NFMA.

Discussion

I disagree with appellants' assertions that the Tongass has failed to meet its responsibilities to acquire and analyze actual and trend population data for MIS, and that no attempt to evaluate population trends for any wildlife species has been reported. The requirements for MIS monitoring are contained in the 1982 Forest Service regulations implementing NFMA:

Population trends of the management indicator species will be monitored and relationships to habitat changes determined. This monitoring will be done in cooperation with State fish and wildlife agencies, to the extent practicable.

In keeping with this direction, the Forest Plan requires monitoring to answer the following question: “[a]re population trends for Management Indicator Species (MIS) and their relationship to habitat changes consistent with expectations?” [TLMP, p. 6-14]. The sampling methods to be employed are described as follows:

Measure habitat changes (see Biodiversity Monitoring, item #2). Use the most recent version of the interagency habitat capability models (other sources may be used if they better reflect habitat change) to estimate change in the relative habitat values for each MIS since the start of plan implementation. Compare population trends for MIS (gathered as described below) with habitat changes. *Evaluate approximately every five years for consistency with plan expectations* [Id., emphasis added].

The Tongass National Forest Annual Monitoring and Evaluation Report for Fiscal Year 2002 includes a 15-page description of efforts conducted in compliance with this direction. The most pertinent portions of that description follow.

A brief summary of the habitats used by the 13 wildlife MIS, population status and trends, and the general management trends on the Tongass National Forest (Tongass) that influence habitat capability for these species [is provided below].... In addition, determinations of 1) the relationships that existed between changes in habitat capability and MIS population changes and... 2)...if the habitat and population information is consistent with expectations in [the] Forest Plan is also addressed. Various techniques were used to infer trends in habitat capability by assessing changes in important habitats. Each species summary was examined to determine its value of that species as an MIS. This evaluation was based on the quality and quantity of existing data available for that species, the magnitude of the management issues associated with the species, and the cost and feasibility of gathering additional data. For many species we acknowledge that linking population changes to management activities is difficult to implement (Landres et al. 1988, Mladenoff et al. 1997), that our analyses could likely only detect dramatic changes in populations, and that we were unable to definitively determine whether changes in the population was due to human caused habitat change.

Of the 5.5 million acres of productive old growth on the Tongass National Forest in 1954, about 1.3 million acres are tentatively suitable forested lands (Tongass ROD, 1997, p. 7). Of these acres, about ½ million acres are available for timber harvest over the 100-year timber rotation. Assuming maximum levels of allowable timber harvest ([an average of] 267 million board feet/year), this equates to an annual harvest of about 8,250 acres. About 16,472 acres have been harvested on the Tongass during the 5-year period (1998 through 2002) since implementation of [the] Forest Plan. This amount of harvest equates to 3294 acres annually, less than half the maximum rate allowed in the Forest Plan. The majority of this harvest occurred in [Game Management Units] 2 and 3, particularly in [three specific] ecological subsections. The number of acres harvested in the last 5 years equates to a very small percentage, generally < 1 percent of the forest in these subsections (Nowacki et al. 2001). Therefore, reduction of old growth habitat to date has been less than projected in the Forest Plan Final Environmental Impact Statement (USDA FS 1997).

[Decision Document #835, pp. 2-161 and 2-162, 2-164 and 2-165]. The monitoring report demonstrates that population and habitat data have been collected and evaluated, and that trends have been identified to the degree possible, as has the relationship between changes in habitats and changes in populations. Accordingly, I believe that the requirements of the NFMA regulations and the Forest Plan with respect to MIS monitoring have been met.

Regarding the failure to ensure wildlife viability, the TPIT clarification provides insight as to the purpose and impact of small protection measures, such as retaining snags or protecting individual bird nests. The document states (A-2):

Many specific stand level protection measures were included as standards and guides...The primary purpose of these measures was to take advantage of opportunities to protect these features within the matrix as these opportunities arise or were readily identified during project planning. These stand level measures are a very small component of the overall landscape conservation strategy and were not intended to serve as principle components of vital species conservation measures.

The old growth reserve system, buffers, connectivity, and standards for treatments of forestland within areas allowed for timber harvest are primary factors in ensuring species viability across the forest, and these standards are appropriately applied in the project area. I conclude that the FSEIS adequately analyzes impacts of the Emerald Bay project on wildlife and ensures that viability is protected.

Issue 13. Whether the FSEIS and ROD are consistent with the viable population requirements of the NFMA.

Appellants assert that the Emerald Bay FSEIS fails to consider project level impacts to the Forest-wide habitat conservation strategy. Appellants contend that the FSEIS relies on the generalized cumulative effects analysis documented in the programmatic TLMP FEIS rather than a more site-specific analysis of impacts of the Emerald Bay project on the old growth protection strategy and wildlife viability for the Cleveland Peninsula. Finally, appellants assert that the FSEIS and administrative record fail to provide adequate analysis or data on current populations of MIS.

Discussion

In large part, appellants are arguing forest planning issues that are outside the scope of a project level EIS. Forest Service regulations at 36 CFR 219.19 require that fish and wildlife habitat be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. These regulations are the regulations that were in effect at the time the 1997 Tongass Plan was approved and apply to the development, adoption, and revision of forest land and resource management plans as required NFMA. They do not apply to project level decisions.

The Tongass Land Management Plan (TLMP) is the applicable Forest Plan, and the TLMP administrative record demonstrates that the Forest Plan old-growth habitat conservation strategy provides for viable populations of all old-growth associated species. The Under Secretary of Agriculture's decisions on the appeals of the TLMP ROD and FEIS determined that the Regional Forester's decision was consistent with NFMA.

Appellants' assertions relating to the adequacy of the Forest Plan old-growth habitat conservation strategy and the peer reviewers' criticism of that strategy are nearly identical to those raised in *Natural Resources Defense Council v. U.S. Forest Service*, No. J03-0029 (D.Alaska, decided September 24, 2004). In its decision in that case, the District Court concluded that the Forest Service had "acknowledged th[e] uncertainty [regarding the conservation strategy], considered the available scientific evidence, marshaled the evidence in

applying it to the Tongass Plan, and proceeded to choose an alternative that would, in the Forest Service's opinion, best provide for the multiple-use goals mandated by Congress" [September 24, 2004 Order at p. 6]. The Court went on to state that the Forest Service "adequately considered the range of alternatives and adequately justified its decisions sufficient to pass muster under both NEPA and NFMA" [Id.]. The 9th Circuit Court decision did not find fault with the conservation strategy.

Regarding the old growth strategy, the Emerald Bay project is appropriately tiered to the comprehensive landscape old-growth habitat reserve strategy designed for TLMP. This strategy established a system of reserves that provide for the viability of species, even with the maximum timber harvest allowed under the Tongass Forest Plan for a full 100 years. Projects consistent with the Tongass Forest Plan, such as the Emerald Bay project, have had their cumulative effects evaluated in the Forest Plan EIS and their effects on viability of species have been considered in the design of the comprehensive landscape old-growth habitat reserve strategy.

In addition to the broad scale old-growth reserve and viability analyses in TLMP, the Emerald Bay FSEIS also addresses old-growth and wildlife viability issues. As stated in the FSEIS, "[p]roject areas are not expected to independently maintain viable populations because of their relatively small size. However, management activities in such areas need to consider project-level contributions to the Forest-wide strategy" [FSEIS, p. 3-6]. The FSEIS provides project-level discussions on the effects of the project on old-growth reserves and viability, including cumulative effects from reasonably foreseeable future actions [FSEIS, pp. 3-6 through 3-13]. The FSEIS also discusses effects of the proposed project on selected Management Indicator Species (MIS), including cumulative effects within Wildlife Analysis Area 1817 [FSEIS, pp. 3-94 through 3-102]. Additionally, the potential cumulative effects on threatened, endangered, and sensitive species are discussed in the Biological Assessment/Biological Evaluation found in Appendix B.

As discussed in my response to Issue 12d, there is no requirement that Forest Plan MIS populations or trends be monitored at the project level. However, the FSEIS does provide some information on specific wildlife populations in the area, when such information is available. As stated in response to comments on the FSEIS, "[t]he Alaska Department of Fish and Game was consulted concerning population trends of species found in the project area" [FSEIS, p. D-162]. General information is provided on: 1) marten ("...marten populations in Unit 1B are believed to be common to abundant and stable" [FSEIS p. 3-92]); 2) deer ("populations are currently low" [FSEIS, p. 3-95]); and 3) goats ("...closed the season in 2003 due to conservation concerns" [FSEIS, p. 3-93]). As stated earlier, trend information is more appropriately monitored at the plan level.

I conclude that the FSEIS appropriately tiered to the Tongass Plan regarding application of the old-growth strategy and assessment of species viability, and the FSEIS adequately discussed effects of the proposed project on these components of the Forest Plan.

Issue 14. Whether the FSEIS adequately protects marten and discloses impacts to marten as required by law.

Appellants assert that the Emerald Bay FSEIS does not adequately disclose the potential effects of the project on marten. Appellants contend that the Emerald Bay project cannot rely on Forest Plan standards and guidelines for marten as the Plan fails to adequately protect marten viability, and that the Emerald Bay ROD and FSEIS fail to include critical new information regarding marten and assumptions made in designing the Forest Plan. Appellants assert that there have been no studies to determine if the Forest Plan marten standards and guidelines are being or can be implemented properly, and that the only monitoring conducted to date has indicated that an insufficient number of trees of the correct diameter were retained and a number of trees had been lost to windthrow. Finally, appellants contend that the FSEIS lacks a detailed discussion of the effect on marten from fragmenting the medium OGR and high value marten habitat with logging roads and resulting increased trapping pressure.

Discussion

The FSEIS discloses the effects of the alternatives on marten habitat. Timber harvesting within the VCU will reduce high value marten habitat by 12 to 13 percent under the action alternatives [FSEIS, p. 3-96] and clearing for the road and associated facilities will reduce high-value marten habitat less than 1 percent [FSEIS, p. 3-97]. However, when considering the Wildlife Analysis Area (WAA) as a whole (a more appropriate scale at which to evaluate effects on marten), high-value marten habitat will be reduced by 2 percent.

The Emerald Bay FSEIS appropriately tiers to the Forest Plan and Forest Plan standards and guidelines for harvesting timber in high risk biogeographic provinces are described in the FSEIS on page 3-96. A review of the unit cards indicates that high-value marten habitat is identified in Units 1,3, 10, 11 and 12, and that appropriate mitigation measures are applied. Regarding the spacing of leave trees, as the appellant notes, “[s]peculative insights suggest that clumping leave trees may be better for marten habitat.” For multiple reasons, current direction from the Forest Supervisor states that “[r]eserve trees should be clumped rather than scattered ...” [Decision Document #609, p. 2].

Appendix N of the Forest Plan describes the risk assessment panel process and also describes concerns expressed by individual panelists over certain components of the conservation strategy. The Robertsen, et al. draft report referenced by appellants identifies a broad array of unanswered questions regarding marten populations, habitat use, and Forest Plan standards and guidelines for marten conservation. However, as stated in the FSEIS, “[t]he amount of timber harvested during the first 5 years under the new Plan is less than half the maximum rate modeled in the Forest Plan. The need for review of the old growth strategy has been substantially reduced due to the lower levels of harvest” [FSEIS, p. D-162].

The effect of the road on wildlife movement is discussed in the FSEIS. As appellants note, marten are highly mobile. The text states that “[t]he road through the OGR could affect movement patterns of smaller, less-mobile species” [FSEIS, p. 3-11]. The FSEIS also discloses that “[t]he main effects of roads are a result of increased access to trappers...” [FSEIS, p. 3-97].

Additionally, the text states that the timber-harvesting period is outside of the current trapping season and access to the shoreline can be dangerous in the winter. After the sale closes, when the LTF is removed and the road closed and allowed to grow up in alder, access to the area will revert to current conditions with minimal, difficult access to the interior portion of the area.

Although it does not appear that the marten model runs are included in the project record, it is evident that the analysis presented regarding effects on marten is based on information obtained from the model. I recommend that the Forest Supervisor review the marten runs to ensure they support the analysis in the FSEIS and that they are available in the planning record. I conclude that the Emerald Bay FSEIS adequately discloses effects of the proposed sale on marten, including effects of the new road. The FSEIS appropriately tiers to the Forest Plan, which is the correct venue for evaluating and adjusting landscape-level standards and guidelines. In my opinion, there will be no significant increase in trapping once the sale is closed and the LTF removed, and a significant increase during the life of the sale is unlikely as the area is difficult to access.

Issue 15. Whether the FSEIS adequately addresses impacts to mountain goats.

Appellants assert that the FSEIS fails to consider how increased access may result in increased recreation in goat use areas and make it easier for illegal hunters to access the area. Appellants contend that the FSEIS also fails to consider or mention an ADF&G study done by Smith regarding the vulnerability of the small population of goats on the Cleveland Peninsula.

Discussion

The FSEIS contains numerous references to the Smith and Raedeke (1982) study cited by the appellants [FSEIS, p. 3-92 and 3-93]. The FSEIS states “[g]oat habitat on the Cleveland Peninsula generally occurs in small, isolated patches and is limited in most areas” [FSEIS, p. 3-93]. According to the FSEIS, the proposed project lies between the Vixen Inlet/South Cleveland population and the Table Mountain/Twin Rift/Frosty Bay populations. There are no known kidding, nursery or winter concentration areas within the project area [FSEIS, p. 3-93], and goat habitat within the project area is extremely limited [FSEIS, p. 3-98]. Individual goats could move through the area [FSEIS, p. D-95].

As appellants note, goat season is closed in the area due to conservation concerns. As stated in the ROD [p. R-1], the road will be closed to motorized public use during and after the sale. Culverts and log stringer bridges will be removed following the sale and the LTF will be removed with the objective of eliminating road use [FSEIS, p. 3-82]. “Alder and conifers are expected to overtake the road within 20 to 30 years of road closure” [FSEIS, p. 3-12]. Even when the road is open for walk-in access (during the life of the sale), the effects on recreation use of any kind on goats (including illegal hunting) is expected to be minimal due to the project’s distance from population centers, potentially rough sea conditions and extremely limited goat habitat [FSEIS, p. 3-98].

I conclude that the FSEIS adequately describes goat populations, habitat, and effects from the project, and the ROD provides for adequate mitigating measures.

Issue 16. Whether the ROD and FSEIS adequately analyzes the impacts of roads on wildlife.

Appellants assert that the construction of roads in a currently road-free area will increase hunter access and pressure on several wildlife species including deer, wolf, brown bear, mountain goats, and marten. Appellants contend that although the agency states that road use during and following harvest will be monitored, the FSEIS provides no estimate of these monitoring costs. Finally, appellants assert that neither the FSEIS nor road cards provide information or analysis to support the Forest Supervisor's conclusion in the ROD that realignment of the road will minimize impacts to the estuary buffer.

Discussion

The effects of the road on specific wildlife species are discussed in the Wildlife section of the FSEIS. Regarding deer, the FSEIS discusses the current situation for deer and states, “[h]istoric use of the project area for deer harvest has been low and recent subsistence hearings and public comments have confirmed findings” [FSEIS, p. 3-91]. The FSEIS also discusses the anticipated effects on deer and deer habitat and states that “[m]ore substantial impacts to deer populations could result from increased hunting pressure during the life of the sale” but concludes that “[h]unting pressure would likely return to current levels once the sale is complete” [FSEIS, pp. 3-95 and 3-96].

Regarding wolves, the FSEIS discusses the current situation for wolves and states, “[w]olf harvest within the Unit 1B portion of Cleveland (Lowell 2003b) and WAA 1817 remains low” [FSEIS, p. 3-94]. The FSEIS also discusses anticipated effects on wolf populations, and concludes “[t]here would be an increased vulnerability of wolves to hunting and trapping during the life of the sale” but “[h]unting and trapping pressure is expected to return to current low levels over the long term” [FSEIS, pp. 3-99 and 3-100].

Regarding brown bear, the FSEIS discusses the current situation for brown bear and states that “[h]unting pressure is low” and “harvest within WAA 1817 for 1999-2004 averaged less than one brown bear/year” [FSEIS, p. 3-92]. The FSEIS discusses anticipated effects on brown bear populations, and states that the new roads will “[i]ncrease the chance of hunters encountering bears” [FSEIS p. 3-98]. As appellants also note, the FSEIS concludes, “[t]he number of hunters is expected to return to current levels once the sale is complete” [Id.].

Refer to my response to Issue 15 regarding the effects on mountain goats.

Regarding marten, the FSEIS discusses the current situation for marten and states “historic use of the project area for marten has been low” [FSEIS, p. 3-92]. The FSEIS also discusses anticipated effects on marten populations and habitat, and states “[t]he main effects of roads are a result of increased access to trappers” [FSEIS, p. 3-97]. However, the FSEIS also indicates that the number of trappers is not expected to increase during the life of the sale due to the distance of the project area from population centers and dangerous winter water and landing conditions during trapping season.

Regarding the appellants' concern about road realignment to minimize impacts, exact road location is not determined prior to completion of the NEPA document. In accordance with FSH 1909.15, Section 18, the District Ranger will assign resource specialists to consider and review adjustments made to the road location in an interdisciplinary fashion [Decision Document #842]. If changes to the road location, sale units, or other components of the project are substantial, the Forest Supervisor will follow direction set forth in FSH 1909.15, Section 18 to determine if a correction, supplement, or revision to the NEPA decision may be necessary.

The ROD states, “[t]he road will be realigned during layout to avoid the estuary buffer to the extent feasible” [ROD, p. R-1]. Notes from a meeting between the Forest Service and USFWS (Decision Document #565) indicate that the road “could be adjusted to the south through the muskeg to keep it out of the estuary buffer at the mouth of Emerald Creek.” It appears that there are one or more opportunities to adjust the road alignment to minimize impacts to important wildlife habitat. The Forest Supervisor has pledged to avoid the estuary buffer to the extent feasible.

In my opinion, the discussion on road impacts to wildlife populations, specifically deer, wolf, brown bear, mountain goats and marten, is adequate and the conclusions reasonable. Given the planned “storage” of the road following completion of the sale, monitoring costs are anticipated to be minimal. Information on road location as provided in the FSEIS and ROD follow forest direction, and adjustments to limit impacts to wildlife habitat will be made during project implementation.

Issue 17. Whether the FSEIS adequately addresses impacts to wetlands.

Appellants assert that the FSEIS provides virtually no analysis regarding impacts to the important hydrological functions of wetlands in the area, and that the ROD fails to insure that these functions will be maintained. Appellants contend that the ROD and FSEIS fail to comply with Executive Order 11990.

Discussion

Executive Order 11990 states, in part:

Each Agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental, and other pertinent factors.

[EO 11990, Section 2(a)].

Appellants assert that the Forest Service fails to take a hard look at the impact of this project on wetlands. They further assert that the approved action violates EO 11990 by not including all practicable measures to minimize harm to wetlands.

The FSEIS discusses the potential effects of the Emerald Bay project on wetlands on pages 3-87 to 3-89, and the record demonstrates that wetlands have been avoided to the extent feasible. With the high density of wetlands within the project area, complete avoidance of wetlands is impossible. Areas of poorly drained organic soils were evaluated on a site by site basis and removed from the proposed timber harvest to avoid impacts. Harvesting will be done using both partial suspension (BMP 12.5) and full suspension is planned via helicopter yarding (BMP 13.9) in order to protect the wetlands.

Where roads are located on wetlands, it is primarily due to safety, engineering design, and other resource concerns. All roads will be closed and all bridges and drainage structures removed upon completion of harvest activities. The entire roadways will be water barred and grass seeded as well.

The Forest Service is not required to select the alternative with the least amount of effects on wetlands; rather, it is required to avoid wetlands to the extent feasible. In my opinion, the Emerald Bay FSEIS and project record adequately analyzed the potential effects of the proposed timber harvest on wetlands, and the road and unit cards demonstrate that all practicable measures to avoid and minimize harm to wetlands have been taken.

Issue 18. Whether the FSEIS adequately analyzes the socioeconomic impacts.

Appellants assert that the FSEIS violates NEPA because the Forest Service fails to present updated, complete, and accurate information relating its assessment of the socioeconomic effects.

Issue 18a. Whether the socioeconomic analysis relies on out-dated information.

Appellants contend that the FSEIS cannot rely on the socioeconomic analysis and community statistics in the Forest Plan because the information is not only outdated but the court in *NRDC v. U.S. Forest Service* found the Plan's analysis of economic effects misleading and in violation of NEPA. Appellants also assert the analysis in the 2003 TLMP SEIS (Roadless Area Evaluation for Wilderness Recommendation) is also outdated, and therefore, the Forest Service violated NEPA because it is unable to take the required hard look at the relationship between the short-term uses proposed for the Emerald Bay project area and the maintenance of long-term productivity for the project area and the Cleveland Peninsula.

Discussion

The issues raised by appellants here are similar to those raised in Issue 2 and I believe I have adequately responded. In my opinion, the record demonstrates that recent socioeconomic information relevant to market demand and the timber sale planning effort has been adequately considered.

In reference to commercial use in the project area, including outfitter guide use and other non-timber economic data, the FSEIS [p. 3-33] states that recreational access is by boat or float plane. The area was assessed using the Recreation Opportunity Spectrum (ROS). Project planners

found that the project area has no identified recreation places (geographic areas that receive recurring use with particularly attractive features, such as camping areas or anchorages). Other than occasional hunting use, there is little or no known recreation use in the project area. Recreation use can be commercial or noncommercial. Although occasional commercial recreational use may occur in the area, there is a lack of evidence of non-timber commercial uses in the area.

Issue 18b. Whether the socioeconomic analysis includes a hard look at the current economic benefits of the area and how the selected alternative will impact those benefits.

Appellants assert that the socioeconomic analysis in the FSEIS fails to explain the basis for the Forest Supervisor's conclusion that he "considered the need to provide for diverse opportunities for natural resource employment and to contribute to local and regional economies."

Discussion

Appellants assert that the economic analysis conducted for the Emerald Bay FSEIS is inadequate because it does not examine a full range of costs and benefits of the project, including both market values and non-market values and costs. Appellants suggest that NEPA, the Multiple-Use Sustained Yield Act (MUSYA), the Resource Planning Act, and NFMA require analysis of non-market goods and services when evaluating management alternatives. I disagree. There is nothing in NEPA, other statutes related to project-level planning, or Forest Service regulation or policy on project planning that requires the agency to quantify, in monetary terms, all of the costs and benefits associated with non-market impacts. In fact, under most planning and project conditions, all costs and benefits cannot be monetarily valued.

This view, that neither NEPA, MUSYA, NFMA, nor NFMA's planning regulations require a quantification of non-market values in monetary terms, was recently upheld in a decision dated September 14, 2004 by the United States District Court for the Western District of Washington [*Forest Conservation Council, et al., v. United States Forest Service*, No. C02-1293C]. In that decision, the Court held that "under the MUSYA, NFMA, and NEPA, [the United States Forest Service] enjoys broad discretion as to the manner in which it conducts the required economic analysis under the Planning Regulations" [Id., p. 24]. The Court further held that:

[E]ven if USFS had assigned monetary value to the non-timber resources and had found that value to exceed the projected value of the harvested timber, USFS might not have changed its decision to authorize the particular volume of the timber sales due to competing purposes of the sales such as improving the forests' quality, "securing favorable conditions of water flows, and ... furnish[ing] a continuous supply of timber for the use and necessities of citizens of the United States." 16 U.S.C. § 475. In fact, according to the MUSYA's express mandate, those purposes are superior to administering the national forests for such uses as outdoor recreation advocated by Plaintiffs. See 16 U.S.C. § 528.

[Id., pp. 24-25]. While the Forest Service is not required to quantify the non-market benefits and costs associated with every timber sale, it is required to "insure that unquantified environmental

amenities and values [are] given appropriate consideration in decisionmaking along with economic and technical considerations” [42 USC 4332(2)(B)]. The Emerald Bay FSEIS provides this analysis for various resources throughout Chapter 3 [see for examples, p. 3-60: discusses non-timber employment at a regional level; p. 3-14: states the area is not a high subsistence use area for fisheries; pp. 3-21 and 3-22: analyzes the effects on both freshwater and saltwater fishers and concludes they would be minimized through Forest Plan direction; pp. 3-35 through 37: describes scenery resources and the minimal effects which may influence the use by operators within and adjacent to the project)]. Based on this analysis, the Forest Supervisor states:

I evaluated the trade-off between resource protection, social values, and timber sale economics. Alternative B provides a beneficial mix of resources for the public, within a framework of existing laws, regulations, policies, public needs and desires, and the capabilities of the land, while meeting the stated Purpose and Need for this project. My decision to implement Alternative B conforms to the Forest Plan and national forest management.

I considered the need to manage this timber resource in order to produce saw timber and other wood products on a sustained yield and economical basis. The Selected Alternative implements Forest Plan direction for Timber Production LUDs and the project design is economical. Alternative B has a positive timber sale value in the 1st quarter of 2004, and a positive value for 11 of the 12 quarters in the economic analysis period.

I considered the need to help provide an even flow of timber to meet annual and Forest Plan planning cycle market demand. The Selected Alternative provides about 16 MMBF toward meeting annual market demand.

I considered the need to provide diverse opportunities for natural resource employment and to contribute to local and regional economies. The Selected Alternative estimates 86 job years of employment opportunities and 16 MMBF of wood products are generated to support local and regional economies.

[ROD, p. R-3]

Accordingly, I believe that the economic analysis contained in the Emerald Bay FSEIS and ROD meets all applicable legal requirements.

Issue 19. Whether the ROD and FSEIS adequately analyzes the economics of the project.

Appellants make several allegations regarding the accuracy of the timber economics section of the FSEIS.

Issue 19a. Whether employment data used in the FSEIS is accurate.

Appellants assert that the employment statistics presented in the FSEIS are based on regional employment information for the wood products industry that was current in the year 2000 and is not reflective of the current situation. Appellants cite reports by Guy Robertson and Lisa K. Crone as being more recent and more accurately portraying current timber industry economics in Southeast Alaska.

Discussion

With respect to employment estimates, the FSEIS at page 3-61 discusses how the number of jobs is calculated. The employment coefficients for direct employment from the Forest Plan relate to how many people it takes to cut a given volume of wood, and then uses that number in conjunction with the estimated volume from the timber sale to estimate employment that will result from the project. The number of people it takes to cut and mill a given volume of wood is not affected by market changes, and so the employment coefficient in the Forest Plan FEIS was an accurate way to estimate possible employment effects of the Emerald Bay timber sale project. No one can determine exactly how many jobs will be created until the sale is sold and cut, given that there can be modifications in volume cut from the time of planning to the final harvest.

Statements about total employment in various segments of the regional economy at various times in the Emerald Bay FSEIS are merely descriptive, comparing different segments of the economy in southeast Alaska so the reader can better understand how the regional economy is characterized. Markets for timber, fish, and recreation all change from year to year. It is beyond the scope of a project level EIS to fully describe the regional economy in a vigorous way.

In my opinion, the FSEIS uses the best information available regarding current employment estimates.

Issue 19b. Whether the methods used to conduct the timber financial efficiency analysis are adequate.

Appellants contend that the timber financial efficiency analysis for the Emerald Bay project is flawed because it relies on a transactional based analysis rather than a residual value system of appraisal. Appellants assert that in the aftermath of the *NRDC v. U.S. Forest Service* decision, the Forest Service is now rationalizing its timber program by saying that it is better to over-supply the market than under supply it, and that installed capacity is the proper basis for demand projections.

Discussion

For analysis purposes in the NEPA process, the Emerald Bay FEIS uses the NEAT model to display and compare relative differences in potential timber values among alternatives over a real time period, with normal market fluctuations. In the model, an average recent bidding price of timber sales is established, based on actual sale bids. That average bid price is adjusted based on recent appraisals to reflect the estimated species quality and harvest and transportation costs of the sale. It is unlikely there would be significant differences in model outputs using TEA or RV data.

Both transaction evidence (TEA) and residual value (RV) appraisal systems have been approved by the Chief as valid systems to use for appraising timber. The Alaska Region was recently given approval to use the RV system of appraisals. It is important to remember the NEAT model is not an appraisal; the appraisal process is conducted after the completion of the NEPA process and determines the fair market value of timber advertised for sale. The Region is in the process of updating the NEAT model to go along with the change in appraisal systems. The objective of the model will remain the same: to compare potential values of the project alternatives over a real time period, with normal market fluctuations.

Contrary to appellants' assertion, the concept of over supplying timber is attributed to Morse (2000), and not the result of *NRDC vs. USFS* (8/5/2005). Morse stated that in the short term, oversupplying the market is less damaging than undersupplying it. If more timber is offered for sale in a given year than is sold in that year, the volume is available for re-offer in future years. [FSEIS, p. A-19].

The Forest Service uses adjusted installed mill capacity as input when making demand estimates, but derived demand for timber on the Tongass is not the total of what it would take to keep every mill "running at double shifts." Mill capacity is just one input among many. The Emerald Bay FSEIS outlines the process in some detail in Appendix A [pp. A-5 and A-6].

In my opinion, the financial efficiency analysis contained in the Emerald Bay project record and FSEIS meets all applicable requirements.

Issue 20. Whether the reasons given by the Forest Service for adopting clearcutting as a logging method are consistent with NFMA.

Appellants assert that the reasons provided for the clearcutting prescriptions included in the FSEIS are directly related to maximizing dollar returns or timber output, and therefore, violates NFMA. Appellants contend that the ROD failed to make a finding that clearcutting is the optimal method of harvest.

Discussion

Section 6(g)(3)(F)(i) of NFMA requires that the Forest Service:

[I]nsure that clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an even-aged stand of timber will be used as a cutting method on National Forest System lands where -- for clearcutting, it is determined to be the optimum method, and for other such cuts it is determined to be appropriate, to meet the objectives and requirements of the relevant land management plan.

In addition, the Chief's directive of June 4, 1992 on ecosystem management limits clearcutting to areas where it is essential to meet Forest Plan objectives and involves one or more of the following circumstances:

1. To establish, enhance or maintain habitat for Endangered, Threatened, or Sensitive species.
2. To enhance wildlife habitat or water yields, or to provide for recreation, scenic vistas, utility lines, road corridors, facility sites, reservoirs, or similar development.
3. To rehabilitate lands adversely impacted by events such as fires, windstorms or insect or disease infestations
4. To preclude or minimize the occurrence of potentially adverse impacts from insect or disease infestations, windthrow, logging damage or other factors affecting forest health.
5. To provide for the establishment and growth of desired trees or other vegetative species that are shade intolerant.
6. To rehabilitate poorly stocked stands due to past management practices or natural events.
7. To meet research needs.

In part, many of appellants' concerns with respect to clearcutting relate to forest planning issues that are outside the scope of a project-level EIS. The Under Secretary of Agriculture's decision on the appeals of the 1997 TLMP ROD and FEIS affirmed the Regional Forester's decision with respect to the clearcutting issues raised, stating "[t]he 1997 Forest Plan is consistent with NFMA with regard to silvicultural methods analyzed and selected... The FEIS adequately addressed the cumulative effects of clearcutting ... on the various resources for the Tongass National Forest." [April 13, 1999 decision, p. 22]. Appendix G of the TLMP EIS describes the silvicultural systems available; provides a comparison of the systems and the anticipated results of each, along with key site and stand conditions found on the Tongass National Forest; and then identifies the most appropriate systems for given combinations of these factors. As stated in Appendix G, certified silviculturists usually make the site-specific project level selection of silvicultural systems, which are then evaluated through the NEPA process [TLMP EIS, Appendix G, p. G-1].

The prescriptions for the Emerald Bay selected alternative are included in the project planning record. They were signed by a certified silviculturist and contain justification language consistent with the rationale required for such a finding. Additional information to support such a finding is also included in the Forest Health section of the FSEIS [p. 3-53].

The analysis described above is sufficient to support a finding that the Selected Alternative justifies clearcutting as the optimal method where it is prescribed. However, the specific finding required is not included in Record of Decision. I recommend, therefore, that you include such a finding in your appeal decision, based on the analysis contained in the record.

Issue 21. Whether the ROD and FSEIS deer/wolf analysis is adequate and uses the best available science.

Appellants raise many issues related to the deer/wolf analysis and assert that failures to disclose and employ the best available means of analysis are violations of NEPA and the Administrative Procedures Act (APA). Appellants further assert that the Data Quality Act was violated by using an inappropriate analysis method (the single-species deer model) to estimate deer densities and populations. Specifically, appellants raise issues related to 1) the deer carrying capacity multiplier of 100 deer/square mile; 2) reliance on an inappropriate forest dataset; 3) whether the

effect of severe winters on deer was evaluated separately and in combination with hunting; 4) whether the deer model was incorrectly used to predict effects on deer populations; 5) whether well documented criticism of the model by many scientists who peer reviewed it has been disclosed in the FSEIS; and finally, 6) whether the importance of the project area for subsistence hunting was dismissed without thorough analysis.

Discussion

Several of appellants' assertions regarding the accuracy of the model's predictions, debate within the scientific community, and disclosure of coefficients used in the project have been raised on other appeals and are related to the NEPA requirements for: 1) use of the best available information [40 CFR 1502.22], and 2) disclosure of methodology and scientific accuracy [40 CFR 1502.24]. In my opinion, the FEIS complies with these requirements.

As described in the FSEIS [p. 3-91], the analysis for deer used the most recent approved model version as directed the Forest Supervisor's letter [Decision Document #609] and as found in the spreadsheet attached to the model. It should be emphasized that the model was evaluated by field surveys, represents just one tool in project level analysis, and (as stated in the FSEIS, p. 3-95), "[d]eer model outputs were designed for comparing relative changes by alternative rather than indicating actual effects to deer populations." Although Table Wildlife-1 [FSEIS, p. 3-95] displays deer habitat capability in terms of numbers of animals, these numbers are, as stated previously, presented for comparison purposes only.

In challenging the components and application of the deer model, appellants are arguing a Forest Plan-level issue. As stated in the FSEIS [D-164], "[i]t is outside the scope of the Emerald Bay project analysis to arbitrarily re-write the model. The deer model [is] maintained and updated at a Forest level." It is inappropriate to adjust the model on a project-level basis. Any changes to the model will be the result of field observations, thorough analysis, and peer review. As noted in the Tongass National Forest Annual Monitoring and Evaluation Report for FY 2002 [Decision Document #835], the Tongass and the Alaska Department of Fish and Game continue to work on a deer-predator-habitat interaction study, which will enhance understanding of the effects of forest management on deer populations.

Debate about the deer model and its application is inferred from several references in the FSEIS and supporting documentation. The FSEIS [p. 3-91] cites "Person et al. (1997)," a document that discusses a number of concerns the authors had regarding the wolf assessment, but also discusses deer model outputs and recommends an adjustment to the habitat capability coefficient. The reference "DeGayner 1996" [Decision Document #731] on the same page of the FSEIS refers to notes from an interagency meeting convened "[t]o respond to numerous questions from ADF&G and USFWS about the TLMP Panel Model, to provide an overview of the model, and to attempt to achieve an inter-agency consensus on a deer habitat modeling process."

The deer model is not the only means of assessing effects of a proposed action on deer habitat and populations. As stated in the FSEIS,

The deer model is but one tool used in the Emerald Bay analysis of deer habitat. Field observations from wildlife biologists and other professionals were utilized to document deer use and movement patterns, research papers were consulted and incorporated, consultation and personal communications were held with ADF&G and USF&WS personnel, ADF&G data was studied and incorporated, in addition to public scoping comments and local knowledge.

[FSEIS, p. D-164].

Regarding appellants' assertion that the multiplier in the deer model is incorrect, I do not find any basis for this claim. In 1996, an interagency group of biologists met to review and discuss the deer model in use at the time. One recommendation from the group was that HSI scores be modified, and subsequently deer model scores were adjusted (from a range of 0 to 1.0) to a range of 0 to 1.3, with the highest score (as in the previous model) assigned to south-facing, low elevation, low snow level, high-volume old growth stands. This information is documented in the Tongass Plan FEIS Part 1, pages 3-367 and 3-368. The carrying capacity (deer/square mile) multiplier that equates to an HSI score of 1.0 has been adjusted several times. Based on information supplied by research, the latest adjustment equates 100 deer/square mile with an HSI score of 1.0 (TNF Annual Monitoring Report for FY 2000 and instructions provided on the deer model spreadsheet). There is no documentation to support appellants' assertion that the 100 deer/square mile carrying capacity was intended to match an HSI score of 1.3.

The deer model uses the volume strata map, consistent with Forest Plan direction [TLMP FEIS, p. 3-365]. ADF&G biologists have funded and conducted studies and published several papers in peer-reviewed journals over the past 20 years on how deer interact with their habitat. These studies have shown that timber volume is a good predictor of winter deer range, and ADF&G has argued that low elevation, high volume, old-growth timber stands be conserved. This research was considered and used in the development of the deer model. Research has also demonstrated that the volume stratum map is a statistically valid method of stratifying the forest for timber volume. It is reasonable that the deer model used the volume-stratum map, since it was the only statistically valid map available at the time and it utilized ADF&G research findings on deer habitat selection and a timber volume. Currently, a new map is being researched to better evaluate forest structure. This map is undergoing peer review and is currently being tested for its utility for evaluating deer habitat.

To bring this discussion into perspective, the deer model spreadsheets [Decision Document #684] indicate that 1,649 acres are classified as "high volume old-growth" (Volume classes 5, 6 and 7), south-facing, and below 800 feet elevation. A review of the acres of timber harvested by alternative indicates that for the selected alternative, only 4 acres will be harvested from this classification. Table Wildlife-1 [FSEIS, p. 3-95] shows that the change in habitat capability for all action alternatives is less than 1 percent.

I agree with the appellants that the FSEIS text on page 3-95 appears to be in error when stating "Alternatives B, C, and D would each reduce *severe* winter deer habitat within WAA 1817 by approximately 1 percent" (emphasis added). As appellants note, the deer model is designed to provide habitat capability for *moderate* winters, and this explanation of the model is correctly

stated (“typical snowfall”) in the FSEIS on page 3-91. Table Wildlife-1 [FSEIS, p. 3-95] displays carrying capacities for moderate winter conditions. As the FSEIS states, the Cleveland Peninsula intermittently experiences severe winters with deep snowfall [FSEIS, p. 3-95]. Low elevation, south-facing high-volume stands are important deer winter habitat, especially in high-snow winters. The FSEIS [p. 3-95] discloses that “[l]ow-elevation coastal habitat is protected by the OGR” and, as noted above, only 4 acres of this important habitat outside of the OGR will be harvested. The FSEIS notes that a “[m]ore substantial impact to deer populations could result from the increased number of hunters during the life of the sale...” and concludes that population recovery could take longer than 5 years [FSEIS, p. 3-95]. Hunting pressure after the sale is closed and the LTF removed is expected to revert to current low levels [FSEIS, p. 3-96]. The FSEIS [p. 3-101] concludes that viability and distribution of deer will not be affected by the proposed project.

With regard to appellants’ contention that the importance of the project area for subsistence hunting for deer was dismissed without thorough analysis, I disagree. Subsistence hearings were conducted in Ketchikan, Wrangell and Meyers Chuck. The FSEIS summarizes those hearings and discusses subsistence uses and the effects of the project on those uses on pages 3-72 through 3-75. As pointed out in the FSEIS, “[t]he deer model projects a 1 percent decline in deer habitat capability” [FSEIS, p. 3-73]. Based on this analysis, the FSEIS concludes that “[t]he Emerald Bay project would not pose a significant possibility of a significant restriction on any subsistence resource within the project area...” [FSEIS, p. 3-75].

I conclude that the deer model was used appropriately, the discussion of winter weather and hunting effects are adequate, and disclosure of debate over the deer model is in the planning record. Additionally, the Forest Supervisor adequately analyzed and disclosed the affects on subsistence.

Recommendation

In my opinion, the analysis in the Emerald Bay FSEIS and planning record is sufficient to support the Forest Supervisor’s decision with respect to all the issues raised in these appeals. Based on my review of the FSEIS, the ROD, and the planning record, and all the discussions above of each specific appeal issue, I believe the FSEIS and ROD meet all applicable requirements of law, regulation, and policy. All of the required findings are included, except for the finding that clearcutting is the optimal method, where prescribed. The analysis is sufficient to support a finding that the Selected Alternative justifies clearcutting as the optimal method; therefore, I recommend that you include such a finding in your appeal decision. I will prepare the appropriate language for your consideration.

Although it is evident that the analysis presented regarding the effects of the project on marten is based on information obtained from the marten model, it does not appear that the model runs are in the project record. Therefore, I recommend that you direct the Forest Supervisor to review the marten runs to ensure they support the analysis in the FSEIS, and that they are available in the planning record.

Finally, with regard to goshawk surveys, I recommend that you direct the Forest Supervisor to consult with the Forest biologist to determine the need for additional goshawk surveys prior to project implementation.

/s/ Beth Giron Pendleton
BETH GIRON PENDLETON
Appeal Reviewing Officer