



United States
Department of
Agriculture

Forest
Service

Washington
Office

14th & Independence SW
P. O. Box 96090
Washington, DC 20090-6090

File Code: 1570-1 (EMC)

Date: April 13, 1999

*Mr. Bart Koehler
Southeast Alaska Conservation Council
419 6th Street, Suite 328
Juneau, Alaska 99801*

RE: Appeal of the Record of Decision for the Tongass National Forest Revised Land and Resource Management Plan (#97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106, #97-13-00-0108, #97-13-00-0112, #97-13-00-0114, #97-13-00-0127).

Dear Mr. Koehler:

Enclosed is the decision on the above referenced appeals.

Sincerely,

*/s/ Steve T. Segovia
for*

CHRISTOPHER RISBRUDT
Director, Ecosystem Management Coordination

Enclosures

*Decision for Appeals #97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106,
#97-13-00-0108, #97-13-00-0112, #97-13-00-0114, #97-13-00-0127*

*Lists of Parties
1999 ROD*





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File Code: 1570-1 (EMC)

Date: April 13, 1999

*Mr. Larry Traini
Friends of Southeast Future
2008 Halibut Point Road
Sitka, Alaska 99835*

RE: Appeal of the Record of Decision for the Tongass National Forest Revised Land and Resource Management Plan (#97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106, #97-13-00-0108, #97-13-00-0112, #97-13-00-0114, #97-13-00-0127).

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File Code: 1570-1 (EMC)

Date: April 13, 1999

*Mr. John R. Swanson
P.O. Box 6554
Minneapolis, Minnesota 55406*

RE: Appeal of the Record of Decision for the Tongass National Forest Revised Land and Resource Management Plan (#97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106, #97-13-00-0108, #97-13-00-0112, #97-13-00-0114, #97-13-00-0127).

Dear Mr. Swanson:

Enclosed is the decision on the above referenced appeals.

Sincerely,

*/s/ Steve T. Segovia
for*

CHRISTOPHER RISBRUDT
Director, Ecosystem Management Coordination

Enclosures:

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*Lists of Parties
1999 ROD*





File Code: 1570-1 (EMC)

Date: April 13, 1999

*Mr. Andy Stahl
Forest Service Employees for Environmental Ethics
P.O. Box 11615
Eugene, Oregon 97440*

RE: Appeal of the Record of Decision for the Tongass National Forest Revised Land and Resource Management Plan (#97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106, #97-13-00-0108, #97-13-00-0112, #97-13-00-0114, #97-13-00-0127).

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Sincerely,

*/s/ Steve T. Segovia
for*

*CHRISTOPHER RISBRUDT
Director, Ecosystem Management Coordination*

Enclosures:

*Decision for Appeals #97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106,
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*Lists of Parties
1999 ROD*





File Code: 1570-1 (EMC)

Date: April 13, 1999

*Mr. David J. Zaber
Defenders of Wildlife
1101 14th St. N.W. Suite 1400
Washington, DC 20005*

RE: Appeal of the Record of Decision for the Tongass National Forest Revised Land and Resource Management Plan (#97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106, #97-13-00-0108, #97-13-00-0112, #97-13-00-0114, #97-13-00-0127).

Dear Mr. Zaber:

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Sincerely,

*/s/ Steve T. Segovia
for*

CHRISTOPHER RISBRUDT
Director, Ecosystem Management Coordination

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*Lists of Parties
1999 ROD*





File Code: 1570-1 (EMC)

Date: April 13, 1999

*Mr. Eric P. Jorgensen
Earthjustice Legal Defense Fund, Inc.
325 Fourth Street
Juneau, Alaska 99801*

RE: Appeal of the Record of Decision for the Tongass National Forest Revised Land and Resource Management Plan (#97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106, #97-13-00-0108, #97-13-00-0112, #97-13-00-0114, #97-13-00-0127).

Dear Mr. Jorgensen:

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Sincerely,

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for*

CHRISTOPHER RISBRUDT
Director, Ecosystem Management Coordination

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*Lists of Parties
1999 ROD*





File Code: 1570-1 (EMC)

Date: April 13, 1999

*John W. Schoen, Ph.D.
National Audubon Society
Alaska State Office
308 G Street, Suite 217
Anchorage, Alaska 99501*

RE: Appeal of the Record of Decision for the Tongass National Forest Revised Land and Resource Management Plan (#97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106, #97-13-00-0108, #97-13-00-0112, #97-13-00-0114, #97-13-00-0127).

Dear Mr. Schoen:

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Sincerely,

*/s/ Steve T. Segovia
for*

CHRISTOPHER RISBRUDT
Director, Ecosystem Management Coordination

Enclosures:

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*Lists of Parties
1999 ROD*





File Code:1570-1 (EMC)

Date: April 13, 1999

**Ms. Page Else
Sitka Conservation Society
P.O. Box 316
Sitka, Alaska 99835**

RE: Appeal of the Record of Decision for the Tongass National Forest Revised Land and Resource Management Plan (#97-13-00-0073, #97-13-00-0101, #97-13-00-0105, #97-13-00-0106, #97-13-00-0108, #97-13-00-0112, #97-13-00-0114, #97-13-00-0127).

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Enclosed is the decision on the above referenced appeals.

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for**

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Director, Ecosystem Management Coordination**

Enclosures

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1999 ROD**



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Appeal Decision

This is a decision on eight appeals of the Record of Decision (1997 ROD) for the Tongass National Forest (Forest) Revised Land and Resource Management Plan (1997 Forest Plan) and its accompanying Final Environmental Impact Statement (FEIS). The appellants are: John R. Swanson (#97-00-13-0073 (#0073)); Southeast Alaska Conservation Council (SEACC) (#97-13-00-0101(#0101)); Defenders of Wildlife (#97-13-00-0105 (#0105)); Forest Service Employees for Environmental Ethics (#97-13-00-0106 (#0106)); Earthjustice Legal Defense Fund, Inc. (#97-13-00-0108 (#0108)); Sitka Conservation Society (#97-13-00-0112 (#0112)); National Audubon Society (#97-13-00-0114 (#0114)); and Friends of Southeast Future (#97-13-00-0127 (#0127)).

The appellants requested relief is a reversal of the 1997 ROD with additional analysis to amend or revise the Forest Plan. One appellant (#0101) requests a moratorium on all development activities until the Plan is amended or revised.

Regional Forester Phil Janik signed the 1997 ROD approving the 1997 Forest Plan on May 23, 1997. Timely Notices of Appeal (NOA) were filed by appellants under regulations at 36 CFR 217, and the Regional Forester transmitted the records, information, and documentation (Record) for the appeal.

Secretary Review and Evaluation

The 1997 Forest Plan is based on Alternative 11 in the Tongass Land and Resource Management Plan Revision Final Environmental Impact Statement (FEIS), with modifications as documented in the 1997 ROD. The decision to approve the 1997 Forest Plan was subject to appeal in accordance with Forest Service appeal regulations at 36 CFR 217. Thirty-three notices of appeal were filed on the May 23, 1997, decision. In addition, two lawsuits have been filed that involve the appeals of the 1997 ROD. Also, the 1997 Forest Plan is implicated in at least one other lawsuit unrelated to appeals.

As the Under Secretary for Natural Resources and Environment at USDA, I have elected to exercise discretionary review of the administrative appeals relating to the Regional Forester's approval of the 1997 Forest Plan. This is not a step I take lightly. It is my belief that the continuing controversy and exceptional circumstances surrounding the Tongass Land and Resource Management Plan warrant my direct and immediate participation in order to bring this controversy to closure as quickly as possible so that the Forest Service can move forward with the Modified 1997 Forest Plan implementation. The residents of Southeast Alaska, their communities and elected officials, as well as business and organizations from the region, have long sought certainty in the management of the Tongass National Forest. A key to this certainty is ensuring the sustainability of the goods and services produced by the Tongass National Forest, and all the resources on which they depend. The enclosed 1999 ROD seeks to provide that certainty built upon a foundation of sustainable natural resource stewardship. Therefore, I have reviewed these appeals and related records. My decisions in the appeals reflect modifications contained in the enclosed 1999 ROD.

The 1999 ROD documents my decision and rationale to modify the 1997 Forest Plan. I am modifying some aspects of the 1997 Forest Plan, not because I find that it fails to meet mandatory requirements, but because I have concluded that, for multiple use reasons and to reduce the level of environmental risk, the Secretary's responsibilities and authorities should be exercised differently to improve the Forest Plan. The enclosed 1999 ROD changes development land use designations (LUD's) to mostly

natural LUD's in 18 Areas of Special Interest totalling approximately 234,000 acres. The 1999 ROD also strengthens a standard and guideline (S&G) and adds another to address certain wildlife species, to improve subsistence opportunities and to reduce risk to old-growth ecosystem viability. Adjustments I made to management direction, together with unchanged portions of the 1997 Forest Plan, will hereinafter be referred to as the Modified 1997 Forest Plan. The Modified 1997 Forest Plan is the document titled "Land and Resource Management Plan - Tongass National Forest", dated 1997, and is based on Alternative 11 in the "Tongass Land Management Plan Revision Final Environmental Impact Statement" with modifications as noted in the enclosed 1999 ROD.

Regulatory Authorities

The regulations governing forest plan appeals are not based on statutes that require an appeal system, but instead are one way the Department meets its responsibilities under the Organic Act (16 U.S.C. 472, 551), the Multiple Use-Sustained Yield Act (16 U.S.C. 528-531) (MUSYA), and the National Forest Management Act (16 U.S.C. 1600, et seq.) (NFMA). As Under Secretary I am charged to provide leadership in resource management and assure the protection, management, and administration of the National Forests (7 U.S.C. 2.20). I also am charged under 7 U.S.C. 2.20(a)(2)(viii) to "exercise the administrative appeal functions of the Secretary of Agriculture in review of decisions of the Chief of the Forest Service pursuant to 36 CFR 215 and 217, and 36 CFR 251 Subpart C."

The regulations governing forest plan appeals (36 CFR 217.17) provide for discretionary review by the Under Secretary. Discretionary review is based on the appeal record presented to the Chief (36 CFR 217.17(e)). The appeal regulations grant broad latitude in deciding when to invoke discretionary review (36 CFR 217.17(a)). The 1997 Forest Plan falls within the scope of the identified factors that include, but are not limited to, the "controversy surrounding the decision, the potential for litigation, whether the decision is precedential in nature, or whether the decision modifies existing or establishes new policy." In fact, probably not since the Secretaries of Agriculture and the Interior jointly signed the 1994 "Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl" has there been as compelling a need for final resolution of such a long-standing land management controversy. An expedited discretionary review harms no appellant's interests as the Chief's decision would be subject to discretionary review in any event, and the review is based on the same record. In sum, expediting the discretionary review portion of the appeal process, although unconventional, is in the best interest of the residents of Southeast Alaska and the public at large, and within the spirit and letter of the appeal regulations.

On February 12, 1999, Chief Dombek issued an 18-month interim rule temporarily suspending decisionmaking regarding road construction and reconstruction in many unroaded areas of the National Forest System. The interim moratorium is needed to safeguard the significant ecological values of unroaded areas from the potentially adverse effects often associated with road construction until a new, permanent road policy is in place. The long-term policy will guide decisions of where, when, and if new roads should be constructed in unroaded portions of the National Forest System. As explained in the interim rule preamble, the Tongass National Forest was exempt from the moratorium as a newly revised plan that had the benefit of considerable science and public involvement. The preamble also noted that the 1997 Forest Plan was still undergoing evaluation as part of the administrative appeal process under 36 CFR 217. The interim rule allows for any issues

related to the construction of roads in unroaded areas to be addressed in the appeal decision. As such, the transportation system analysis in general, and as it relates to unroaded areas specifically, is discussed below where appropriate.

I find that the Regional Forester complied with applicable Federal law and agency policy in his approval of the 1997 ROD for the 1997 Forest Plan. However, as previously discussed, I feel modifications are needed to reduce the level of risk and uncertainty for ensuring environmental protection regarding three key issues which I found could be improved upon from the 1997 Forest Plan: (1) subsistence use and associated deer winter range/deer habitat capability; (2) assurance of adequate amounts and distribution of old-growth forest for species viability; and (3) protection of Areas of Special Interest.

My decision on the appeals reflects those modifications contained in the enclosed 1999 ROD and is the final administrative action by the Department of Agriculture.

The Modified 1997 Forest Plan

The Modified 1997 Forest Plan is a programmatic framework for management of an administrative unit of the National Forest System.¹ The enclosed 1999 ROD explains what the Modified 1997 Forest Plan does. "This Plan provides the broad, programmatic direction necessary to manage the resources and uses of the Tongass National Forest in a coordinated and integrated manner" (Modified 1997 Forest Plan). It "will guide the management of the Tongass National Forest for the next 10 to 15 years" (1999 ROD). The components of Forest Plan direction, "along with the Land Use Designation map, establish a management framework that governs the location, design, and scheduling of all Forest management activities. Within the management framework, project-level planning is undertaken to achieve Forest Plan implementation" (Modified 1997 Forest Plan). The Modified 1997 Forest Plan sets forth goals and objectives for management and establishes programmatic standards to follow in pursuit of those goals. "Goals are achieved through the allocation of lands to the set of LUD's, through implementation of the Standards and Guidelines specified for the LUD's, and through other activities conducted on the Forest" (Modified 1997 Forest Plan). Pursuant to NFMA, the Modified 1997 Forest Plan identifies land that is suitable for timber production and determines the allowable sale quantity (ASQ), and other resource outputs, all of which are estimates.

Implementation of the Modified 1997 Forest Plan will take place through project-level decisions which must be within the bounds of the programmatic framework. As stated in the Modified 1997 Forest Plan, implementation is "accomplished through the recurrent identification of proposed actions . . . consistent with activities anticipated in the Plan; the analysis and evaluation of such actions . . . ; related documentation and decisionmaking; and project execution and administration, in a manner that is consistent with the management direction of the Plan" (Modified 1997 Forest Plan). Thus, the Modified 1997 Forest Plan standards operate as parameters within which projects must take place. Approval of any project must be consistent with the management standards. If a project cannot be conducted within these parameters, these safeguard mechanisms in the Modified 1997

¹*The Modified 1997 Forest Plan and FEIS were prepared under the authority of the Multiple Use-Sustained Yield Act (MUSYA) (16 U.S.C. 528-531); the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by the NFMA (16 U.S.C. 1601-1614); the implementing regulations of NFMA (36 CFR 219); and the NEPA (42 U.S.C. 4321-4335 and its implementing regulations (40 CFR 1500-1508).*

Forest Plan will prevent such development from going forward (see Swan View Coalition v. Turner, 824 F.Supp 923, 933 (D. Mont. 1992)).

The 1999 ROD (Section VIII, Appeal Rights) notes that decisions on site-specific projects are not made in the ROD and that such decisions will not be made until completion of environmental analysis and documentation for the specific project, in compliance with the National Environmental Policy Act (NEPA). Thus, approval of the Modified 1997 Forest Plan does not mandate any project decisions. Each project or activity must be consistent with the programmatic environmental protection direction in the Modified 1997 Forest Plan (16 U.S.C. 1604 (i)).

Finally, the Modified 1997 Forest Plan establishes monitoring requirements to help determine how well the standards and management direction are working and whether the goals remain appropriate throughout the plan period. As stated in the Modified 1997 Forest Plan, ". . . monitoring and evaluation comprise an essential feedback mechanism within an adaptive management framework to keep the Plan dynamic and responsive to changing conditions."

In summary, the Modified 1997 Forest Plan establishes a framework for decisionmaking on the Tongass National Forest using programmatic direction as a gateway for compliance with environmental laws at the project level.

Response to Concerns

This decision provides a consolidated response to eight appeals of the 1997 Forest Plan. A letter was sent March 25, 1998, notifying appellants that the appeals would be consolidated. The appeals were consolidated into one decision document because they contain common issues (36 CFR 217.13(b)). The appellants should be assured that each appeal was reviewed and that all concerns were considered. This consolidation of appeals and concerns did not reduce the level of review provided each appeal.

My response to your concerns provides a focused response to contentions involving complex resource management issues. Although every contention made by you may not be cited in this decision, all of your concerns have been considered. My review of the concerns has focused upon the Regional Forester's compliance with law, regulation, and policy.

The appeals address the following concerns: range of alternatives, subsistence, clearcutting/optimality, forest management, species viability, wilderness, wild and scenic rivers, the planning process, karst and caves, transportation, Tongass Timber Reform Act (TTRA), minerals, multiple use, social/economics, watershed/fisheries, FORPLAN and Forest-wide S&G's.

Range of Alternatives

The appellants contend that, "[t]he alternatives offered by the Forest Service artificially narrowed its options and improperly predisposed it towards continuing large-scale clearcutting on the Tongass" (NOA #0101, p. 1) and that "[n]o alternative considered by the Forest Service allocated a reasonable amount of lands to the timber base with selection logging as the predominate silvicultural system" (NOA #0101, p. 3). The appellants further contend that, "[t]he lack of consideration of alternatives

to clearcutting in the Forest Plan FEIS violates NEPA" (NOA #0101, p. 25) and that the FEIS failed to consider alternatives offered by the public (NOA #0101, pp. 4-5).

In addition, the appellants contend that "[t]he Forest Service's treatment of Roadless Areas and potential wilderness violates NEPA for failure to consider an adequate range of alternatives" (NOA #0101, p. 46) and that "[t]he Forest Service never considered an alternative that put all these areas [SEACC's special areas] off-limits to clearcutting and road building" (NOA #0101, p. 6).

The appellants further contend that neither "[t]he FEIS nor [1997] ROD provide any reasonable justification for not considering an alternative that protected more than 29% of the Tongass rivers by recommending them for designation as wild and scenic rivers" (NOA #0101, p. 60) and that "[t]he Forest Service has failed to consider a wide range of alternatives by failing to truly consider an alternative which fully protects home range recreation places while allowing logging in other areas" (NOA #0101, p. 100).

The appellants contend that "[t]he Plan fails to provide a genuine range of alternatives" (NOA #0108, p. 77) and that "[t]he Alaska Region failed to consider an adequate range of alternatives to protect subsistence" (NOA #0108, p. 39).

The appellants further contend that "[t]he Forest Service artificially constrained the Forest Plan expert panel evaluations during the revision process by failing to provide a true restoration/wildlife recovery alternative" (NOA #0105, p. 8).

The appellants contend that the 1997 Forest Plan failed to consider a full range of reasonable alternatives, including the FSEEE alternative plan (NOA #0106, p. 7; NOA #0112, p. 2) and that "there is no alternative which combines good levels of habitat protection with a revised timber harvest volume" (NOA #0112, p. 2).

Background

*Alternatives prepared for consideration in a forest plan are to provide for a broad range of reasonable management scenarios for the various uses of the forest (36 CFR 219.12 (f)). A primary goal in formulating alternatives is to provide an adequate basis for identifying the alternative that comes closest to maximizing net public benefits in an environmentally sound manner (*id.*). Thus, the evaluation of the range of alternatives does not turn upon consideration of a single factor, such as ASQ, but rather must consider the alternatives as a whole.*

*The Ninth Circuit Court of Appeals has ruled that the range of alternatives required to be analyzed is determined by the scope of the proposed action (*California v. Block*, 690 F. 2d 753, 767 (9th Cir. 1983); *NCAP v. Lyng*, 844 F. 2d 588, 593 (9th Cir. 1988)). An EIS need only set forth alternatives sufficient to permit a reasoned choice (*Sierra Club v. Robertson*, 810 F. Supp. 1021, 1029 (W.D. Ark 1992) affirmed 28 F. 3d 753 (8th Cir. 1994), citing *Minnesota Public Interest Research Group v. Butz*, 541 F. 2d 1292, 1300 (8th Cir. 1975)).*

*The NEPA does not require full discussion of land-use alternatives whose implementation is remote or speculative (*Jantzen*, 760 F.2d at 988). Moreover, "an agency's consideration of alternatives is*

adequate if it considers an appropriate range of alternatives, even if it does not consider every available alternative" (Resources Limited v. Robertson, 8 F.3d 1394, 1401 (9th Cir. 1993), citing, Headwaters, Inc. v. Bureau of Land Management, 914 F.2d 1174, 1180-1181 (9th Cir. 1990)).

Arguments raised by the appellant here are similar to those addressed by several Federal courts in their review of Forest Service land and resource management plans. In Resources Limited, Inc. v. Robertson, 789 F. Supp. 1529 (D. Mont. 1991), affirmed, 8 F.3d at 1401-1402, plaintiffs argued that the Flathead Forest Plan EIS was inadequate because it allegedly was developed using "unrealistic timber prices and harvest costs." The district court reviewed the Flathead Forest Plan's range of alternatives using a "rule of reason: "the agency is required to set forth only those alternatives necessary to permit a reasonable choice. The "touchstone" for the court's inquiry is whether the EIS's selection and discussion of alternatives fosters informed decisionmaking and informed public participation (Id. at 1537). The court concluded that assumptions underlying the EIS were reasonable (Id. at 1539).

In Sierra Club v. Robertson, 810 F. Supp. at 1021 (W.D. Ark. 1992), affirmed, 28 F. 3d 753 (8th Cir., 1994), plaintiffs argued that the Ouachita Forest Plan EIS was inadequate because it did not contain a "herbicide-free, selection cutting" alternative. The court noted that the Forest Plan EIS considered 13 alternatives and their environmental consequences and concluded that the Forest Service "considered sufficient alternatives to permit a reasoned choice."

Equally important, the Ninth Circuit Court of Appeals held in Idaho Conservation League v. Mumma, 956 F.2d 1508, 1520, 1522 (9th Cir. 1992) that "the inclusion of alternatives similar to that put forward by plaintiffs' was held sufficient by the court in Headwaters, Inc. v. Bureau of Land Management, 914 F.2d 1174 (9th Cir. 1990), and Northern Plains Resource Council v. Lujan, 874 F.2d 661, 666 (9th Cir. 1989)."

Arguments similar to those raised in this administrative appeal were likewise addressed in another Federal district decision. In Krichbaum v. Kelley, 844 F. Supp. 1107, 1119 (W.D. Va. 1994), the court found that:

So long as congress requires this [National] Forest to be managed with multiple-use principles, portions of the Forest must embody a compromise between "natural" Forest conditions and the need for Forest resources -- consistent, of course, with NFMA's substantive commands. Unless it acts irrationally, this compromise is the agency's to strike, and it need not consider alternatives which are consistent with that compromise.

For a forest plan, the choice is among management scenarios affecting all the multiple-use resources of the forest. Alternatives cannot be completely specified by a single output. Displays of estimated output levels for the various resources under the alternatives are presented to assist the public to better understand the possible consequences of implementing a particular alternative. Output levels themselves are not subject to the NEPA requirements for a broad range of reasonable alternatives. In developing a forest plan, it is reasonable to expect that alternatives designed to meet established goals and objectives may produce similar results. The 1997 Forest Plan does demonstrate variation in management emphasis between alternatives.

In the development of a forest plan for a 10-15 year period, there is an infinite number of alternatives that could be evaluated in detail. Consideration of all these is obviously an impossible task. The process of narrowing the possible alternatives to be considered to a manageable and reasonable range is appropriate under NEPA. Detailing the infeasibility of every possible alternative would risk making trivial the environmental inquiry NEPA intends (Vermont Yankee Nuclear Power Corp. v. Natural Resource Defense Council, 435 U.S. 519 (1978)).

The planning regulations (36 CFR 219.1 (a)) state that "plans shall provide for multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long term net public benefits in an environmentally sound manner." Net public benefits include all outputs and effects, both positive and negative values that cannot be quantitatively valued, and, therefore, require the decisionmaker to subjectively balance such benefits with costs with each other and with those that can be quantified. The planning regulations (36 CFR 219.12 (f)) state that "the primary goal in formulating alternatives, besides complying with NEPA procedures, is to provide an adequate basis for identifying the alternative that comes nearest to maximizing net public benefits, consistent with the resource integration and management requirements of sections 219.13 through 219.27."

*For purposes of NEPA compliance, the courts have established that an agency need only set forth those alternatives necessary to permit a "reasoned choice" (Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 988 (9th Cir. 1985)). The NEPA does not require full discussion of land use alternatives whose implementation is remote or speculative (*id.*).*

Discussion

The appellants contend that the 1997 Forest Plan fails to provide a "genuine range of alternatives" (NOA #0108, p. 77) or to consider a "full range of alternatives" (NOA #0106, p. 7; #0112, p. 2). Contrary to appellants' contentions, the Forest did look at a full range of alternatives. As described under section III (Alternatives Considered) of the 1997 ROD the Regional Forester stated, "[a] Total of 34 alternatives has been discussed in the environmental impact statements associated with the Forest Plan. Some of these alternatives have been carried from one EIS to another and refined in response to public comments, new information, or changing circumstances" (1997 ROD, p. 11). A summarization of those "Action Alternatives Considered in Detail" (10 in all) can be found in the 1997 ROD, pages 11-14. The FEIS (pp. 2-8 to 2-24) describes the evolution of the ten alternatives considered in detail. The various components of the wide range of alternatives are detailed at pages 2-11 through 2-62 of the FEIS (1997 ROD, p. 11).

Table 2-1 of the FEIS (p. 2-7) shows the considerations used to develop alternatives. Chapter 2 of the FEIS also discusses those alternatives eliminated from detailed study (pp. 2-11 through 2-18). Included is a discussion of the Conservation Group Alternatives (pp. 2-12 to 2-15), the AFSEEE Alternative (p. 2-15), the Defenders of Wildlife and Narrows Conservation Coalition Alternative (pp. 2-15 to 2-16), the Alaska Rainforest Campaign, SEACC and The Wilderness Society alternative (pp. 2-16 to 2-17), SEACC/SCLDF (11/95) alternative (pp. 2-17 to 2-18) and the State of Alaska alternative (1996) (pp. 2-18).

The Regional Forester has shown, as part of his Findings Related to other Resource Requirements (1997 ROD, pp. 3-40) that the FEIS considered a broad range of reasonable alternatives. The 10 alternatives considered in detail in the FEIS represent only part of the total number of alternatives considered over the course of the DEIS, SDEIS, and RSDEIS. Additionally, numerous options within alternatives were considered as discussed in the FEIS (pp. 2-1 through 2-23). The alternatives presented in the FEIS encompass a broad range of response to issues, including a timber suitable land base ranging from 0 to 1.6 million acres, a retention visual quality objective (VQO) ranging from 2 to 5.9 million acres, and various options of even-aged to uneven-aged silvicultural systems (1997 ROD, p. 30).

The Regional Forester's decision to select Alternative 11 was reached after a comprehensive review of the relevant environmental, economic, and social consequences of the FEIS alternatives and is based on a number of factors, as well as the discussion of public issues and comments that best responds to multiple needs, including ensuring a healthy forest habitat and providing a sustainable supply of goods and services including timber. In addition, the Regional Forester's consideration of national policy issues, as explained, further shaped his decision. Forest Plan compliance with applicable laws, regulations, and executive orders also was a key factor (1997 ROD, p. 15; FEIS, Chapter 2).

A "Comparison of Alternatives" can be found in the 1997 ROD (pp. 15-16). The Regional Forester provided his rationale for selection of Alternative 11. He stated, "[t]here are a number of factors that the selected alternative responds to and for which the public has expressed concerns. These areas deserve a more thorough discussion to fully describe the selection I have made and the implications of the selected alternative to public issues" (1997 ROD, p. 17). These other factors include: Alternatives to Clearcutting; Deer Winter Range; Fish Habitat; Karst and Caves; Local Economy/Socioeconomic Considerations; Popular and Community Use Areas; Recreation and Tourism; Roadless Areas; Scenic Quality; Subsistence; Timber (ASQ, Demand, Non-Interchangeable Components, Sustainability of the Timber Industry); and Wildlife Habitat (1997 ROD, pp. 17-27).

In response to appellants contentions that the alternatives are predisposed toward clearcutting or failed to consider a lack of alternatives to clearcutting (NOA #0101, p. 25), the Regional Forester, as stated in the discussion above, took a hard look at alternatives to clearcutting. The timber S&G's include direction to "[u]se clearcutting only where such a practice is determined to be the best system to meet the objectives and requirements of Land Use Designations." The Forest estimates (FEIS, p. 3-268) that even age management will predominate regeneration timber harvesting (about 80 percent). In addition, the timber S&G's also state that the two-aged management system, in which some of the harvest unit is left uncut to provide structural diversity and a biological legacy in the regenerated timber stand, "may be used where windthrow or dwarf mistletoe are not major threats or can be tolerated" (1997 Forest Plan, Chapter 4 'Timber') (1997 ROD, p. 5).

On a Forest-wide basis, considering all land allocations where timber harvesting is permitted, it is "estimated that 65 percent of harvesting will involve clearcutting, with the remaining 35 percent utilizing other methods" (1997 ROD, p. 5).

It is important to note that the 1997 Forest Plan is a programmatic document and does not determine silvicultural and harvest methods for individual projects. Silvicultural and harvest methods will be determined at the project level during site-specific analysis. That point is emphasized by the Regional

Forester in section B of the 1997 ROD, "Issues Receiving Additional Consideration" under "Alternatives to Clearcutting" in which he stated,

"The determination of which harvest methods to incorporate in a timber sale project will be made considering site-specific information as part of project-level decision-making, using Forest Plan standards and guidelines. The project-level determinations of harvest methods will be discussed and disclosed in NEPA documents and will be subject to the notice and comment appeal (36 CFR 215)" (1997 ROD, p. 17).

Thus, for analysis purposes, the 1997 Forest Plan is merely projecting possible even-age management levels using the best available information. During plan implementation, the actual harvest method will be determined.

The FEIS (pp. 2-66 to 2-67) provides additional discussion of timber harvest and alternatives to even age management. The silvicultural systems described in Appendix G have a sound scientific basis when applied appropriately and matched to the management objectives and site conditions. Appendix G also makes clear that factors other than the silvical or ecological limitations of the species weigh heavily in the choice between even-aged, two-aged and uneven-aged management.

The appellants contend that the Forest Service never considered an alternative that put SEACC's special areas off limits to clear-cutting and road building (NOA #0101, p. 6). The Region received numerous comments requesting that various areas throughout the Tongass be assigned a non-development LUD. In response, Alternative 1 of the FEIS considered the impacts of assigning a non-development LUD to all of the areas for which such a suggestion was made. A number of comments suggested non-development LUD's be allocated to certain value comparison units (VCU's). These were addressed, including those from the State of Alaska, suggesting the Forest Service develop "appropriate management prescriptions that protect community use, and fish and wildlife values" in VCU's having high levels of community use. Based upon such comments, the 1997 Forest Plan assigns non-development LUD's to all or a significant portion of a number of VCU's that were assigned to development LUD's in the RSDEIS Preferred Alternative (1997 ROD, p. 21). In the 1999 ROD I have given further consideration to VCU's and non-development LUD's. Based upon my evaluation, I selected 18 Areas of Special Interest to be given non-development LUD prescriptions (1999 ROD, Appendix B).

In response to appellants' contention regarding consideration of an alternative that protects more than 29 percent of the Tongass rivers by recommending them for designation as wild and scenic (NOA #0101, p. 60), the Regional Forester, as demonstrated by his decision in the 1997 ROD, did review the process used to determine eligibility of rivers for inclusion in the National Wild and Scenic Rivers System (see the discussion on wild and scenic rivers in this decision). The Regional Forester concurred with the process and agreed that 112 rivers, in whole or in part, were eligible for designation as part of the National Wild and Scenic Rivers System. Those eligible river segments total 1,394 miles. Alternative 11 provides a mix of National Forest uses and activities, but with an additional emphasis on fish and wildlife habitat protection. Rivers were also recommended for inclusion in the selected alternative based on public comment to the RSDEIS (Administrative Record RS-G-6, TLMP 1048; FEIS, p. 3-338).

The Regional Forester recommended 32 eligible rivers for inclusion in the National Wild and Scenic Rivers System, though they may not necessarily be included in the Wild and Scenic River System. The Regional Forester clearly explained that "[t]hese recommendations are preliminary administrative recommendations that will receive further review and possible modification by the Chief of the Forest Service, the Secretary of Agriculture, and the President of the United States" (1997 ROD, p. 9). Congressional action is necessary to designate rivers as part of the National Wild and Scenic Rivers System. A list of these rivers is included in Chapter 3 of the 1997 Forest Plan, and the Regional Foresters rationale for these recommendations is discussed in Appendix A of the 1997 ROD. In addition, I changed the LUD on two additional rivers in order to maintain its outstandingly remarkable values (see wild and scenic river discussion below).

In response to one appellants contention, that the 1997 Forest Plan failed to consider a full range of reasonable alternatives, including the FSEEE alternative (NOA #0112, p. 2), the FEIS under "Alternatives Eliminated from Detailed Study", Table 2-2 (Conservation Group Recommended Alternatives) presents many of the key features of the Conservation Group proposed alternatives, including the FSEEE Alternative (FEIS, p. 2-14). It was concluded that the FSEEE alternative would make an estimated 1.435 million acres of suitable timber lands unsuitable, which exceeds the acres of suitable land available in Alternative 3. No estimate was made for removing islands 1,000 acres or smaller, or traditional use (as defined in Alaska National Interest Lands Conservation Act (ANILCA) (Section 803)) areas. Assuming that this is an overestimate and some suitable land remained available, it would be subject only to uneven-aged management using 200- to 300-year harvest rotations, and would include only the lower volume classes. Timber harvest under such a scenario is not likely to be economically viable. The 70,000 acres of suitable land remaining in Alternative 1, with less restrictive harvest requirements, were not scheduled for harvest for economic reasons (FEIS, p. 2-15).

The "Rationale for Acreage Reductions Analysis of 'Conservation Alternatives'" for the 1997 Forest Plan Revision is found in the Administrative Record (RS-I 1293). This write-up provides the rationale for the suitable acre reductions used in evaluating several conservation group alternatives in the FEIS (Chapter 2), which include the FSEEE Alternative, Defenders of Wildlife Alternative, Alaska Rainforest Campaign, SEACC and Wilderness Society Alternative, and the SEACC/SCLDF Alternative.

For the SEACC Alternative (combined with Alaska Rainforest Campaign and The Wilderness Society) (FEIS, p. 2-16), the FEIS concluded that, "[t]ogether the above components of this alternative would make an estimated 0.785 million acres of suitable timber lands unsuitable, leaving approximately 415,000 acres of suitable land available. This acreage would be subject to additional constraints, or managed differently, under the three proposals . . ." The Forest did agree that, of the three proposals, SEACC's offered the highest likelihood that a small-scale timber program could be maintained at a sustainable level, although considerably below any alternative considered in detail except Alternative 1 (FEIS, p. 2-17).

Therefore, as described above, NEPA regulations do not require full discussion of land-use alternatives whose implementation is remote or speculative, and an "agency's consideration of alternatives is adequate if it considers an appropriate range of alternatives, even if it does not

consider every available alternative." The Forest has met the requirements of NEPA in regard to range of alternatives.

In response to a previous comment from SEACC regarding "protective status" for areas that were part of the TTRA deliberations but which the Act did not "set aside", the FEIS states, that land use designations which provide a "protective status" were considered, but not set aside for Wilderness by the Tongass Timber Reform Act. Many of these areas did receive allocations to maintain the natural conditions. One of the goals common to all alternatives (FEIS, p. 2-25) is to "[p]rovide for the continuation of subsistence uses and resources by all rural Alaskan residents" (FEIS Appendix L, p. L-86). For a more detailed discussion on wilderness, see that section of this decision letter. As part of my evaluation, I considered eight areas which did not receive protected status under TTRA. I selected all eight as areas of special interest, using the criteria described in the 1999 ROD (Areas of Special Interest Section).

The FEIS (see Table 2-7) examined a broad range of alternatives, allocating various areas of the Tongass National Forest to different management emphasis. The alternatives analyzed various estimates of timber volume, ranging from an ASQ of 122 (Alternative 5) to an ASQ of 640 (Alternative 7) (FEIS, p. 2-64).

Decision

After my review of the record, I find that the Regional Forester looked at a broad range of alternatives, and took into account public comments and concerns as required by NEPA. The Regional Forester looked at numerous factors he felt should receive additional consideration in making his selection of Alternative 11. The SEACC and FSEEE's alternatives were appropriately considered, in accordance with NEPA. Alternative development and analysis were consistent with law, regulation and policy.

However, to further strengthen Alternative 11, I have added provisions to enhance subsistence by increasing deer winter range/deer habitat capability. I have also increased protection for old growth and old growth dependent species. In addition, I have provided new protection for Areas of Special Interest, as well as added an additional river to the list for WSR recommendation (see the section on Rationale for Decision in the enclosed 1999 ROD).

Subsistence

The appellants contend that the "[t]he [1997] ROD unlawfully holds that significant restrictions to subsistence uses are necessary to achieve multiple use balancing goals" (NOA #0101, p. 11) and that "[t]he TLMP Revision will have a devastating effect on customary and traditional uses of fish and game in Southeast Alaska" (NOA #0108, p. 31). The appellants further contend that "[t]he Alaska Region mistakenly treats subsistence the same as, or less than any other resource use subject to multiple use balancing" (NOA, #0108, p. 35). The appellants also contend "[t]he Alaska Region's failure to recognize the heightened protection for subsistence in the statutory scheme permeates the Plan and resulted in numerous deficiencies. Subsistence was treated as an afterthought throughout the planning process" (NOA #0108, p. 39).

The appellants contend that the "economic value of subsistence activities have not been adequately addressed in the [1997] Revised Plan, nor their importance as a cultural and lifestyle resource to rural residents" (NOA #0112, p. 9).

Background

Section 810 of the ANILCA states in part,

"(a) In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands under any provision of law authorizing such actions, the head of the Federal agency having primary jurisdiction over such lands or his designee shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency -

- (1) gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805;*
- (2) gives notice of, and holds, a hearing in the vicinity of the area involved; and*
- (3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such uses, occupancy, or other disposition, and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.*

National Forest land management plans are required by NFMA, and must provide for the multiple-use and sustained yield of renewable forest resources in accordance with the MUSYA. Multiple-use is defined as "the management of all the various renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet the needs of the American people" (36 CFR 219.3). The alternatives presented in the 1997 Forest Plan "represent different ways of managing Tongass National Forest resources in combinations that are intended to meet the needs of the American people. Each provides a different mix of resource uses and opportunities, and each has some potential to affect subsistence uses. Given the theme and emphasis of each alternative, the potential restrictions associated with each alternative are necessary, consistent with the sound management of public lands" (FEIS, p. 3-228).

Discussion

The Forest-wide multiple use goal and objective for subsistence is to provide for the continuation of subsistence uses and resources by all rural Alaskan residents, and evaluate and consider the needs of subsistence users in making project land management decisions (1997 Forest Plan, p. 2-4).

Appellants contend that the Region mistakenly treats subsistence the same as or less than, any other resource use subject to multiple use balancing. In Amoco Production Co. v. Village of Gambell, 480

U.S. 531,544, the Supreme Court noted that, Congress did not state in ANILCA that subsistence uses have to be given preference over the development of energy resources, or other uses of Federal land; rather it expressly declared that preservation of subsistence resources is a public interest and established a framework for reconciliation, where possible, of competing public interests.

Contrary to the appellant's allegation that the Region treated subsistence as an afterthought, Forest-wide evaluations, coupled with statements made above and in the FEIS, of the need to consider and evaluate subsistence in project decisions, demonstrates the Regional Forester's recognition of subsistence, and that it was not treated as an afterthought. The Forest emphasized that some components of the management prescriptions received special consideration in the decision-making because the Forest believed they are essential to maintain sustainability of ecosystems and the supply of goods and services" (1997 ROD, p. 4). Those components that weighed heavily in the Regional Forester's selection of Alternative 11 included subsistence (1997 ROD, pp. 4-7).

As further discussed by the Regional Forester, subsistence forest-wide S&G's (1997 Forest Plan, pp. 4-86 to 4-87) reflect the policies of Title VIII of ANILCA. Specific public involvement and analysis requirements will be followed to ensure that project activities consider impacts upon rural residents who are subsistence users. Consultations will occur with the Southeast Alaska Federal Subsistence Regional Advisory Council on current and proposed management actions. The S&G's likewise provide for participation by recognized Tribal governments and subsistence user groups in various matters relating to subsistence (1997 ROD, p. 5).

In addition, the Forest Service will evaluate changes in subsistence-use patterns and activities by consulting with subsistence user groups and by cooperating with appropriate State and Federal agencies in periodic surveys of wildlife populations. The Regional Forester assured that reasonable access to subsistence resources will be maintained and subsistence users' needs will be considered in fish and wildlife improvement projects, as well as in access and facilities projects (1997 ROD, p. 5).

There were a number of factors that the selected alternative responded to and for which the public had expressed concern (1997 ROD, p. 17) including some individuals and groups, which included the Southeast Alaska Federal Subsistence Advisory Council, who advocated the creation of a subsistence LUD to be used in concert with the other 19 LUD's in the 1997 Forest Plan. In response, the Regional Forester stated, "[t]he recommendation for a subsistence LUD has not been adopted, in part because there is no agreement on what activities would and should not be allowed in such a LUD. In addition, all LUDs provide for subsistence uses of the Forest" (1997 ROD, p. 24).

The [1997] Forest Plan is consistent with Section 810 of ANILCA. Subsistence hearings and other meetings with subsistence users were held throughout Southeast Alaska to obtain the specific concerns of subsistence users. It was concluded that, "in combination with other past, present, and reasonably foreseeable future actions, there will be no significant restriction for salmon, other finfish, marine mammals, invertebrates, river otter, moose, waterfowl, seabirds, other small game, edible plants, or firewood. Together, these resources account for an average of at least 75 percent of the total harvest of subsistence resources." (Id).

In his "Findings Related to Other Requirements" the Regional Forester discussed subsistence as related to the Alaska National Interest Lands Conservation Act (ANILCA), Section 810: "Necessity,

Consistent with Sound Management of Public Lands; Amount of Public Land Necessary to Accomplish the Proposed Action Purpose; and Reasonable Steps to Minimize Adverse Impacts Upon Subsistence Uses and Resources" (1997 ROD, pp. 36-37). The Regional Forester stated,

The continuation of subsistence opportunities, and reasonable steps to minimize effects on subsistence resources, are provided for by the forest-wide standards and guidelines for subsistence, as well as related standards and guidelines for riparian areas, fish, and wildlife. Many important subsistence areas were assigned land use designations that exclude timber harvesting. The beach and estuary fringe forest-wide standards and guidelines apply to all beach fringe and estuarine areas not under more restrictive designations. Adverse impacts to subsistence uses and resources are minimized though [sic] these measures. The potential site-specific effects on subsistence uses, and reasonable ways to minimize these effects, will be analyzed and considered during project-level planning. (Id.)

The FEIS (p. 3-227) states, "[a]n ANILCA Section 810 evaluation and determination is not required for approval of a revised Forest Plan, a programmatic level decision that is not a determination whether to 'withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition' of National Forest lands." However, "[a] Forest-wide evaluation and determination is included for the Forest Plan revision to facilitate project level planning and decision making in compliance with ANILCA Section 810." (id.)

Using analyses of subsistence uses and needs and the comments from the ANILCA 810 Subsistence Hearings, the alternatives considered in this FEIS were evaluated for potential effects on subsistence uses and needs, as described above. Based on this evaluation it was again determined that, in combination with other past, present and reasonably foreseeable future actions, one or more of the FEIS alternatives, if implemented through project-level decisions and actions, may result in a significant restriction of subsistence uses of deer, and possibly other land mammals, due to potential effects on abundance and distribution, and on competition (FEIS, p. 3-228).

As a result of this finding, the "USDA Forest Service notified the appropriate State agencies, local communities, the Southeast Alaska Federal Subsistence Regional Advisory Council, and State Fish and Game Advisory Committees, and held hearings in affected communities throughout Southeast Alaska after publication and dissemination of the RSDEIS" as evidenced in the FEIS, page 3-228 and Administrative Record RS-G-11.

The Forest responded to previous comments on subsistence (FEIS Appendix L, pp. L-114 through L-116). An evaluation of the likely potential effects of management on subsistence and community use areas is displayed for each of 33 Southeast Alaska communities (FEIS Appendix L, p. N-117). The most important use areas for subsistence were identified, using deer harvest as the indicator. This information is provided on a community-by-community basis by Alaska Department of Fish and Game (ADF&G) Wildlife Analysis Area (Id.).

The Forest conducted a qualitative assessment of environmental justice considerations based on the information in the FEIS. The FEIS consistently ranked Alternative 11 with the lowest risk of adverse environmental effects from land management activities on wildlife and fish habitat and subsistence

resources. Only Alternative 1, which has no commercial timber program, is consistently ranked lower in risk (1997 ROD, p. 39).

Pointing again to the recognition of the importance of subsistence is the early identification of subsistence as an issue, at least nine years prior to the 1997 ROD. In 1988, ten public issues were originally identified for the Forest Plan revision. One of the issue topics included was subsistence (1997 Forest Plan Summary, pp. i, ii). Subsistence issues were carried through to and updated for the 1991 DEIS. Subsistence is discussed in the FEIS on pages 1-4 through 1-5. The subsistence issue revolves around ensuring subsistence opportunities and protecting traditional subsistence areas while managing for multiple resource uses. The potential effects of continued logging on resources and places important to subsistence users is the main concern. Another acknowledged concern is roads, which can provide new access opportunities, but can also result in competition among sport and subsistence users.

The Forest also recognized that "[s]ubsistence means preserving the traditional Native life-style. It is much more than just getting food, it includes spiritual, cultural and historical aspects also" (FEIS Appendix L, p. L-114). "Subsistence resources provide the foundation for Native culture, ranging from the totemic basis of clan divisions, to norms governing the distribution of wealth in potlatch ceremonies, to reinforcement of basic values of respect for the earth and its resources." (Id.) Subsistence is discussed in the FEIS (Chapter 3, "Subsistence").

One appellant is concerned that deer habitat will decline dramatically under the 1997 Forest Plan (NOA #0108, p. 31). Appendix H of the FEIS looks at additional community information. This appendix is in three parts: community deer use maps, estimated effects on deer habitat capability and harvest opportunities, and community group employment data.

The Forest looked at subsistence deer harvest information (FEIS Appendix L, p. L-115). Recent ADF&G deer hunter harvest data was incorporated in the FEIS. Information from the Tongass Resource Use Cooperative Survey (TRUCS) and ADF&G was used extensively in both the RSDEIS and the FEIS. Prior to initiating the survey, approximately 200 formal and informal community leaders throughout Southeast Alaska were informed about the study objectives and asked for their comments about the way the survey would be conducted. The analysis of individual communities is discussed in the FEIS (Chapter 3, "Communities").

In addition, the Ninth Circuit Court of Appeals ruled (March 24, 1999) that the Forest Service complied with statutory requirements concerning subsistence deer hunting in the Tongass National Forest. The ruling came in cases that two Southeast Alaska tribes filed over the Eight Fathom and Northwest Baranof timber sales, located on Chichagof Island and Baranof Island respectively. The appeals court held that the Forest Service decisions about the impacts of timber sales on subsistence hunting complied with section 810 of the ANILCA. In doing so, the court rejected the claims of the Hoonah Indian Association and the Sitka Tribe of Alaska that additional protections were needed. The court found that the Forest Service correctly determined, in accord with the terms of ANILCA, that the sales were "necessary, consistent with sound management principles" and "involve the minimal amount of public lands necessary to accomplish the purposes" of the sales.

Decision

After my review of the record, I find that the Regional Forester took a hard look at subsistence and its economic value as a cultural and life-style resource. He stated that the Forest-wide multiple use goal for subsistence is to provide for the continuation of subsistence uses and resources by all rural Alaskan residents, and will evaluate and consider the needs to subsistence users in making project land management decisions. Although a forest plan does not determine whether to withdraw, reserve, lease nor otherwise permit the use, occupancy, or disposition of public lands, the Forest Service has satisfied all the requirements of ANILCA 810(a) as if it applied to the decision to adopt the Forest Plan. The 1997 Forest Plan was consistent with ANILCA, NFMA, and the requirements of NEPA, as well as other law, regulation, and policy with regard to the evaluation of the impacts on subsistence uses and needs.

However, based upon my review of the record, I have determined that there was a need to modify the provisions of the 1997 Forest Plan to better address subsistence uses. I have changed from development to non-development LUD's in 18 Areas of Special Interest (see enclosed 1999 ROD, Wildlife section) to further protect subsistence needs and other special values associated with these lands. Thirteen of the eighteen Areas of Special Interest were selected because of their significance for subsistence values (see enclosed 1999 ROD, Rational for Decision section).

In addition, I have added a standard which extends timber rotation from 100 to 200 years in 42 Wildlife Analysis Areas (WAA's) where deer habitat capability concerns exist (see enclosed 1999 ROD, Deer Winter Range section). Reducing the rate at which timber is harvested reduces the risk to deer habitat capability and thus subsistence use of deer. Because there is a strong relationship between those WAA's and the areas identified as important "heavy use" subsistence areas across the forest (FEIS Chapter 3, Wildlife Analysis tables), the extended timber rotation focuses on all areas where deer habitat capability is a concern. The rotation strategy addresses the concern of increased competition for deer that might result from shifts in hunting pressure that could result if only a few areas of concern were addressed.

These actions will increase the Forest's ability to meet subsistence needs over the long term.

Clearcutting/Optimality

The appellants contend that "[t]he TLMP violates the NFMA provisions limiting the use of clearcutting" (NOA #0101, p. 11; NOA #0108, p. 47) and that "[t]he Forest Service did not attempt to make a finding that clearcutting is the optimum method of logging to meet the wide variety of objectives in the plan" (NOA #0101, p. 25). The appellants further contend that "[t]he alternatives offered by the Forest Service artificially narrowed its options and improperly predisposed it towards continuing large-scale clearcutting on the Tongass" (NOA #0101, pp. 1-4; NOA #0108, p. 57) and that "[t]he TLMP final Environmental Impact Statement (FEIS) fails to address adequately the cumulative adverse ecological effects of continued clearcutting and road construction" (NOA #0105, p. 15). They further contend that the "TLMP violates NFMA and Forest Service Policy by emphasizing clearcutting as the dominant silvicultural method" (NOA #0106, p. 12).

The appellants express a "concern for the continued reliance on clearcutting . . ." (NOA #0127) and the "continual reliance on clearcutting violates the mandate of the Forest Service to manage for multiple resource use in a sustainable manner" (NOA #0112, pp. 2-3).

Background

The NFMA allows clearcutting and other forms of even-aged timber management under specified circumstances. The statute requires that the Secretary's regulations must ensure that environmental and economic elements are considered, that resource relationships are considered, and that the Revised Plan provides for a variety of resource uses and activities (16 U.S.C. 1604 (g)(3)(A)).

As previously discussed, the Revised Plan identifies through the management prescriptions the desired future condition of the Forest (36 CFR 219.11) and sets the stage for project or activity review, but does not provide the last word. Forest plans are not a collection of individual project decisions which create irretrievable commitments of resources. Such plans would inhibit use of new information, responses to changes in demands and needs, adoption of new technology, and response to evidence from monitoring. It is during project decisionmaking that we determine management practices to meet overall goals and objectives consistent with the 1997 Forest Plan's S&G's. Decisions at the project planning level and the Forest Plan monitoring and evaluation processes provide for regular reviews to ensure validity of planning assumptions.

*Several federal court decisions have held that NFMA does not require forest plans to make site-specific timber harvesting decisions including silvicultural methods for future projects. Arguments similar to those raised in this administrative appeal of the 1997 Forest Plan were considered in *Resources Ltd. v Robertson*, 789 F.Supp.1529, 1536-1537 (D. Mont.1991), affirmed, 8 F.3d at 1402. Plaintiffs alleged the Flathead Forest Plan violated NFMA (16 U.S.C. 1604(g)(3)(F)(i)) because it failed to demonstrate that clearcutting was the "optimum" method of harvest. The court rejected plaintiff's arguments, noting that NFMA, 16 U.S.C. 1604(f)(2), requires that forest plans estimate the "proportion of probable method of timber harvest." The court concluded that NFMA required the agency to make the optimality finding with reference to the Forest Plan. Thus, the court found that harvest method and the optimality finding for clearcutting were project level determinations under NFMA. The Ninth circuit affirmed the District Court, adding that "when the EIS or an environmental assessment (EA) for each specific site is drafted, Resources Limited will have the opportunity to challenge that EIS or EA if clearcutting is improperly endorsed as the optimum harvest method" (*Resources Ltd. v Robertson*, 8 F.3d at 1402).*

*Similarly, plaintiffs in *Sierra Club v. Robertson*, 810 F. Supp. at 1026-1027 (W.D. Ark. 1992), affirmed, 28 F.3d at 753, argued that the timber harvest method decisions must be made at the forest plan level of decisionmaking. Plaintiffs alleged that the failure of the Ouachita Forest Plan to make the optimality determination for clearcutting in the plan violated NFMA, 16 U.S.C. 1604(g)(3)(F)(i). The court considered plaintiffs', arguments and the NFMA requirements, and concluded that:*

*. . . plaintiffs are wrong. First, a reasonable reading of the statute does not mandate that the agency create a regulation requiring that timber harvesting methods be in the plan. Second, the agency concluded that the choice of harvest method is a project-level decision rather than a planning-level decision. The agency's interpretation of NFMA is controlling unless unreasonable. See *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 844-45 (1984). The court concludes that the agency's reading is reasonable because it allows site-specific analysis of the*

appropriateness of the cutting method. See Resources Ltd. v. Robertson, 789 F.Supp. 1529, 1536-37 (D. Mont. 1991).

The Fifth Circuit Court of Appeals in Sierra Club v. Espy, 38 F.3d 792 (5th Cir. 1994), has also examined this issue in detail and noted that:

"national forest are subject to multiple uses, including timber uses, which suggests that the mix of forest resources will change according to a given use. Maintenance of a pristine environment where no species' numbers are threatened runs counter to the notion that NFMA contemplates both even- and uneven-aged timber management" (Id. at 16).

The court reviewed its previous decision upholding even-aged timber management, Texas Committee on Natural Resources v. Bergland, 573, F-2d 201 (5th Cir.), cert. denied, 439 U.S. 966 (1978), and re-affirmed its conclusion that:

"Congress, after hearing testimony on both sides of the clearcutting issue, struck a delicate balance between the benefits of clearcutting and the benefits of preserving the ecosystems and scenic quality of natural forests On three separate occasions, Congress rejected amendments that would have made uneven-aged management the preferred forest management technique" (Sierra Club v. Espy, Slip Opinion at 11-12, 13).

The court recognized that the Forest Service "may use even-aged management as an overall management strategy" (Id. at 12), and concluded that "NFMA does not bar even-aged management or require that it be undertaken only in exceptional circumstances; it requires that the Forest Service meet certain substantive restrictions before it selects even-aged management (Id. at 14). The court acknowledged that these substantive restrictions were satisfied during project level planning (Id. at 3, 5).

In a letter dated September 8, 1988, the Chief established policy on clearcutting as follows:

"Apply clearcutting only where it has been found to be the optimum method of regeneration to meet multiple-use objectives and is essential to meet forest plan objectives, involving one or more of the following circumstances:

- 1. To establish, enhance or maintain habitat for threatened, endangered or sensitive species.*
- 2. To enhance wildlife habitat or water yield values, 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 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."*

The 1997 Forest Plan does not require that clearcutting must occur at all, much less that it must occur at a particular location. The Forest Service has emphasized that the propriety of individual timber sales would be subject to site-specific inquiries in which the public would be given an opportunity to participate.²

In Sierra Club v. Espy, 38 F.3d 792, 799 (5th Cir. 1994), the Fifth Circuit stated that:

The Forest Service may use even-aged management as an overall management strategy. That even-aged management must be the optimum or appropriate method to accomplish the objectives and requirements set forth in an LRMP does not mean that even-aged management is the exception to a rule that purportedly favors selection management. Similarly, the requirement that even-aged logging protect forest resources does not in itself limit its use. Rather, these provisions mean that the Forest Service must proceed cautiously in implementing an even-aged management alternative and only after a close examination of the effects that such management will have on other forest resources.

After reviewing the Act's legislative history, the Fifth Circuit concluded that "NFMA does not bar even-aged management or require that it be undertaken only in exceptional circumstances; it requires that the Forest Service meet certain substantive restrictions before it selects even-aged management." (Id. at 800).

Discussion

The appellants allege that the Forest is in violation of the NFMA planning regulations at 36 CFR 219.27(b)(1) and 219.27(c)(6) (NOA #0101, p. 11; #0108, p. 47). The regulation at 36 CFR 219.27(b)(1) states that: (b) Management prescriptions that involve vegetative manipulation of tree cover for any purpose shall -- (1) be best suited to the multiple-use goals established for the area with potential environmental, biological, cultural resource, aesthetic, engineering, and economic impacts, as stated in the regional guides and forest plans, being considered in this determination. The regulation at 219.27(c)(6) states: (c) The following management requirements apply to timber harvest and cultural treatments: (6) Timber harvest cuts designed to regenerate an even-aged stand of timber shall be carried out in a manner consistent with the protection of soil, watershed, fish and wildlife, recreation, and aesthetic resources, and the regeneration of the timber resource.

As noted above, the 1997 Forest Plan does not make site-specific decisions to harvest timber (1997 ROD, p. 43). The determination of when, where and how timber may be harvested is left up to future

²*See Department of the Interior and Related Agencies Appropriations Act, 1993, Pub. L. No. 102-381, 322, 106 Stat. 1419 (1992) (16 U.S.C. 1612 note). The administrative decision on appeal of any such site-specific activity would then be final agency action subject to judicial review under the Administrative Procedure Act, 5 U.S.C. 701, et seq.. See, e.g., Pub. L. No. 102-381, 322 (d)(4), 106 Stat. 1420.*

project decision making. Because timber is a multiple-use resource (16 U.S.C. 528) the 1997 Forest Plan makes certain LUD's available for timber harvesting, just as it does for recreation and other areas for old growth or interior forest species habitat. The 1997 Forest Plan is a programmatic framework for future decisionmaking for multiple-use resources and does not contain any site-specific harvesting decisions.

As discussed in the 1997 ROD, the Tongass National Forest will continue to allow timber harvest while maintaining sustained yield and multiple use goals. The forest-wide S&G's for timber include general direction to "[e]nsure that silvicultural systems other than clearcutting are considered through an appropriate project level analysis process. However, uneven-aged management systems will be limited to areas where yarding equipment suited to selective logging can be used" (1997 Forest Plan, Chapter 4; 1997 ROD, p. 5).

As stated in Issue 1, above, the timber S&G's (1997 Forest Plan, Chapter 4, 'Timber') include direction to: "Use clearcutting only where such a practice is determined to be the best system to meet the objectives and requirements of Land Use Designations" (1997 ROD, p. 5). Also, the Alaska Region, the Tongass National Forest, and the Pacific Northwest Research Station (PNW) will continue to study and experiment with alternative harvesting systems to forward the goal of further reducing the acres that are clearcut annually.

The determination of which harvest methods to incorporate in a timber sale project will be made considering site-specific information as part of project-level decision-making, using Forest Plan S&G's. The project-level determinations of harvest methods will be discussed and disclosed in NEPA documents and will be subject to the notice and comment appeal (36 CFR 215).

Contrary to appellants' allegations that the Forest was improperly predisposed towards continuing large-scale clearcutting on the Tongass (NOA #0101, pp. 1-4; #0108, p. 57), the Regional Forester recognized the need for additional information regarding use of alternative silvicultural methods. The Alaska Region and the Pacific Northwest Research Station are continuing to study alternative harvest systems. Monitoring and evaluation (as outlined in Chapter 6 of the 1997 Forest Plan) will be important in determining what alternative harvest systems may be appropriate for the Tongass, and where and when they will be used (1997 ROD, p. 17).

The Forest (FEIS, pp. 2-66 through 2-67) provides a discussion on "Timber Harvest and Alternatives to Clearcutting." There were three alternative silvicultural systems available as options for timber harvest in the forest plan alternatives: even-aged management (clearcutting), two-aged management, and uneven-aged management. In addition, two harvest rotation ages were also available: an average 100-year rotation ("short" rotation), and an average 200-year rotation ("extended" rotation). The combination of even-aged management with 100-year rotations is the practice used currently, and forms the primary harvest system selected for Alternatives 2, 7, 9 and 11 (in 11 in combination with two-aged systems). Other combinations would be considered the as "alternatives" to clearcutting.

The Forest discussed the pros and cons of the different harvest systems, and described the reasons for currently and historically using even-aged management (FEIS, pp. 3-249 through 3-308). The Forest admitted that for Southeast Alaska there are many unknowns surrounding the silvicultural

alternatives to clearcutting which translates into considerable uncertainty over their long-term success and effectiveness.

There were quite a few public comments to the DEIS concerning the elimination of clearcutting. The Forest responded to the major public issue of eliminating clearcutting, and moving to selection, group selection and shelterwood cutting systems (FEIS Appendix L, p. L-131).

In response to another, similar comment raised previously by SEACC, that only two timber harvest methods, both featuring clearcutting, are offered in the timber harvest schedule shown by FORPLAN (FEIS Appendix L, pp. L-150 to L-151) the Forest stated:

All silvicultural systems are available for selection within the Forest's suitable land base. Selection by the Forest Service of an appropriate silvicultural system or systems occurs at both the National Forest land management planning level and project level. The basis for the Forest's selection is a broad match of silvicultural systems with the ecological characteristics of the vegetation and the overall planning objectives of broadly defined Land Use Designations. Examples of Land Use Designations that allow timber harvest are Timber Production, Modified Landscapes, Scenic Viewsheds, and Riparian Areas. An estimate of the most likely regeneration methods that land managers may use on the Forest was made to project the effects and predict costs and yields for the Plan revision. The Forest Service requires that Certified silviculturists make or approve the site-specific project level selection of appropriate silvicultural systems. The selection is evaluated through the NEPA process. The choices are dependent on matching the attributes of the silvicultural system with specific management objectives, the ecological characteristics for specific stands and species, and policy direction.

Appendix G of the FEIS contains information and discussion of the different silvicultural practices available on the Tongass, as well as the key site and stand conditions. Appendix G provides a comparison of systems and anticipated results of each and then identifies the most appropriate systems for given combinations of the above factors. While the indicated systems should be those most often used, it is not intended that other systems should not be used when site conditions warrant or to test alternative systems.

The Forest recognizes that no single silvicultural system can produce all desired combinations of products and amenities from a particular stand, or from a National Forest (FEIS Appendix G, p. G-1).

A good silvicultural system is a solution to a specific set of circumstances; and it should fit logically into the overall management plan for the forest. A silvicultural system is developed from a stand-specific analyses. The prescription is designed to meet desired conditions and considers such issues as worker safety, logging systems layout, pathogen and insect effects, animal populations, costs, stand development and yield, fuels management, etc.

The Forest is in compliance with the NFMA requirements regarding vegetation manipulation. Each of the described systems has a sound scientific basis when applied appropriately and matched to the management objectives and site conditions. Factors other than the silvical or ecological limitations of the species weigh heavily in the choice between even-aged, two-aged and uneven-aged management,

and the various regeneration methods or variations within each system which may include: Other resource values; Management objectives; Terrain considerations with its limitations on logging systems; Presence or absence of dwarf-mistletoe; Susceptibility to windthrow; Susceptibility to logging damage; Policy constraints and/or Socio-economic considerations (FEIS Appendix G).

Throughout the documents site-specific analysis and project level decisionmaking are emphasized at the time which a silvicultural method is determined. The level of even-aged management projected by the plan is merely the "proportion of probable method of timber harvest" as required by NFMA (16 U.S.C. 1604 (f)(2)). The optimality finding is determined at the project level.

The appellants allege that the 1997 Forest Plan fails to address adequately the cumulative adverse effects on continued clearcutting and road building (NOA #0105). The environmental effects analysis estimates timber activities and timber associated activities, such as road building, in excess of 100 years.

As stated in the FEIS Chapter 3, "[f]ollowing each resource description is a discussion of the potential effects (environmental consequences) to the resource associated with implementation of each alternative. All significant or potentially significant effects, including direct, indirect and cumulative effects, are disclosed. Effects are quantified, where possible, although qualitative discussions are also included. The means by which any identified potential adverse effects will be reduced or mitigated are also described" (FEIS, p. 3-1).

Within the FEIS is a discussion of the potential direct, indirect and cumulative effects to: biodiversity (pp. 3-27 through 3-39); Fisheries (pp. 3-56 through 3-71); Recreation and Tourism (pp. 3-128 through 3-135); Roadless areas (pp. 3-169 through 3-174); Scenery (pp. 3-178 through 3-196); Soils (pp. 3-195 through 3-201); Subsistence (pp. 3-222 through 3-324); and Wildlife (pp. 3-362 through 3-429) and in Appendix N.

The Regional Forester acknowledged that, "[u]ncertainties connected with environmental impacts were addressed with the use of expert panels for effects on wildlife and human communities. Complex wildlife habitat models were employed to better understand the relationships between management actions and impacts to wildlife" (1997 ROD, p. 30). Project analyses will be conducted and will assure cumulative effects have been considered before a project decision is made.

Decision

After my review of the record, I find that the Regional Forester analyzed all forms of timber management appropriate for the Tongass, as specified under NFMA. The 1997 Forest Plan is consistent with NFMA with regard to silvicultural methods analyzed and selected. Alternatives were looked at that utilized harvest methods other than clearcutting and other forms of even-aged timber management. The FEIS adequately addressed the cumulative effects of clearcutting and road construction on the various resources for the Tongass National Forest. I affirm the Regional Forester's decision with further direction to move toward a reduction in the use of clearcutting on the Tongass. Nothing in the enclosed 1999 ROD affects the 1997 ROD on this issue.

Forest Management

The appellants contend that the "TLMP authorizes a forest type conversion in violation of NFMA (36 CFR 219.27(g))" (NOA #0101, p. 26; NOA #0108, p. 57).

The appellants contend that the "[t]he Plans Timber Sale Transition Rules violates the National Forest Management Act" (NOA #0108, p. 71).

The appellants contend that the Forest Service's approach to falldown is inadequately explained and justified (NOA #0101, p. 117; NOA #0108, p. 66) .

Discussion

The appellants contend that, because of its reliance on clearcutting, the 1997 Forest Plan will result in a significant type conversion of the Tongass (NOA, #0101, p. 26; #0108, p. 57). Nowhere in the 1997 ROD or FEIS does the Forest say that harvest practices (clearcutting) will "result in a significant type conversion on the Tongass." The statement that the appellants reference in the 1997 ROD (p. 17) does not represent what the Forest is planning to do, but is rather giving an estimate or example. The Regional Forester recognizes the controversy surrounding clearcutting and the need for additional information regarding use of alternative silvicultural methods. The Alaska Region and the Pacific Northwest Research Station are studying alternative harvest systems. Monitoring and evaluation, as outlined in the 1997 Forest Plan, Chapter 6, will be important in determining what alternative harvest systems may be appropriate for the Tongass, and where and when they will be used (1997 ROD, p. 17).

The FEIS (Chapter 3) provides a discussion of the potential effects (environmental consequences) to the various resources associated with the implementation of each alternative. In the selected alternative (Alternative 11) about 14 percent of the total forest acreage is considered tentatively suitable lands as defined by NFMA regulations 36 CFR 219.14(a) and Section 102 of the TTRA (FEIS, p. 3-263). Harvest of these suitable lands does not result in a "type conversion" of tree species. Even-aged management produces a stand-developmental sequence much like that which follows stand replacement events such as catastrophic windthrow, landslides or avalanches (FEIS Appendix G, p. G-3). The Forest is in compliance with the regulations at 36 CFR 217.27(g).

The appellants contend that the 1997 Forest Plan's "Timber Sale Transition rule violates the NFMA" in that "NFMA requires consistency with the plan [appellants believe to mean S&G's], not consistency with the 'goals and objectives of the plan'" (NOA #0108, p. 71).

The planning regulations at 36 CFR 219.3 define a goal as a "concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed." An objective is defined as a "concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals." The planning regulations also describe a forest plan's content at 36 CFR 219.11 which states in part, "[t]he forest plan shall contain . . . (b) Forest multiple-use goals and objectives that include a description of the desired future condition of the forest or

grassland and an identification of the quantities of goods and services that are expected to be produced or provided during the RPA planning period . . ." Thus, goals and objectives are clearly an integral part of the forest plan which help describe how to reach the desired future condition.

Subsequent to the release of the 1997 ROD there has been litigation. In Friends of Southeast's Future v. Morrison, 153 F.3d 1059 (9th Cir. 1998) the Ninth Circuit examined the 1997 ROD's efforts to remove the area analysis provisions of the 1979 TLMP for the Ushk Bay project. The court found that the "area analysis - required in the 1979 Tongass LRMP could be forgone only if the sale was fully consistent with the 1997 Revised Forest Plan." The Ninth Circuit stated that it could not determine from the case record whether the timber sale is permissible under the amended Plan. The Ushk Bay and Poison Cove timber sales were subsequently withdrawn.

The Regional Forester identified four categories of timber sale projects to be evaluated for consistency with the 1997 Forest Plan (1997 ROD, pp. 40-41). Two of the categories included projects for which NEPA had been completed prior to the effective date of the 1997 Forest Plan. Category 1 included projects for which NEPA decision documents had been signed and whose volume had been sold prior to the effective date of the 1997 Forest Plan. Category 2 included projects for which NEPA decision documents had been signed but whose volume had not been sold prior to the effective date of the 1997 Forest Plan.

The appeal issue addressing the Regional Forester's transition treatment of Category 1 projects to the 1997 Forest Plan is similar to one addressed by the 9th Circuit Court of Appeals. The Court held in Forest Guardians v. Dombeck, 1987 EL 765718 (9th Cir. Ariz) that in the case of Forest Plan amendments, "[t]he language of 1604(i) does not explicitly mandate the retroactive application of all amendments. In fact, it expressly precludes the retroactive application of amendments where such retroactive application would impair existing rights." Under NFMA, "permits, contracts, and other instruments for the use and occupancy" of National Forest System lands are required to be "consistent" with the current Forest Plan. However, this requirement is not absolute. In the plan revision context, NFMA specifically qualifies the requirement in three ways: 1) these documents must be revised only "when necessary"; 2) these documents must be revised "as soon as practicable; and 3) any revisions are "subject to valid existing rights." This language allows the decisionmaker a great deal of latitude.

In developing the 1997 Forest Plan, implementing pre-existing decisions and the associated effects of that implementation were considered part of the baseline against which the alternatives were evaluated. Because the Forest considered these earlier decisions in their effects analysis, their implementation is not in conflict with the 1997 Forest Plan. Furthermore, as supported by the Forest Guardian court decision, it was reasonable for the Regional Forester to determine that it was not necessary to apply the plan's S&G's retroactively. The NFMA does not require revision of pre-existing use and occupancy authorizations. The Regional Forester has the discretion to determine on a case-by-case basis whether modifications to pre-existing authorizations are necessary.

To ensure compliance with NFMA and its implementing regulations (36 CFR 219) and consistency with the 1997 Forest Plan, the Regional Forester reviewed Category 2 projects for consistency with the 1997 Forest Plan goals and objectives. Since, as described above, desired future condition is ultimately what the Forest is trying to achieve with 1997 Forest Plan implementation through projects, it was reasonable for the Regional Forester to evaluate existing projects against these goals

and objectives. The Regional Forester determined it necessary to modify one project prior to implementation and directed the Forest Supervisor to modify the project to avoid compromising an Old-growth Habitat LUD in the 1997 Revised Plan (1997 ROD, p. 41). Other projects in Category 2 did not require modification.

The appellants contend that the Forest Service's approach to falldown is inadequately explained and justified (NOA #0101, p. 117; NOA #0108, p. 66). Contrary to these assertions, the FEIS provides an adequate discussion of falldown (FEIS, p. 2-19). Further in the FEIS is a discussion of the factors that affect the ASQ, or "falldown" (FEIS, pp. 3-277 to 3-280). Appendix B of the FEIS describes the factors that may result in falldown and states, "[a]s discussed earlier in the appendix, constraints have been added to the FORPLAN models to account for a variety of missing, miscoded, and unaccounted for information that may reduce the feasibility of FORPLAN-generated results. These values are referred to as Model Implementation Reduction Factors (MIRFs). In order to estimate the impact these constraints have on the models, a series of runs were made without them. All other constraints were left in place" (FEIS Appendix B, p. B-34).

In the administrative record (RS-H-C-i) the Forest has provided a comprehensive package which describes how the MIRF's were developed for use in FORPLAN. For each of the 10 MIRF elements (land selections, TTRA stream buffers, non-commercial forest, slope/soil hazard, cost efficiency, riparian habitat, karst/caves, deer habitat and remaining S&G's) the Forest has provided documentation on the conceptual approach used, the supporting information and how the calculations to "falldown" were done.

In March and April of 1995, as part of the then current Timber Assessment Task List, the Forest was asked to provide a project design loss (or falldown) factor that reflected their Areas' experience. They were asked to identify the most common factors causing the change between project planned and harvest acres. This information is provided in the administrative record (RS-G-12-a #928).

In addition, the Pacific Northwest Research Station provided an "Evaluation of the Use of Scientific Information in Developing the Final Alternative for the Tongass Land Management Plan", which examined how the scientific information was used in making management decision and evaluated whether the decisions were consistent with available information. Their conclusion was that "the management decisions made in developing the final alternative achieved a relatively high degree of consistency with the available scientific information" (Administrative Record, RS-F #1594).

Decision

After my review of the record, I find that the Regional Forester is in compliance with NFMA regulations at 36 CFR 219.27(g). The Forest is not in violation of the NFMA with regard to the 1997 Forest Plan timber sale transition rules. We find that the Forest's approach to falldown has been adequately explained and justified. I affirm the Regional Forester's decision.

The Regional Forester's 1997 transitional provisions remain effective for contracts, permits, and other legal instruments issued prior to October 1, 1999. For similar reasons as discussed above, I have decided to allow a transition period for implementation of all projects, including timber projects, in the enclosed 1999 ROD (Section VII, Implementation, Parts B and C).

Species Viability

General Wildlife

The appellants contend that "[a]lternatives studied in the 1996 revised supplement did not ensure well-distributed, viable populations of wildlife" (NOA #0108, p. 8) and that "[t]he new Tongass Plan does not remedy the major shortcomings of the preferred alternative in the RSDEIS and its predecessor "V-POP" Strategy. There are several areas the revised TLMP notably differs from features of the Preferred Alternative and recommendations on the RSDEIS (NOA #0108, pp. 9-12). The appellants further contend that the "TLMP violates NFMA by failing to assure viable populations of all native vertebrate species" (NOA #0106, p. 10) and that the "decision does not consider viable fish, wildlife, and plant habitats" (NOA #0073).

Brown bears

The appellants contend that the 1997 Forest Plan will not maintain viable and well distributed populations of brown bears because: "The Tongass Land Management Plan's riparian buffers and brown bear streamside protection measures are inadequate" (NOA #0101, p. 28; NOA #0108, pp. 17-21); "[t]he Tongass Land Management Plan's road management measures are inadequate" (NOA #0101, p. 29; NOA #0108, pp. 17-21); "[t]he Tongass Land Management Plan's reserves are inadequate" (NOA #0101, p. 30; NOA #0108, pp. 9-12 and 17-21); and "[t]he Tongass Land Management Plan does not adequately address the genetic variation of southeast Alaska's brown bear populations" (NOA # 0101, p. 31; NOA #0108, pp. 17-21).

The appellants contend that "[a]lternative 11 of the revised Tongass Land Management Plan fails to address many of the substantive issues raised by the Scientific Peer Review Panel and other scientific reviewers including the two Brown Bear Viability Assessment Panels" (NOA # 0114, pp. 2-3) and that "[t]here is a significant risk that this plan will not maintain well distributed populations of brown bears or wolves across their historic range on the Tongass National Forest" (NOA #0114, pp. 3-9).

Alexander Archipelago wolves

The appellants contend that the "[t]he Tongass Land Management Plan does not provide for adequate deer densities [to maintain sustainable wolf populations]" (NOA #0101, p. 34; NOA #0108, p. 25) and that "[t]he Tongass Land Management Plan reserves are inadequate to meet the needs of the Alexander Archipelago wolf" (NOA #0101, p. 36; NOA #0108, p. 27). The appellants also contend that "[t]he Tongass Land Management Plan does not adequately address wolf mortality" (NOA #0101, p. 38; NOA #0108, p. 28) and that "[a] recent wolf/deer population model raises significant concerns about the persistence of viable and well distributed populations of Alexander Archipelago wolf under the plan" (NOA #0101, p. 40; NOA #0108, p. 29).

The appellants contend that the 1997 Forest Plan's wolf and deer conservation measures are inadequate (NOA #0114, pp. 9-10).

American marten

The appellants contend that "[t]he TLMP will not maintain viable and well distributed populations of American Marten" (NOA #0108, p. 21).

Queen Charlotte Goshawk

The appellants contend that "[t]he Tongass Land Management Plan will not maintain viable and well distributed populations of Queen Charlotte Goshawk" (NOA #0108, p. 23).

Background

The NFMA requires the Secretary of Agriculture to promulgate regulations "specifying guidelines for land management plans developed to achieve the goals of the Program which . . . (B) provide for a diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple use objectives . . ." (16 U.S.C 1604 (g)(3)(B)). The diversity

provision is one of ten subsections of direction from Congress regarding the promulgation of planning regulations for Forest Plans to provide for multiple use and sustained yield. In accord with NFMA, the Secretary promulgated regulations which address the diversity provision (36 CFR 219.3, 219.19, 219.26, 219.27(a)(5), 219.27(a)(6) and 219.27(g)).

The fish and wildlife resources section of the planning regulation, 36 CFR 219.19 states:

Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired nonnative vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to ensure its continued existence is well distributed in the planning area. In order to ensure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.

The fish and wildlife resource section has seven provisions designed to meet the goal of managing National Forest habitat for viable populations of existing native and desired non-native vertebrate species in the planning area. Through 36 CFR 219.19 and other provisions of the planning regulations Forest plans provide for diversity of plant and animal communities within multiple use objectives. A Forest uses the planning process and ongoing monitoring, evaluation and forest plan amendments to prevent listing of species under the Endangered Species Act (ESA) and avoid extirpation of species from its actions.

The NFMA diversity provisions and the fish and wildlife section provide for habitat for the continued persistence of native and desired non-native vertebrate species in the planning area. The goal is met by following the provisions of 36 CFR 219.19(a)(1) through (a)(7). The Regional Forester may not adopt a plan that he/she knows or believes would through its actions extirpate a vertebrate species. Viability assessments of all vertebrate species are not required. Compliance with 36 CFR 219.19 is not subject to precise numerical interpretation and cannot be set at a single threshold.³

The fish and wildlife resource section does not require species-specific assessments to support a finding that a proposal is consistent with the regulations. Rather the decisionmaker may place reasonable reliance upon assessments of (1) species with habitat needs that are essentially the same; (2) a group of species generally thought to perform the same or similar ecosystem functions; and/or (3) the continued integrity and function of ecosystem(s) in which a species is found. Flexibility in selecting methodology is especially appropriate for species assessments, given the expertise and knowledge of local forest officials concerning the lands they manage, the variety of complex issues involved, and the often-limited resources available. As Judge Dwyer concluded, the system for providing for diversity "must be designed by the agencies, not by the courts" and a court cannot require a "degree of certainty that is ultimately illusory" (Seattle Audubon Society v. Lyons, 871 F. Supp. 1291, 1321 (W.D. Wash. 1994) aff'd 80 F.3d 1401 (9th Cir. 1996)).

The courts have uniformly upheld Forest Plans or project decision from challenges on NFMA diversity and the fish and wildlife resource section grounds (Sierra Club v. Espy, 38 F.3d 792 (5th

³See, Record of Decision, April 13, 1994, for amendments to Forest Plans in range of northern spotted owl, pp. 42-47.

Cir. 1994); *Seattle Audubon Society v. Lyons*, 871 F. Supp. 1291, 1315 (W.D. Wash. 1994) *aff'd* 80 F.3d 1401 (9th Cir. 1996); *Sierra Club v. Robertson*, 784 F. Supp. 593, 609 (W.D. Ark. 1991); and 810 F. Supp. 1021, 1027-28 (W.D. Ark. 1992) case dismissed and *aff'd* in the alternative 28 F.3d 753 (8th Cir. 1994); *ONRC v. Lowe*, 836 F. Supp. 727 (D. Ore. 1993) *aff'd* 109 F.3d 521 (9th Cir. 1997); *Glisson V. USFS*, 876 F. Supp. 1016, 1027-1029 (S.D. Ill. 1993), *aff'd* 51 F.3d 275 (Table Citation) (7th Cir. 1995); *Sierra Club v. Marita*, 843 F. Supp. 1526 (E.D. Wisc. 1994) and *Sierra Club v. Marita*, 845 F. Supp 1317 (E.D. Wisc. 1994) *aff'd* *Sierra Club v. Marita*, 46 F.3d 606 (7th Cir. 1995); *Krichbaum v. Kelley*, 844 F. Supp 1107 (W.D. Va. 1994) *aff'd* 61 F.3d 900 (Table Citation) (4th Cir. 1995); *Seattle Audubon Society v. Moseley*, 80 F.3d 1401 (9th Cir. 1996); *Inland Empire Public Lands Council v. USFS*, 88 F.3d 754 (9th Cir. 1996)).

The Ninth Circuit Court of Appeals has recognized that NFMA does not create a concrete standard for diversity within multiple use objectives. In the northern spotted owl litigation Judge Dwyer stated:

"The Forest Service argues that it should not be required to conduct a viability analysis as to every species. There is no such requirement. As in any administrative field, common sense and agency expertise must be applied" (Seattle Audubon Society v. Moseley, 798 F. Supp. 1473, 1490 (W. D. Wash. 1992)).

The Ninth Circuit (Seattle Audubon Society v. Moseley, 80 F.3d 1401, 1404 (9th Cir. April 10, 1996)) endorsed the government's application of the diversity provision of NFMA and the viability provision in the NFMA regulations in its decision upholding the 1994 Northwest Forest Plan:

There is similarly little or no support for the environmental plaintiffs' contention that the selected alternative violates the applicable viability standards. The district court correctly explained that the selection of an alternative with a higher likelihood of viability would preclude any multiple use compromises contrary to the overall mandate of the NFMA. See, Seattle Audubon Society v. Moseley, 871 F. Supp at 1315-16; see also 16 U.S.C. 1604 (g)(3)(B) (diversity is to be addressed in light of "overall multiple-use objectives"); 36 CFR 219.27(a)(6) (habitat maintained and improved "to the degree consistent with multiple-use objectives"); 219.26 (provide for diversity consistent with multiple-use objectives); 219.27 (a)(5) (forest plans should "maintain diversity of plant and animal communities to meet overall multiple-use objectives"). Here, the record demonstrates that the federal defendants considered the viability of plant and animal populations based on the current state of scientific knowledge. Because of the inherent flexibility of the NFMA, and because there is no showing that the federal defendants overlooked any relevant factors or made any clear errors of judgement, we conclude that their interpretation and application of the NFMA's viability regulations was reasonable. See, Batterson V. Francis, 432 U.S. 416, 425-26 (1977) (the Secretary's interpretation of a statutory term is entitled to substantial deference).

In Inland Empire Public Lands Council v. USFS, 88 F.3d 754, 763 (9th Cir. 1996) regarding the Upper Sunday timber sales on the Kootenai National Forest, the court noted that the Forest Service

relied upon analyzing the amount of the species' habitat that would be reduced by each alternative rather than quantitative population data. The Ninth Circuit stated:

We therefore reject Plaintiffs' argument that the Service must assess population viability in terms of actual population size, population trends, or population dynamics of other species. We do not mean to suggest, however, that Plaintiffs' suggestions are in any way improper. Indeed, we would encourage such analyses and hold only that they are not required.

In the Inland Empire Public Lands Council v. USFS, 754 F.3d at 763-64 (footnotes deleted) the Ninth Circuit also considered and rejected an argument that the Forest Service must consider species population analysis on the species entire ecosystems:

*We furthermore believe that adopting Plaintiffs' position as a rule of law would be impractical. Under such a rule, an agency would have to analyze separately each species to determine the area covered by its particular ecosystem and then analyze its population viability in that area; this task could become particularly burdensome if there are a number of different species to examine, each with a different population ecosystem area to analyze. See *Seattle Audubon Society v. Lyons*, 871 F. Supp. 1291, 1312 (W.D. Wash. 1994) ("[t]o plan based on different geographic boundaries for every species in the same ecosystem would be impractical.") NEPA does not require the government to do the impractical. *Kleppe*, 427 U.S. at 414, 96 S.Ct. at 2732 (noting that "practical considerations of feasibility might well necessitate restricting the scope of comprehensive statements"); *Krichbaum v. Kelley*, 844 F. Supp. 1107, 1118 (W.D. Va. 1994) ("This claim . . . would require a level of analysis sufficient to stop all action in the Forest while every conceivable effect is catalogues . . . [p]laintiff's insistence [on this action] . . . is unavailing on an arbitrary and capricious standard"), *aff'd*, 61 F.3d 900 (4th Cir. 1995). We therefore hold that the Forest Service did all it was obligated to do.*

* * *

Even if we were to assume that the Service could not confine its analyses to the project boundaries, the Forest Service's EIS is nevertheless valid. The Service never limited its analysis of cumulative effects to the Upper Sunday area. For the black-backed woodpecker, boreal owl, flammulated owl, lynx, and fisher, the Forest Service extended its analysis beyond the 12, 345 acre Upper Sunday area to include the entire 28,485 acre Watershed. See Final EIS at IV:74, 77, 82, 83 (black-backed woodpecker, boreal owl, and lynx analyses cover Upper Sunday Watershed area); Biological Assessment, Addendum 2, at 5, 8 (same for flammulated owl and fisher analyses). To the extent that they challenge that the Service's decision not to extend its analysis beyond the Watershed, Plaintiffs have advanced no proof why this decision is arbitrary and capricious, as is their burden.

Discussion

General Wildlife

Contrary to the contentions that the 1997 Forest Plan violates the NFMA by failing to assure viable populations of all native vertebrate species (NOA #0106, p. 10) and that the decision does not consider viable fish, wildlife and plant habitat (NOA #0073, p. 1), providing for the diversity of plants and animals, as well as managing habitat to maintain viable populations of existing native and desired non-native vertebrate species was a central issue in developing the 1997 Forest Plan.

The Regional Forester outlined in his 1997 ROD (pp. 31-36) how the Tongass is meeting the NFMA requirements and states in conclusion,

"Our understanding of the biological diversity of the complex old-growth ecosystem of the Tongass National Forest, including its composition, function and structure, is continually growing. Given the complexities involved, management decision necessarily will involve some degree of uncertainty. Based on my review of the record, including the FEIS and Appendix N, I find that the old-growth strategy and specific species management prescriptions represent a balance of wildlife habitat conservation measures which consider the best available scientific information and, within an acceptable level of risk inherent in projecting management effects, will provide fish and wildlife habitat to maintain well-distributed viable populations of vertebrate species in the planning area, and maintain the diversity of plants and animals" (1997 ROD, pp. 35-36).

The following discussion of specific considerations supports the Regional Forester's statement.

In response to concerns regarding the "major shortcomings of the preferred alternative in the RSDEIS and its predecessor [Interagency Viable Population Committee] 'V-POP' strategy" (NOA #0108, p. 8) it should be noted that all RSDEIS alternatives (except Alternative B), including the preferred Alternative (Alternative 10), were carried forward into the FEIS, as were the 1995 risk assessment panel results. The FEIS analysis thus covers the RSDEIS alternatives, and is equal to, or more in-depth than, the RSDEIS analysis.

The Regional Forester stated that wildlife habitat needs are predicated to a great extent on maintenance of old-growth forest. The system of reserves included in the 1997 Forest Plan is based on the old-growth conservation strategy initially developed by the VPOP in 1993, with modifications as a result of additional scientific information and analysis (1997 ROD, p. 6; FEIS, pp. 3-380 through 3-429; and Appendix N).

The analysis contained in the FEIS (pp. 3-362 to 3-429) and Appendix N supports the need for additional protection of wildlife habitat from the current situation. The Regional Forester acknowledged that although the scientific information on habitat needs of several Tongass wildlife species is incomplete, the analysis contained in the FEIS incorporates the best scientific information available, including among other things the VPOP Committee's 1993 report, the independent scientific peer review of that report (PNW Station, 1994), the VPOP Committee's 1994 response to the peer review, the conservation assessments for the wolf, goshawk, and marbled murrelet, and the results of panelists convened to assess the risk associated with the various alternatives to certain species (1997 ROD, p. 27).

Some commenters believed that the results of the wildlife panel assessments included in the RSDEIS indicated that the Preferred Alternative (Alternative 10 in the FEIS) would have a low probability of protecting sufficient habitat to maintain well-distributed viable populations of wildlife. In response, the Forest reconvened the risk assessment panels and evaluated Alternative 10 and the selected Alternative 11. The results of this additional risk assessment (FEIS Appendix N) were fully considered in the Regional Forester's final decision (1997 ROD, p. 27).

The analysis of wildlife habitat and wildlife viability is found in Chapter 3 of the FEIS. The wildlife section for the brown bear (or other terrestrial mammals), marten, Alexander Archipelago wolf, and northern goshawk is broken down into evaluating viability, old-growth forest conservation strategy ("course" filter analysis), and species assessments ("fine" filter analysis) (FEIS, pp. 3-380 through 3-429). In addition, for each species a discussion is presented by "panel considerations and assumptions", "panel evaluation of alternatives" and "further evaluation of alternatives."

Appendix N of the FEIS provides a summary of additional analyses pertaining to the wildlife habitat conservation measures of FEIS alternatives, with emphasis on the old-growth habitat conservation strategy adopted for the 1997 Forest Plan (FEIS Alternative 11). Included within Appendix N is an explanation and overview of a second set of panel assessment meetings held in March and April 1997, a comparison of the results of these panels with the analysis contained in Chapter 3 of the FEIS, and discussions of how this and other information was used in strengthening the 1997 Forest Plan (Sections II and III of this appendix).

A detailed analysis of the old-growth forest habitat conservation strategy of the 1997 Forest Plan; how it was developed, its relationship to other proposed strategies, and its effectiveness in providing the amount and distribution of habitat sufficient to maintain viable and well distributed wildlife populations of old-growth associated species across the Tongass National Forest is found in Section IV of Appendix N. Section IV contains additional evaluations of the viability strategies for the Alexander Archipelago wolf and Queen Charlotte goshawk (FEIS Appendix N, p. N-1).

The Forest responded to the 1997 panel assessment, by including additional guidelines to Alternative 11 (FEIS Appendix N, p. N-14) that will increase the likelihood that viable populations of endemic mammals be maintained. These guidelines require that surveys for endemic mammals be completed prior to projects that would substantially alter vegetation on islands of 50,000 acres or less. Surveys will also be conducted on larger islands if an initial assessment indicates high likelihood that endemic mammals are present on the site. Where endemic taxa are detected by the surveys, projects will be designed to provide for continued persistence of the taxa. As an additional measure, ongoing research of endemic taxa on the Tongass will be accelerated (FEIS Appendix N, p. N-12).

The Forest added other guidelines to Alternative 11 which will benefit both the endemic and widely-distributed mammals. The connectivity guideline will provide additional measures to maintain connectivity of large and small reserves and other non-development LUD's in places where beach fringe and riparian habitat management areas do not provide adequate connectivity. Guidelines for structural retention for goshawk and marten habitat will also benefit other mammal species (FEIS Appendix N, p. 12).

In his 1997 ROD (p. 31) the Regional Forester stated that in reaching his decision, he also considered the S&G's that were developed specifically for Alternative 11, after the consideration of the results of the risk assessment panels for selected species. These measures strengthened the forest-wide S&G's for the goshawk, marten, endemic mammals, as well as the connectivity of old-growth forest among large and medium old-growth habitat reserves (1997 ROD, pp. 31-32; FEIS Appendix N, p. N-14).

Appendix N also describes the 1997 Forest Plan old-growth habitat strategy and analysis for species of special management concern. In developing the old-growth strategy the Forest has relied on several key scientific documents that provided the basic foundation for addressing wildlife viability. These include the VPOP Conservation Strategy (Suring et al. 1993), the PNW Peer Review of the VPOP Strategy (Kiestler and Eckhardt 1994) and the VPOP Response to the PNW Peer Review (Suring, et al. 1994). In addition, the Alexander Archipelago wolf (Person, et al. 1996) and northern goshawk (Iverson, et al. 1996) conservation assessments provided the basis for design of some components of the strategy as well as a basis for examining whether the old-growth strategy would sustain viable and well distributed populations of these two species (FEIS Appendix N, pp. N-16 through N-17).

Monitoring and Evaluation (Chapter 6 of the 1997 Forest Plan) is a quality control process for implementation of the 1997 Forest Plan. It provides the public, the Forest Service, and other concerned resource agencies with information on the progress and results of Forest Plan implementation. As such, monitoring and evaluation comprise an essential feedback mechanism within an adaptive management framework to keep the 1997 Forest Plan dynamic and responsive to changing conditions.

Brown Bear

The appellants contend that the 1997 Forest Plan will not maintain viable and well distributed populations of brown bears (NOA #0101, p. 28; NOA #0108, pp. 17-21). A discussion of brown bear and their habitats can be found in the FEIS (p. 3-354). Table 3-109 of the FEIS displays "[s]ome important habitat components and conservation options . . ." for brown bear (among other species) (FEIS, p. 3-360). Pages 3-380 through 3-389 (of the FEIS) discuss "Wildlife Species Viability", and for the brown bear in particular states, "[a]t a broad geographic scale, environmental variability (for the Tongass) is classified into Biogeographic provinces that exhibit differences in climate, geology, and species distributions (see Biodiversity section). For wide-ranging species (i.e., northern goshawk, brown bear), well distributed populations are appropriately assessed among, and within, these provinces across the Forest" (FEIS, p. 3-380). For the species assessments, or "fine filter" analysis in regard to the brown bear the FEIS (p. 3-382) states, "[t]he viability analysis relies on the six wildlife species panel assessments mentioned previously (wolf, marten, northern goshawk, brown bear, marbled murrelet, and 'other mammals'). Each of these panel assessments were conducted by scientists with expert professional knowledge and experience of the species being evaluated."

The FEIS Appendix N, provides a discussion of the results of the 1995 and 1997 evaluations of Alternatives in regard to risk of brown bear (FEIS Appendix N, p. N-8). A detailed discussion of brown bear in the FEIS (pp. 3-415 to 3-423) states in conclusion, "Alternative 11 should rank highest along with Alternative 1 in landscape design features that minimize risk to brown bear viability. The extensive reserve system at multiple scales and significant riparian protection reduces risk relative to other alternatives. The additional reserves added on Northeast Chichagof (Chicken Creek and Port

Frederick) should compensate for an otherwise high risk landscape identified by panelists" (FEIS, p. 3-419).

Contrary to appellants allegations that the 1997 Forest Plan's riparian buffers and brown bear streamside protection measures are inadequate (NOA #0101, p. 28; #0108, pp. 17-21) the FEIS states, "[r]iparian habitat emerged as one of the more important elements of brown bear ecology addressed by panelists. The relationship between riparian habitat management and the maintenance of habitat capability in sustaining anadromous fish production (see Fish section) is one aspect" (FEIS, p. 3-415) and "[a] second aspect of riparian habitat management is vegetative cover provided by riparian habitats. Cover for visual obscurity is important for minimizing interactions among bears and between humans and bears." (Id.) The FEIS continues, "[r]oads and human access and the effect on brown bear populations was considered equally important. The panel specifically clarified that the issue was the human access and use of roads and not necessarily the physical nature of the road itself" (FEIS, p. 3-416) and concluded "[t]he panel considered current population trends and concluded that there is no evidence of short- or long-term brown bear population declines anywhere in Southeast Alaska" (Id.)

In recognition of the importance of riparian habitats to brown bears based upon panel recommendations, recommendations from Titus and Schoen (1993) and recent brown bear telemetry relocation data from NE Chichagof Island provided by ADF&G, the Forest added a Forest-wide standard and guideline to more explicitly address the issue of riparian brown bear habitat protection. Where site-specific analysis indicates that the Riparian Forest-wide S&G's do not effectively protect riparian habitat cover for brown bears, an unharvested buffer of up to 500 feet on each side of important brown bear foraging streams may be necessary. Important foraging sites will also be identified on a site specific bases and in consultation with the ADF&G (FEIS, p. 3-420).

Forest S&G's can be found in the 1997 Forest Plan: fish (pp. 4-8 through 4-11); riparian (pp. 4-53 through 4-73); transportation (p. 4-104); and Standards and Guidelines for Bear Habitat Management can be found in the 1997 Forest Plan (pp. 4-112 through 4-114).

Alexander Archipelago wolves

The appellants maintain that the Forest's wolf and deer conservation measures are inadequate (NOA #0114, pp. 9-10). The Forest discussed wolf distribution and habitat in the FEIS (pp. 3-355 to 3-356). As stated above, Table 3-109 (FEIS, p. 3-360) displays some important habitat components and conservation options for the wolf (and other species). Sitka black-tailed deer, habitat capability model and effects is found in the FEIS (pp. 3-365 to 3-379).

The selected alternative, Alternative 11 ranks relatively high in the conservation of deer habitat. Other than Alternative 1, Alternative 11 protects the largest acreage of high quality deer winter range, and ties for the 2nd highest rank in overall conservation of habitat quality from 1954 to 2095 (1,000-foot beach fringe, larger riparian reserves, large, medium, and small old-growth habitat reserves, and other large reserved areas such as south Cleveland Peninsula and South Kuiu Island). Alternative 11 also maintains relatively high deer densities (FEIS, p. 3-369).

For wolf viability (FEIS, pp. 3-380 to 3-389) which relied on panel assessments mentioned previously (wolf, marten, northern goshawk, brown bear, marbled murrelet, and 'other mammals'), assessments

were conducted by scientists with expert professional knowledge and experience of the species being evaluated" (FEIS, p. 3-382). As stated in the FEIS (p. 3-399):

Deer are the primary prey of wolves in Southeast Alaska, and the significance of predator/prey interactions on wolf populations led to the conclusion that wolf persistence was directly linked to deer habitat capability. Therefore, to the extent the individual alternative design features effected deer habitat capability the feature was important to the alternative likelihood rating. There were no overall identified positive or negative contributions of major alternative design features such as reserves versus extended rotations, presence of an extended beach zone, or any specific riparian option.

*The appellants contend that the 1997 Forest Plan does not adequately address wolf mortality (NOA #0101, p. 38; #0108, p. 28). In cooperation with the Forest Service, an interagency conservation assessment (ICA), for the Alexander Archipelago wolf was developed (Person, et al. 1996) (Wolf Assessment), which included the ADF&G, and Fish and Wildlife Service (FWS). This ICA synthesized the best available information on the Alexander Archipelago wolf and addressed wolf conservation. Using the major findings contained within the Wolf Assessment as a benchmark for analysis, the 1997 Forest Plan provides habitat conservation elements that will result in a high likelihood of maintaining habitat to sustain viable wolf populations in Southeast Alaska (p. N-30). It was determined that genetic differentiation in wolf populations was not a major factor in the outcome ratings of the panel (FEIS, p. 3-399). Roads as a management issue affecting wolf mortality were also considered (*Id.*).*

The appellants also contend that the 1997 Forest Plan reserves are inadequate to meet the needs of the wolf (NOA #0101, p. 36; #0108, p. 27). The concept of well distributed wolf populations received considerable discussion, specifically what constituted a "gap" in wolf distribution that would trigger an Outcome III rating. The Outcome III rating is described as "[h]abitat is of sufficient quality, distribution, and abundance to allow the species to maintain some breeding populations, but with significant gaps in the historic distribution on the forest. These gaps are likely permanent and will result in some limitation of interactions among local populations. The significance of gaps must be judged relative to the species distributional range, and life history" (FEIS, p. 3-382).

The 1997 Forest Plan, in response to observations of the PNW Review scientists and management considerations contained in the interagency wolf conservation assessment contains at least one very large reserve (approximately 180,000 acres) (1997 ROD, p. 7; FEIS Appendix N, p. N-2) within each of the 21 biogeographic provinces across the Tongass to address large scale distribution of large old growth reserves. This action is specifically responsive to Lande's recommendation (p. 81, in Kiester and Eckhardt 1994) of one large reserve per province and to other scientist's concerns that VPOP's HCA's were too small.

The concepts of viable and well distributed populations for the wolf can be found in Appendix N. Results of risk assessment panels indicated a lower concern for the wolf and brown bear (pp. N-7, N-10).

Based upon panel assessments and analyses, it was concluded that only Alternatives 1 and 11 would have a high likelihood of sustaining viable and well distributed wolf populations in Game

Management Unit (GMU) 2 and 3 as well as the remainder of their historic range on the Tongass. Only these two alternatives will sustain sufficient reserves on Prince of Wales/Kosciusko Islands and Kuiu/Kupreanof/Miktof Islands to provide secure core refugia for persistent wolf packs and provide sufficient deer habitat capability to sustain the current deer, wolf, human harvest equilibrium (FEIS, p. 3-406).

The appellants allege that the 1997 Forest Plan does not provide for adequate deer densities to maintain sustainable wolf populations (NOA #0101, p. 14; #0108, p. 25). The deer S&G's in the 1997 Forest Plan provides guidance to identify important deer winter range. The Forest-wide S&G's for the Alexander Archipelago wolf generally provide for the maintenance of at least 13 deer per square mile where deer are the principle prey of wolves (to sustain wolves and to consider meeting estimated human deer harvest demands). This measure is taken from the conservation assessment of the Alexander Archipelago wolf and seeks to maintain an equilibrium between current wolf populations of 250-300 animals and the current human harvest of deer. The current deer habitat capability model is the best management tool available to estimate the effects of management activities on long-term deer habitat capability. It was developed through many iterations among professionals in interagency meetings. The model was developed and intended for use in evaluating and comparing relative differences among planning alternatives; it is not a population model (FEIS Appendix L, p. L-207).

Deer Habitat Capability is discussed in Appendix N of the FEIS (pp. N-30 through N-34); Habitat Reserves on pages N-34 through N-35; wolf mortality at pages N-35 through N-37. Based on the above discussion it is apparent that the 1997 Forest Plan provides a combination of land allocations and forest-wide S&G's that provides sufficient habitat to maintain viable and well distributed wolf populations on the Tongass for 100 years of application of the 1997 Forest Plan. This addresses both the requirements of the NFMA regulations and purposes of the Interagency Memorandum of Understanding among the FWS, FS, and ADF&G to conserve species with viability concerns and help prevent the need for listing under the ESA (MOU 1994) (FEIS Appendix N, p. N-37).

The Administrative Record (RS-G-10-E, 1339 and 1434) explains the application of scale within the Interagency Modified Panel Model for deer numbers. The models output is unaffected by scale of application. The total deer numbers for the entire Tongass National Forest would be the same whether the data were input for the entire Tongass as a whole or by VCU, WAA, etc. and summed (Id.). The 1997 Forest Plan (pp. 4-114) clarifies that the analysis process for implementing the deer standard will include additional analysis. This additional analysis will provide the site-specific verification of deer habitat capability needed to implement a site-specific project. This analysis will also be contrasted with the specific scope of the proposal and the actual on-the-ground habitat conditions. Appendix N of the FEIS contains a thorough explanation of how this will affect wolf viability and how the 1997 Forest Plan will ensure adequate protection for the wolf.

American Marten

The appellants contend that the 1997 Forest Plan will not maintain viable and well distributed populations of marten (NOA #0108, p. 21). The FEIS provides a discussion of the marten. Habitat to support adequate prey populations of small mammals was considered important in developing the 1997 Forest Plan (FEIS, p. 3-396).

Alternative 1 provides the greatest likelihood of maintaining well distributed marten populations across their current range on the Tongass. Panelists indicated that even with no further timber harvest and road construction, there is still a reasonable likelihood that local populations would be reduced (FEIS, pp. 3-396 to 3-397). The final average panel ratings for marten are displayed in Table 3-118 of the FEIS.

As stated in Appendix N of the FEIS, "[o]f those alternatives reviewed in both 1995 and 1997, Alternatives 1, 5, 2, and 9' were ranked in order from least to highest risk to marten habitat in both assessments (Table 2). The 1997 panel results also are consistent with conclusions drawn concerning the relative ranking of all alternatives based on other evidence in Chapter 3 and other information in the planning record. This includes the conclusion that outcomes of Alternative 11 would be similar to those of Alternative 3" (p. N-6).

In response to the subsequent risk assessment panels concern for marten (which indicated a level of concern about the likelihood of marten populations remaining well-distributed across the Tongass for at least 100 years) Alternative 11 was strengthened. The measures used to strengthen the alternative were based on comments provided by the panelists, information drawn from past studies on marten, and information on existing habitat conditions on the Tongass. Three different measures were applied to Alternative 11 to improve the likelihood of maintaining habitat to support well-distributed populations of marten (FEIS Appendix N, pp. N-14 to N-15).

With these measures in place, "Alternative 11 will provide for a network of large and medium-sized HCA's, capable, respectively, of supporting 25 and 5 female marten each" (FEIS Appendix N, p. N-15). Connection between HCA's will be provided by protected habitats in riparian and beach fringes, small HCA's, and additional old-growth habitat designated for connectivity where these protected habitats are not adequate. The Forest relied on studies by Buskirk, et al. 1989, Raphael and Jones (in press), Spencer and Zielinski 1983, to ensure that riparian and beach fringe areas will be effective for marten. The matrix between the reserves will also contain significant, although fragmented, old-growth habitat. An average of 57 percent of the pre-1954 productive old growth will remain unharvested in the matrix areas through the planning horizon of 100 years. The percent of old growth remaining in the matrix will vary by province, but in those provinces considered at highest risk the additional habitat measures described above will be applied in the matrix. In addition, road access will be managed to reduce marten mortality where mortality has been identified as a significant risk (FEIS Appendix N, pp. N-14 to N-15).

By implementing the strategy outlined in Appendix N, the Forest should increase the likelihood of maintaining habitat that will support well-distributed marten populations. The Forest acknowledges that while there will likely be gaps in this distribution, there is low likelihood that there will be significant isolation among marten populations resulting from implementation of Alternative 11 (FEIS Appendix N, pp. N-14 to N-15).

Queen Charlotte Goshawk

The appellants contend that the 1997 Forest Plan will not maintain viable and well distributed populations of goshawks (NOA #0108, p. 23). The Forest discussed goshawk in the FEIS (pp. 3-359 through 3-360). Habitat composition or considerations and conservation options for the goshawk

are displayed in Table 3-109 of the FEIS (p. 3-360). The Panel Considerations and Assumptions for the goshawk are discussed in the FEIS at pages 3-389 to 3-396. The FEIS states in conclusion, "[b]ased upon this analysis, Alternatives 1, 11 and 5 would have a moderately high likelihood of sustaining well-distributed viable goshawk populations and would not result in a loss of viability and a declining trend that would require additional protection and federal listing under the ESA" (FEIS, p. 3-395).

Additional habitat management measures were added to provide benefit in areas on Prince of Wales Island where risks to goshawks are highest of all regions in southeast Alaska, and in VCU's where over 33 percent of the productive old growth has been converted to young forest (FEIS Appendix N, p. N-11). See also, 1997 Forest Plan, Chapter 4, Forest-wide S&G's for Threatened, Endangered, and Sensitive Species, J. Northern Goshawk.

The FEIS Appendix N further states, ". . . implementing the Revised Plan for 100 years will result in a moderately high likelihood of providing the amount and distribution of habitats to sustain long-term well distributed viable populations of goshawks throughout the Tongass." This is based upon analysis at both the landscape and stand level scales, as well as information synthesized in the goshawk assessments (FEIS Appendix N, p. N-38).

In conclusion the Forest states that based upon the above discussion it is apparent that the 1997 Revised Plan will provide a sufficient amount and distribution of habitat to maintaining viable and well distributed goshawk populations. This adequately addresses the NFMA regulations concerning wildlife population viability and purposes of the interagency MOU (MOU 1994) (FEIS Appendix N, pp. N-43 to N-44).

Decision

After my review of the record, I find that the Regional Forester's decision is consistent with the NFMA. There is adequate discussion of brown bear, the riparian buffers and streamside protection measures that they are associated with, road management in relation to brown bear populations, habitat reserves and genetic variation of brown bears. The Regional Forester took into account scientific panel recommendations. For the Alexander Archipelago wolves, the Regional Forester includes discussion of how the Forest will provide deer densities to maintain sustainable wolf populations, and again, took into consideration the recommendations and assumptions presented by the scientific panel for wolf on the Tongass. The Regional Forester did the same for the American marten and Queen Charlotte goshawk.

However, based on my review of the record, I have determined that there was a need to modify the provisions of the 1997 Forest Plan to better address the risks for old growth dependent species, including the brown bear, goshawk, wolf, and American marten (see enclosed 1999 ROD, Management Indicator Species and Other Species of Management Concern sections).

Furthermore, for the wolf, I have added a standard that reduces road density, therefore decreasing the potential for wolf mortality. The change from 100 to 200 year timber harvest rotation will increase viability for the northern goshawk, brown bear, and American marten by providing more old growth habitat for these species. For specific S&G's refer to the enclosed 1999 ROD, Appendix B.

In addition I have also strengthened protection for all the old growth dependent species by changing specific Land Use Designations from "Development" to "Mostly Natural."

Scientific information

The appellants contend that "[t]he Forest Service's failure to accurately represent scientific data and failure to utilize properly critical and well-accepted ecological principles hardly constitutes the type of high quality information required by federal law" (NOA, #0105, p. 13).

Discussion

In response to the concern of whether the Forest Service utilized well-accepted ecological principles (NOA #0105, p. 13) it should be noted that the Council on Environmental Quality regulation 40 CFR 1502.24 states: "Agencies shall insure the professional integrity, including scientific integrity, of the discussion and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusion in the statement. An agency may place discussion of methodology in an appendix." In addition, 40 CFR 1500.1(b) states: "NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken."

The Regional Forester considered and used the best methodology and information available at the time the decision was made. This information was prepared by Forest Service biologists and scientists using their professional judgement and expertise including that of other State and Federal agencies.

As stated in the 1997 ROD, "[t]he system of reserve included in the Forest Plan is based on the old-growth conservation strategy initially developed by the Interagency Viable Population Committee (VPOP) in 1993, with modifications as a result of additional scientific information and analysis" (1997 ROD, p. 6).

The Regional Forester was aware that there was incomplete scientific information on habitat needs of several Tongass wildlife species (1997 ROD, p. 27). However, the analysis contained in the FEIS incorporates the best scientific information available, including among other things the VPOP Committee's 1993 report, the independent peer review of that report (PNW Station, 1994), the VPOP Committee's 1994 response to the peer review, the conservation assessments for the wolf, goshawk, and marbled murrelet, and the results of panelists convened to assess the risk associated with the various alternatives to certain species.

As stated above in the species viability discussion, the best information was used to address potential impacts and effects to those threatened, endangered and sensitive (TE&S) species and their habitat found on the Forest.

With regard to the wolf, and the use of best information, the FEIS states that an "interagency wolf conservation assessment has been conducted to synthesize available information on wolf ecology and identify management considerations for sustaining viable wolf populations on the Tongass (Person, et al. 1996)" (FEIS, p. 3-355). The information provided for in Table 3-109 (FEIS, p. 3-360) was from the "Viability Synthesis Workshop, June 1995." For the Sitka black-tailed deer, the FEIS states, "[t]he deer panel took a different approach than the other species panels, choosing to develop a systematic process for evaluating landscapes for deer habitat capability rather than doing the actual evaluation of landscapes for each alternative. The panel thus focused on habitat capability modeling for Sitka black-tailed deer" (FEIS, p. 3-365). A comprehensive discussion of the Sitka black-tailed deer model and effects, and the scientific information used can be found in the FEIS (pp. 3-365 to 3-379). Information used to assure the continued existence of wildlife species viability on the Tongass is provided in the discussion in the FEIS at pp. 3-380 to 3-389. A detailed discussion of the wolf is found in the FEIS at pages 3-399 to 3-406. Combined panel outcomes, which utilized the best scientific information available, for the Northern goshawk, marten, wolf, murrelet, other mammals and the brown bear is discussed in the FEIS (pp. 3-420 to 3-423).

The Forest allows for changes in management activities based on new information, and states, "[f]or endemic mammals, surveys will be conducted in project areas prior to management activities that would significantly alter habitat. Where distinct taxa are located, measures will be taken to provide for their continued persistence. Ongoing research into endemic mammals will be continued, and in some cases be accelerated, in order to refine the application of this 'survey and manage' measure" (FEIS Appendix N, p. N-10).

The 1997 Forest Plan, Wildlife S&G's provide that, "[t]he objective is to maintain habitat to support viable populations and improve knowledge of habitat relationships of rare or endemic terrestrial mammals that may represent unique populations with restricted ranges" (1997 Forest Plan, p. 4-117).

As shown above, the Forest is aware that new research and scientific information is an ongoing process. The 1997 Forest Plan is written to provide for new information, in order to assure the maintenance of available habitat for species viability on the Tongass.

Decision

After my review of the record, I find that the Regional Forester did use the best scientific data and information available to address the potential impacts to all resources on the Tongass. I affirm the Regional Forester's decision. Nothing in the enclosed 1999 ROD affects the 1997 ROD on this issue.

Wilderness

The appellants contend that the 1997 Forest Plan's wilderness review is inadequate and violates the NFMA (36 CFR 219.17(a)(2)(i-v)), (NOA #0101, p. 42; NOA #0108, p. 67) and the NEPA (NOA #0101, p. 46; NOA #0108, p. 67). The appellants further contend that the Forest Service cannot commit those lands (currently unroaded) to development without the required analysis and based on consideration of irrelevant factors (NOA #0101, p. 46; NOA #0108, p. 70).

Discussion

The Forest was responsive to comments regarding roadless/wilderness concerns. As explained:

"The Tongass is managed as part of the National Forest System. National Forests are managed for a variety of multiple uses which range from Wilderness to intensive use of resources. Currently over 35 percent of the Tongass is set aside as Wilderness. Another 4 percent was set aside by Congress as LUD II designation, to be managed primarily to maintain its wildland character. In addition, land use designations in the Revised Forest Plan which emphasize natural conditions, namely Remote Recreation, Semi-Remote Recreation, Wild and Scenic Rivers, and Old-Growth Habitat constitute land allocations covering 44 percent more of the Forest. Thus over 79 percent of the forest will be allocated to land use designations that have goals to primarily maintain natural conditions, such as a 'watershed preserve.'

"The Draft Environmental Impact Statement considered Wilderness additions to the Tongass. Between the DEIS and Supplement to the DEIS, Congress addressed the Wilderness issue with passage of the Tongass Timber Reform Act in November of 1990. The legislation added over 300,000 acres of Wilderness to the Tongass as well as the creation of LUD II areas totaling over 727,000 acres. Since Congress addressed the Wilderness issue during this planning effort, no additional Wilderness is considered as part of this plan revision. However, 110 roadless areas that meet the criteria for consideration for Wilderness remain on the Tongass. Each of these 110 roadless areas is disclosed in Appendix C of the FEIS" (FEIS Appendix L, p. L-85).

The Regional Forester's approach was consistent with the NFMA regulations. The Regional Forester highlighted some of the "Areas of Special Interest", and the specific land allocations in the 1997 Forest Plan that reflect concerns raised in public comments to those areas (1997 ROD, p. 10-

11). A partial list of non-development LUD's can be found in the 1997 ROD at page 21. In his discussion of roadless areas the Regional Forester (1997 ROD, pp. 22-23) stated:

Thus, while no new Wilderness is proposed under any alternative, 90 percent of all currently unroaded lands on the Forest will still be roadless at the time of the next Forest Plan revision, assuming that roadless acres become roaded in the same proportion as in the past (Final EIS, 3-170). Potential Wilderness may be considered again at the time of the next revision (Final EIS, 3-170).

In the meanwhile, special areas of concern have been fully considered and have been designated under specific LUDs. These designations, in some cases, allow unroaded lands to be included in the suitable timber base. In other cases, they preserve the roadless and wilderness character of the land.

The Forest will comply with statutory obligations arising from the NEPA, ESA, Clean Water Act and other environmental laws, and will perform a site-specific analysis of projects and activities before entry into a currently identified roadless area (FEIS, p. 3-161).

The FEIS identifies the roadless areas "which meet the minimum criteria for potential inclusion in the National Wilderness System." When "identifying this potential it does not imply that areas should or should not be recommended for designation as Wilderness, but is intended to portray the remaining undeveloped portions of the National Forest for which Wilderness is a future option. Once an area is roaded it is generally no longer available for Wilderness consideration. Depending on when and how the activity was conducted, evidence of previous timber harvest, abandoned habitations, and historic mining may not necessarily result in an irreversible removal of land from future Wilderness consideration" (FEIS, p. 3-161).

The FEIS further states, "[t]he minimum criteria for considering a roadless area in the evaluation of Wilderness potential was established by the Wilderness Act of 1964 and in subsequent regulation and policies. To qualify, an area must contain at least 5,000 acres of undeveloped land which does not contain improved roads maintained for travel by passenger-type vehicles. However, areas less than 5,000 acres may qualify if they are a self-contained ecosystem such as an island, are contiguous to existing Wilderness, or are ecologically isolated by topography and manageable in a natural condition." (id.)

Appendix C (Roadless Areas) of the FEIS presents a more detailed description and effects analysis of the areas of the Tongass National Forest that are in an unroaded and essentially undeveloped condition. There are 110 roadless areas outside of existing Wilderness totaling 9.4 million acres. As a result of the 1990 TTRA, 727,202 acres were legislated as LUD II and are included in the roadless area descriptions. Some 24,587 acres of the legislated LUD II's are roaded. Identification and discussion of each of these 110 roadless areas is in response to direction found in Forest Service Manual (FSM) 1923 and 2320 and 36 CFR 219.17.

Appendix C describes each area's attributes and resource potentials, evaluates the area's capability and availability for management as Wilderness or allocation to other roadless management prescriptions. It also provides a table (C-2 through C-4) that gives the National Forest acres and the number and percentage of acres tentatively suitable for timber harvest (FEIS Appendix C, p. C-1).

Roadless areas are shown on the map called "Roadless Areas" in the map packet, and are identified on the map by the area's number, as well as by: 1) The history, location and access, physiographic and biologic features, current resource uses, and appearance, surroundings, and attractions; 2) The presence or absence of wilderness characteristics, potential for solitude, and manageability and special features; and 3) The presence or absence of opportunities for resource uses, both extractive and non-extractive.

All of this information was available and considered by the Regional Forester.

Decision

After my review of the record, I find that the Regional Forester adequately evaluated and considered for recommendation as potential wilderness those roadless areas which met the minimum criteria for potential inclusion in the National Wilderness System and is not in violation of the NFMA, TTRA, or NEPA. I affirm the Regional Forester's decision. Nothing in the enclosed 1999 ROD affects the 1997 ROD on this issue.

Wild and Scenic Rivers

The appellants contend that the FEIS for the Revised Tongass Plan does not adequately analyze or disclose the environmental impact of its decision not to recommend eligible rivers as "suitable" for designation under the WSRA (NOA #0101, p. 50 and that "[t]he [1997] ROD violates the Wild and Scenic Rivers Act" (NOA #0073, p. 1).

Background

Eligibility and Identification of Outstandingly Remarkable Values

The WSRA of 1968, describes the requirements used to determine a river's eligibility for designation in the National Wild and Scenic Rivers System. As stated by the WSRA Section 1 (b) as amended, "[i]t is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes."

These "outstandingly remarkable" values should be a unique or exceptional representation for the area studied or within a geographic province when compared to other rivers (Record RS-G-6-a, TLMP 443). "For study purposes, the Act requires that the evaluation of a river's eligibility consider, as a minimum, the area within one-fourth mile of either side of the high water mark of the river.

However, features outside this corridor may be considered if their inclusion is essential for protection of the outstandingly remarkable values of the river" (FEIS Appendix E, p. E-4).

The process for adding rivers to the National System includes three steps. Eligibility is the first step in the assessment of a river segment for potential inclusion in the National Wild and Scenic River System. As part of the forest planning process, river study teams determine eligibility for wild and scenic river designation by applying the criteria in sections 1(b) and 2(b) of the WSRA and the procedures established in the FSH (1909.12, 8.21). The FSH states that "[t]he determination that a river area contains 'outstandingly remarkable' values is a professional judgment on the part of the study team" (FSH 1909.12, 8.21c)

The second step, results in the classification of the study river as "wild," "scenic," or "recreational." "Wild river areas are defined as "those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive in character and waters unpolluted. These represent vestiges of primitive America." "Scenic" river areas are defined as "those rivers or sections of rivers that are free of impoundments with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads." "Recreational" river areas are defined as those rivers or sections of rivers that are readily accessible by road or railroad, that may have undergone some development along their shorelines and that may have undergone some impoundment or diversion in the past" (WSRA Section 2 (b)(1) as amended). If a study river is determined to be not eligible for inclusion in the System, no further evaluations are necessary or appropriate.

Suitability Determinations

For those rivers which the study team finds eligible the third and final step is a determination of whether the river is suitable for inclusion in the national system. Suitability refers to "how designation of a river fits the overall management for the area, and considers the trade-offs with other resource values"

(FEIS, p. 3-326). "The land manager's estimate of the worthiness of the river to be recommended as a component of the national system, as well as mixed land ownership, state and local government interests and the value of other resources and potential uses, may affect the decision to recommend a river as suitable" (FEIS, p. 3-326).

Once these factors have been fully evaluated, a determination is made on whether the river segment should or should not be recommended for designation as part of the System. As provided at FSH 1909.12, 8.41(2), wild and scenic river suitability determinations conducted as part of the forest planning process are:

. . . a preliminary administrative recommendation for the wild and scenic designation . . . that will receive further review and possible modification by the Chief of the Forest Service, Secretary of Agriculture, and the President of the United States. The congress has reserved the authority to make final decisions on designation of rivers as part of the National Wild and Scenic Rivers System.

Pending suitability determinations, all eligible rivers on the Tongass National Forest will be managed to retain their free-flowing character and outstandingly remarkable values at their highest level of

classification, within the existing authorities of the Forest Service. Those recommended rivers in the selected alternative (Alternative 11) will also be managed to retain their free-flowing character and outstandingly remarkable values (FEIS, p. 3-344).

Discussion

In response to appellants' concern that the "[1997] ROD violates the Wild and Scenic Rivers Act" (NOA #0073, p. 1), we find that the Tongass National Forest followed the process for evaluating and recommending potential additions to the Wild and Scenic Rivers System (FEIS, pp. 3-325 to 3-326). As stated in Appendix E of the FEIS, rivers are considered eligible for inclusion in the National Wild and Scenic Rivers System if they are essentially free-flowing (without major dams, diversions, or channel modifications) and if they possess at least one outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value. These values should be a unique or exceptional representation for the area studied, and must be related to the river or its immediate environment. For study purposes, the Act requires that the evaluation of a river's eligibility consider, as a minimum, the area within one-fourth mile of either side of the high water mark of the river. However, features outside this corridor may be considered if their inclusion is essential for protection of the outstandingly remarkable values of the river (FEIS Appendix E, p. E-4).

In response to appellants' concerns regarding the FEIS not "adequately" analyzing or disclosing the environmental impacts of its decision not to recommend eligible rivers as "suitable" for designation under the WSRA (NOA #0101), all rivers and streams on the Tongass National Forest were examined and evaluated to determine their eligibility, potential classification, and suitability (by alternative). Hundreds of rivers were considered, and several screening processes were used to identify those with truly outstandingly remarkable values (FEIS Appendix E, p. E-4). The results of the evaluation determined 112 rivers were eligible for consideration for inclusion in the National Wild and Scenic Rivers System. A suitability analysis was conducted on all 112 eligible rivers. The suitability analysis concluded that the 112 rivers, with numerous segments, and three possible classifications (wild, scenic, or recreational), presented hundreds of possibilities for structuring alternatives at the forest plan level. By considering the range of alternatives for managing a river, the river could be depicted in its current, most undeveloped condition in one alternative, and resource opportunities and state and local infrastructure needs could be recognized in other alternatives. Thus the "alternatives were simply a starting point for comparing rivers, values, resource trade-offs, and opportunities" (FEIS, pp. 3-337 through 3-338).

Assigning a river to a given alternative was a reflection of the alternative theme, recognizing other possible combinations for a particular river might exist (FEIS, p. 3-338). Alternative 1 reflects a non-commodity, natural condition emphasis. All 112 eligible rivers totaling 1,394 miles were included in this alternative at their highest level of eligibility (FEIS, p. 3-338). This could be considered a baseline. Analysis of all other alternatives would then be the effects of not recommending rivers. Additional rivers were recommended for inclusion in the selected alternative based on public comment to the RSDEIS (FEIS, p. 3-338).

In his decision, the Regional Forester concurred with the process used to determine the eligibility of rivers for inclusion in the National Wild and Scenic Rivers System and he agreed that 112 rivers, in "whole or in part, are eligible for designation as part of the National Wild and Scenic Rivers System"

(1997 ROD, p. 9). The Regional Forester's final recommendation identified 32 rivers as suitable for designation to the National Wild and Scenic Rivers System (1997 ROD, pp. 9-10).

Appendix A of the 1997 ROD adequately summarizes the basis for the finding the remaining 80 eligible rivers as non-suitable for wild and scenic designation (1997 ROD Appendix A, p. A-7). Subsequently the Regional Forester withdrew the recommendation of Niblack Stream and Lakes for inclusion in the wild and scenic river system.

The Forest also responded to a previous comment from SEACC, on their Transition Alternative, regarding wild and scenic corridors. The Forest explained that, "[i]n determining what corridor width to use, we are following the Wild and Scenic Rivers Act (Section 4(d), 1986) and FSH (1909.12, Chapter 8.13) direction to consider a minimum of ¼ mile from each bank of the river (which totals over a ½ mile corridor)" (FEIS Appendix L, p. L-166).

Decision

After my review of the record, I find that the Forest's suitability recommendation process was consistent with the WSRA and NEPA, with the exception of the eligibility analysis for the South Sullivan River.

I direct the Regional Forester to complete and document an eligibility analysis for the South Sullivan River and share the finding with the appellants and intervenors. If the analysis was prepared and not documented in the record, I direct the Regional Forester to include it in the record and share it with the appellants and intervenors. I further direct the Regional Forester to avoid any activities that would preclude eligibility and suitability until such time as the eligibility is completed and documented. If the South Sullivan River is determined to be eligible, it shall be managed in accordance with FSH 1909.12, Chapter 8, Sec. 8.14, pending suitability review. If it is determined to be ineligible, activities may continue consistent with management area prescription as soon as analysis findings are documented and distributed as directed above.

Also, I have determined two other streams to be suitable and am changing the LUD for Kushneahin Creek and Castle River corridors in order to protect their outstandingly remarkable values (see ROD, Appendix A).

Stream Buffer Requirements

The appellants contend that "[t]he Forest Service's conclusion that application of the stream buffer requirements in the forest-wide Riparian standards and guidelines would "adequately protect" the Castle River's remarkable fish and recreational values is not supported by any meaningful analysis" (NOA #0101, p. 56).

Discussion

The 1997 Forest Plan "incorporates the requirements of the Tongass Timber Reform Act (TTRA) which requires the maintenance of 'a buffer zone no less than one hundred feet in width . . .'" The TTRA requirement is not a maximum buffer width, but for a buffer at least

one hundred feet wide on both sides of the stream. The need for buffer widths greater than 100 feet in many locations was emphasized by the Anadromous Fish Habitat Assessment (AFHA) (FEIS Appendix L, pp. L-35 to L-36). A full analysis of the effects associated with implementation of each alternative on fish habitats and fish resources is in the "Fish" section in Chapter 3 of the FEIS.

Appellants' are concerned that riparian S&G's and 100-foot buffer are inadequate to protect the river's outstandingly remarkable fish and recreation values. The Regional Forester explained in his decision that Castle River's outstandingly remarkable values are "concentrated at the mouth of the river and upstream about two miles. This area is allocated to the Semi-remote Recreation LUD, which would maintain the outstandingly remarkable values of this river" (1997 ROD Appendix A, p. A-8).

The Forest responded to concerns that timber harvesting impacted streamside habitat, affecting fish populations. The Forest explained, "[w]e have designed riparian protection guidelines to protect watershed function and stream channel processes during various levels of timber harvest activity" (FEIS Appendix L, p. L-30). The Regional Forester also explained that "[t]he riparian and fish habitat standards and guidelines will protect fish values of the upstream portions of the river that are allocated to the Timber Production LUD (1997 ROD Appendix A, p. A-8). If necessary, at the project level, the S&G's could be re-evaluated and mitigations measures could be developed.

The 100-foot buffer zone as mentioned above is a minimum, not a maximum buffer width. The Regional Forester discussed stream buffer requirements in his decision, "[t]hese may be adjusted to site-specific conditions after completion of watershed analysis as long as fish habitat objectives are still met" (1997 ROD, p. 4). Therefore, at the project-level, once site-specific analysis has occurred, a decision on the appropriate buffer width, which could be greater than 100 feet, would be determined.

As discussed in the 1997 ROD, the Castle River was not recommended for potential future inclusion to the Wild and Scenic River System. As mentioned above, the Forest Service follows the minimum 1/4 mile requirement of the WSRA to determine the corridor widths for potential candidates to the Wild and Scenic River System. For those streams or rivers that have been recommended as potential candidates to the WSR System, the free-flowing and outstandingly remarkable characteristics would be protected by the forest-wide riparian S&G's as well as the 1/4 mile study boundary area.

Decision

After my review of the record, I find that stream buffer requirements were adequately discussed by the Regional Forester in the 1997 ROD. I find that the conclusion that application of the stream buffer requirement in the 1997 Forest Plan riparian S&G's would "adequately protect" the Castle Rivers remarkable fish and recreational values is supported by adequate analysis. However, with regard to Castle River, I have changed the LUD from Semi-remote Recreation to Mostly Natural (see Appendix B of the enclosed 1999 ROD). Further, the standards that I have strengthened in the enclosed 1999 ROD will provide additional protection for fisheries and riparian resources (1999 ROD, Fish Habitat section) through reduced level of activities in upland sites.

Planning Process

The appellants contend that "[t]he two-step planning process moves from the macro-level . . . to the micro-level . . . without an intermediate step. This practice will cripple the Forest Service's ability to conduct a credible cumulative impact analysis" (NOA #0101, p. 70).

Discussion

A forest plan provides guidance for all resource management activities on a National Forest, by:

- 1. establishing forest-wide multiple-use goals and objectives [36 CFR 219.11(b)];*
- 2. establishing forest-wide standards and guidelines to fulfill the requirements of 16 U.S.C. 1604 applying to future activities and the resource integration requirements found in 36 CFR 219.13 through 219.27;*
- 3. establishing management area direction (management area prescriptions) applying to future activities in a management area (resource integration and minimum, specific management requirements) [36 CFR 219.11(c)];*
- 4. designating lands as suited or not suited for timber production [16 U.S.C. 1604(k)] or other resource management activities (36 CFR 219.14, 219.15, 219.20, and 219.21);*
- 5. establishing monitoring and evaluation requirements [36 CFR 219.11(d)]; and*
- 6. providing recommendations to Congress for the establishment of wilderness, wild and scenic rivers, and other special designations, as appropriate.*

Forest plans estimate future management activities, but the actual level of activity accomplished is determined by many factors, including annual budgets and site-specific project decisions.

The Forest Service Planning Manual provides for systematic stepping down from the overall direction provided in the Forest Plan when making project or activity level decisions:

Planning for units of the National Forest System involves two levels of decisions. The first is the development of a Forest Plan that provides direction for all resource management programs, practices, uses, and protection measures The second level planning involves the analysis and implementation of management practices designed to achieve the goals and objectives of the Forest Plan. This level involves site-specific analysis to meet NEPA requirements for decisionmaking (FSM 1922, 53 Federal Register 26807, 26809 (July 15, 1988)).

Congress has confirmed the Forest Plan and project level approach by enacting a statutory notice, comment and administrative appeal right for projects and activities implementing Forest Plan (16 U.S.C. 1612 note (106 Stat. 1419) Forest Service Decision Making and Appeals Reform (1992)). For a discussion of the nature of Plan and project decisionmaking see, Advanced Notice of Proposed Rulemaking (56 Federal Register 6508, 6519-21, February 15, 1991); Proposed Administrative Appeal Regulations 36 CFR 215, (58 Federal Register 19369, 19370-71 (April 14, 1993)); Final Regulation, Preamble 36 CFR 215, (58 Federal Register 58904, 58909 (November 4, 1993)); and Proposed 36 CFR 219 (60 Federal Register 18886, April 13, 1995), Preamble 60 Federal Register at 18897-18903.

See also, Forest Service staged decisionmaking, Idaho Conservation League v. Mumma, 956 F.2d 1508, 1511-12 (staged decisionmaking) and 1523 (Forest Plan level EIS is merely programmatic) (9th Cir. 1992) and Swan View Coalition v. Turner, 824 F. Supp. 923, 935 (D. Mt. 1992).

*For court decisions upholding the staged decision approach of Forest Plans and Project levels see: National Wildlife Federation v. Coston, 773 F.2d 1513, 1518 (9th Cir. 1985); City of Tenakee Springs v. Block, 778 F.2d 1402, 1406 (9th Cir. 1985); Cronin v. USDA 919 F.2d 439, 447-49 (7th Cir. 1990); Idaho Conservation League v. Mumma 956 F.2d 1508, 1511-12 (9th Cir. 1992); Resources Limited Inc. v. Robertson, 789 F. Supp. 1529 (D. Mt. 1991) *aff'd* in part (NEPA, NFMA) and reversed in part (ESA), 8 F.3d 1394 (9th Cir. 1993) amended 35 F.3d 1300 (9th Cir. 1994); Inland Empire Public Lands Council v. USFS, 88 F.3d 754, 757 (9th Cir. 1996); Swan View Coalition v. Turner, 824 F. Supp. 923 (D. Mt. 1992); Sierra Club v. Robertson, 810 F. Supp. 1021 (W.D. Ark 1992), Eighth Circuit found no standing and alternatively affirmed lower court on the merits, 28 F.3d 753 (8th Cir. 1994); and Seattle Audubon Society v. Lyons, 871 F. Supp. 1291, 1317-18 and 1323-24 (W.D. Wash. 1994) *aff'd* 80 F.3d 1401 (9th Cir. 1996).*

The Ninth Circuit recognizes that Forest Plan EIS's are "an early stage, where the EIS is 'merely programmatic'" (Idaho Conservation League v. Mumma, 956 F.2d at 1523). The Ninth Circuit has also held that when a programmatic EIS "is prepared, site-specific impacts need not be fully evaluated until a 'critical decision' has been made to act on site development" (Salmon River Concerned Citizens v. Robertson, 32 F.3d 1346, 1357 (9th Cir. 1994)).

In Resources Limited v. Robertson, 35 F.3d 1300, 1306 (9th Cir. 1994) the Ninth Circuit stated:

We do not require non-Federal cumulative impacts in this programmatic EIS, on the condition that the Forest Service must analyze such impacts, including possible synergistic effects from implementation of the Plan as a whole, before specific sales.

and

We are convinced that such specific analysis [water quality] is better done when a specific development action is to be taken, not at the programmatic level. The analysis will be conducted before each particular project, and projects not found to meet Montana water quality standards "will be redesigned, rescheduled, or dropped."

In Swan View Coalition v. Turner, 824 F. Supp. at 935 the court noted the nature of Forest Plans:

the Forest Plan is a broad framework for the management of a National Forest which does not directly commit to development. Allowing for additional review at each subsequent stage of development recognizes both the managerial purpose of a Forest Plan to provide mechanisms for monitoring and regulating future development as well as its inherent limitations in predicting what development will actually occur.

** * **

the standards and guidelines operate as parameters within which all future development must take place. If a development project cannot be maintained within

those parameters, the safeguard mechanisms in the Plan will prevent such development from going forward.

* * *

Finally, Plaintiffs argue that FWS should be compelled to analyze the resource production objectives [included in LRMP] so that the Forest Service can look at the "big picture" before adopting the Plan. As stated above, these resource production objectives simply represent a ceiling on timber production and do not mandate that such quantities actually be harvested.

In Sierra Club v. Robertson, 28 F.3d 753, 758-59 (1994) the Eighth Circuit held:

The mere existence of the Ouachita Forest Plan does not produce an imminent injury in fact. A forest plan, such as the Ouachita Plan, is a general planning tool. It provides guidelines and approved methods by which forest management decisions are to be made for a period of ten to fifteen years. Adoption of the Plan does not effectuate any on-the-ground environmental changes. Nor does it dictate that any particular site-specific action causing environmental injury must occur. Indeed, before an environmental change can come about, several events must transpire. First, a site-specific action (e.g., a timber sale) must be proposed and found to be consistent with the Plan. Next, the action is subject to NEPA and NFMA analysis and public comment. Finally, the Forest Service must adopt the action. Finding an environmental injury based on the Plan alone, without reference to a particular site-specific action, would "take . . . us into the area of speculation and conjecture" (O'Shea v. Littleton, 414 U.S. 488, 497 (1974)).

* * *

Thus, when a site-specific action in the Ouachita Forest, such as a timber sale, is proposed, and all administrative appeals are exhausted, persons threatened by an imminent injury in fact may seek judicial review of the proposed action. At that time, such persons may assert that the proposed site-specific action is not consistent with the Plan, or that the Plan as it relates to the proposed action is inconsistent with the governing statutes, or both. Here, however, as we already have emphasized, appellants mount their attack on the Plan per se, their arguments devoid of reference to the particularities of any proposed site-specific action that might give rise to an injury in fact.

A forest plan provides the framework to guide the day-to-day land and resource management operations of a National Forest. The Forest Plan is a strategic, programmatic document that does not make project-level decisions. Those decisions are made after more detailed analysis and further public comment. NFMA requires that resource plans and permits, contracts, and other instruments issued for the use and occupancy of National Forest System lands be consistent with the forest plan. The following are some examples of project decisions that require more detailed environmental analysis:

- *Timber harvesting and related activities, such as slash disposal and road construction.*
- *Range allotment management plans.*
- *Fish or wildlife habitat improvement projects.*
- *Watershed improvement projects.*
- *Decisions for winter-sports development, outfitter/guide proposals, and other externally generated projects involving occupancy and use of National Forest System lands.*

Resource inventories, action plans, and schedules are not binding decisions and do not require additional environmental analysis at the project level.

Public involvement is a key part of implementing the forest plan. Monitoring and evaluation reports are available annually for public review.

During plan implementation, evaluation of monitoring results may reveal that the Forest Plan needs to be changed. Changes are made by amending the Forest Plan (36 CFR 219.10(f)).

The Forest Supervisor is required to review the conditions of the land at least every 5 years to determine if a revision is necessary. If monitoring and evaluation indicate that immediate changes in the Forest Plan are needed, and these needed changes cannot be handled in an amendment, then revision of the Forest Plan becomes necessary. The Regional Forester is the official responsible reviewing and approving Forest Plan Revisions.

In his 1997 ROD (p. 40), the Regional Forester was very clear about the role of the 1997 Forest Plan:

The Revised Plan does not provide final authorization for any activity, including timber sales, nor does it compel that any contracts or permits be advertised or awarded. Rather, like the 1979 TLMP (as amended in 1985-86 and 1991), it provides a programmatic framework within which project-level decisions, including timber sales, are considered. Projects must undergo appropriate site-specific analysis, and comply with applicable requirements for public participation, environmental analysis and disclosure, and the administrative appeal procedure before final authorization and implementation.

The Forest also responded to previous comments on the two-step planning process and cumulative effects, and explained that a separate site-specific environmental analysis is done for each project (the second step in the two-step planning process). The cumulative effects of each project and any past, present or reasonably foreseeable future projects (in the same area) are also analyzed for the project. The Revised Plan does not authorize specific projects, and therefore, does not provide or need to provide the site-specific information for such projects; thus the cumulative effects analysis focuses on the estimated effects of the alternatives as a whole (FEIS Appendix L, p. L-193). The 1997 ROD explains why the mid-level or "area analysis" in the old Forest Plan (1989) was dropped (1997 ROD, pp. 41-42). The two-step process noted by the Regional Forester has been in use for years in other areas of the Forest Service and has posed no impediment to satisfaction of the NEPA requirement to adequately analyze cumulative impacts.

Decision

After my review of the record, I find that the Regional Forester followed the requirements of NFMA. The Regional Forester was clear in his discussion regarding the role of the 1997 Forest Plan. As outlined in the above discussion, the two-step planning process will allow the Forest to conduct credible cumulative impact analysis, prepare annual monitoring and evaluation reports, and will reveal any changes necessary to the 1997 Forest Plan. I affirm the Regional Forester's decision. Nothing in the enclosed 1999 ROD affects the 1997 ROD on this issue. The NFMA doesn't prohibit a third tier of planning, but also does not require it.

Karst and Caves

One appellant contend's that the 1997 Forest Plan's karst S&G's will not fully protect the Tongass' unique karst ecosystem (NOA #0101, p. 73).

The appellants further contend that "[i]nconsistencies between management direction in the Karst and Cave Resources Forest-wide Standards and Guidelines and the Plan's Appendix I must be eliminated" (NOA #0101, p. 75) and that "[p]roject assessment, inventory, and clearance for archaeological, natural history, paleontological and cultural resources associated with karst and cave resources must be dramatically improved" (NOA #0101, p. 77).

Discussion

The Federal Cave Resources Protection Act is the primary law recognizing caves. It requires protection of caves designated as significant on Federal land. A cave must possess one or more of the criteria outlined in 36 CFR 290.3(c) or (d) and be designated as significant as outlined in 36 CFR 290.3(e)

(1997 Forest Plan Appendix I, p. I-2). "Although the intent of the Act is to protect caves specifically, caves and their associated resources are an integral part of the karst landscape, therefore to fully protect the cave resource, caves and their karst landscapes need to be managed as an ecological unit" (FEIS, p. 3-82). The karst ecosystem is characterized by mature, high-productivity sites for spruce and hemlock forests along valley floors and lower slopes; productive plant, animal, and aquatic communities; well-developed subsurface drainage; and underlying cave resources (FEIS, p. 3-82).

The 1997 Forest Plan provides management direction and protective measures for karst ecosystems by use of Forest-wide S&G's (1997 Forest Plan, pp. 4-18 through 4-20) and LUD S&G's included in Chapter 3, "Management Prescriptions" of the 1997 Forest Plan. The Forest-wide S&G's for karst and caves "incorporate: a) the results of a 1995 karst vulnerability assessment conducted through a partnership between the Forest Service and national cave experts' b) the results of a 1996 analysis of karst landscapes and associated resources by the interdisciplinary planning team; and c) requirements of the Federal Cave Resources Protection Act of 1988" (1997 ROD, p. 18).

The multiple-use goals for karst and cave resources are "to maintain and protect significant caves and karst ecosystems Forest-wide." Forest-wide objectives for karst and cave resources allow for the continuation of natural karst processes; maintain the productivity of the karst landscape while providing for other land uses where appropriate; and manage lands in a manner which protects significant caves and their associated resources (1997 Forest Plan, p. 2-3).

New information has become available since release of the 1991 SDEIS about the extent of world class karst and cave resources on the Tongass National Forest. "Given a high correlation between occurrences of karst and high-quality timber, questions have arisen regarding how best to protect karst and cave resources while meeting other management objectives of the Forest Plan" (1997 ROD, p. 18).

Chapter 3 includes a definition of what a cave and associated karst terrain are and a description of the controlling natural variables. Chapter 3 also discusses effects of implementing Forest Plan alternatives and past resource management activities on karst systems. Furthermore, Appendix I of the 1997 Forest Plan provides a detailed protocol for determining the significance and importance of these resources (FEIS Appendix L, p. L-45).

Desired landscape attributes describe the mosaic of land and resource conditions envisioned for the Forest in the future. They are attained through Forest-wide multiple-use goals and objectives, and through the cumulative achievement of the goals, objectives, and desired conditions for each of the individual LUD's (1997 Forest Plan, Chapter 3). One of the desired landscape attributes describes managing the Forest to "produce desired resource values, products, services, and conditions in ways that also sustain the diversity and productivity of ecosystems" (1997 Forest Plan, p. 2-1), including karst and caves.

The FEIS discusses three options for managing cave and karst areas in the alternatives (FEIS, p. 3-85). Original Forest Plan direction for the Tongass National Forest (Alternative 9) extends only to the protection of designated significant caves under the Federal Cave Resource Protection Act. The second management approach, as applied in Alternatives 2 and 7 of the Revised Plan, uses standards and guidelines from the unpublished 1992 FEIS for caves. These standards and guidelines include "a process for compiling an inventory of significant caves, measures to include and protect all known significant caves, and some recognition of the connection between karst geology and caves" (FEIS, p. 3-85).

The third approach to cave and karst management, which is the management strategy applied in the selected alternative, assesses the vulnerability or sensitivity of karst areas to planned resource activities. This strategy "strives to maintain the natural karst processes and the productivity of the karst landscape while providing for other resource uses, such as timber production, where appropriate. Under this approach, project planning will identify all potentially affected karst lands and features, and the extent of their hydrologic systems. Karst areas would then be rated in terms of their vulnerability to the proposed management activities" (FEIS, p. 3-85). The karst vulnerability strategy is outlined in detail in the Karst and Cave Resources Forest-wide S&G's (1997 Forest Plan, Chapter 4).

The appellants have a concern regarding the inconsistencies between management direction in the Karst and Cave Resources Forest-wide S&G's and the 1997 Forest Plan's Appendix I (NOA #0101, p. 75). There is no inconsistency between the Forest's S&G's and Appendix I. Appendix I should more appropriately be viewed as how to implement the Forest Wide S&G's for Karst and Cave Resources. Applying the karst vulnerability rating strategy, the Regional Forester discussed in his decision that high vulnerability areas would be removed from the suitable timber base (if the project is to harvest timber), or otherwise be avoided. In areas of high vulnerability, "limited road construction

for access to other areas will be allowed if no alternatives are available and karst resource values would not be compromised" (1997 ROD, p. 18). In moderate vulnerability areas, activities such as timber harvest and road construction would be allowed, but with some restrictions on practices or project design. Low vulnerability areas would not require any special management (FEIS, p. 3-85). All alternatives in the 1997 Forest Plan include, at a minimum, "direction for protecting significant caves under the Federal Cave Resources Protection Act" (FEIS, p. 3-85). The Regional Forester stated that no significant adverse effects to those caves are anticipated under any alternative (1997 ROD, p. 18).

Decision

After my review of the record, I find no inconsistencies between S&G's and Appendix I. The S&G's for karst and cave resources, as well as definitions, were adequately displayed and discussed. The 1997 Forest Plan is consistent with the Federal Cave Resource Protection Act, as well as other law, regulation, and policy with regard to karst and cave resources. I affirm the Regional Forester's decision. Nothing in the enclosed 1999 ROD affects the 1997 ROD on this issue.

Transportation

The appellants contend that, the Revised Supplement's treatment of the Forest development transportation plan falls far short of the requirements of 36 CFR 212.3 or Alaska Regional Guide (NOA #0101, p. 78).

The appellants further contend that "[b]y amending the Regional Guide, the 1997 ROD excuses the Forest Service's failure to comply with the Regional Guides' Transportation Planning Policies" (NOA #0101, p. 83) and that the "[l]ack of information in the FEIS about the number and location of proposed log transfer facilities prevents the evaluation of the cumulative impact to the marine environment and associated uses" (NOA #0101, p. 84).

Discussion

Some appellants contend that the Revised Supplement's treatment of the Forest development transportation plan falls far short of the requirements of 36 CFR 212.3. The forest development transportation system regulations at 36 CFR 212.3 states that "[a] plan shall be made for each National Forest, experimental, and other areas under Forest Service administration. It shall be prepared, maintained, revised, and reported on in accordance with procedures prescribed by the Chief." The definition of the "[f]orest development transportation plan" (36 CFR 212.1) is as follows: "The plan for the system of access roads, trails, and airfields needed for the protection, administration, and utilization of the National Forests and other lands administered by the Forest Service, or the development and use of resources upon which communities within or adjacent to the National Forest are dependant."

The objectives of transportation planning are twofold: to efficiently provide facilities that will achieve forest management direction and that are appropriate for their intended purpose, and to direct the orderly development and management of the transportation system and to insure the documentation of decisions affecting the system (FSH 7710.2).

The FSM at 7711 defines the Forest Development Transportation Plan: The forest development transportation plan is the official description of the forest development transportation system and consists of a base map or series of base maps showing the location of each facility and an inventory record defining their characteristics. These documents shall also serve as the forest development road system plan reference in 16 U.S.C. 1608. Each forest shall prepare and keep current a forest development transportation plan.

It is the responsibility of the Regional Forester to (FSM 7710.41):

- 1. Issue Regional policy and guidelines for transportation planning and prescribe minimum standards for analyses of various levels of planning intensity.***
- 2. Prescribe Regional transportation planning information requirements.***
- 3. Develop Regional multiyear schedules of proposed transportation facility projects (FSM 1922.51).***
- 4. Establish policy for traffic surveillance and classification to be used in transportation planning (FSM 7731.5).***
- 5. Coordinate State and Federal transportation involvement in land and resource management planning to ensure that their plans are included in land management policy development and that their policy development has the benefit of Forest plans.***

Transportation planning for the 1997 Forest Plan included addressing FSM 1922.11 and 1922.15, as well as providing 1) an overview of the transportation rights-of-way acquisition needs for the planning period and 2) a summary of how resource programs affect existing public transportation facilities, the need for reconstruction or new construction, and the Forest Service transportation investments necessary for carrying out the planned resource program (FEIS, p. 3-308; 1997 Forest Plan, Chapter 4).

For certain areas identified by the State of Alaska as appropriate for development of major transportation or utility systems, a Transportation Utility System LUD has been developed (1997 ROD, p. 6).

Road construction for timber management will normally only occur in LUD's which allow timber harvest. Several other LUD's allow roads through them to access adjacent areas, but such uses will be infrequent. Therefore, most of the road construction will occur in the approximately 3.7 million acres covered by the Timber Production, Modified Landscape, and Scenic Viewshed LUD's.

In response to appellants concerns that the lack of information about the number and location of proposed log transfer facilities prevents the evaluation of the cumulative impact to the marine environment and associated uses (NOA #0101, p. 84), the fisheries discussion of the FEIS took road construction into account for potential effects on habitat (FEIS, pp. 3-56 to 3-73). The impacts of log transfer facilities are discussed in the FEIS (p. 3-311).

The Fisheries Assessment Panel acknowledged that the greatest risk to the fish resource is caused by roads. Increased sediment yield, including yields from roads during construction, use during timber harvest activities, and lack of sufficient maintenance or proper closure following timber harvest activities, were all viewed as potential problems for maintaining fish resources (FEIS, p. 3-64). The Forest decided to incorporate all the recommendations made in the AFHA report because this report is the most comprehensive and credible scientific review of measures needed to protect fish habitat (1997 ROD, p. 18). The S&G's of the 1997 Forest Plan meet or exceed those recommendations by the AFHA (1997 ROD, p. 18; 1997 Forest Plan, pp. 4-8 through 4-12).

The Management Prescriptions for Transportation and Utility Systems is found in the 1997 Forest Plan, (p. 3-158). Road construction and management is covered under the transportation forest-wide S&G's, and include restrictions of road use to minimize effects on wildlife, and direction to avoid fish-bearing streams and wetlands where feasible. Best Management Practices (BMP's) for complying with State Water Quality Standards to provide for beneficial uses of water apply to all road construction and reconstruction activities. The Alaska Department of Environmental Conservation and Forest Service have agreed that the Forest Service is the Agency responsible for monitoring and protecting water quality on the National Forest System lands in Alaska (FEIS, p. 3-314). The adopted VQO's for each LUD apply to road design and location as well as timber management practices. The siting, design and construction of log transfer facilities are also covered by the transportation forest-wide S&G's, and the Log Transfer Facility Siting, Construction and Monitoring-Reporting Guidelines (Appendix G of the 1997 Forest Plan).

In response to a previous comment by SEACC regarding the effectiveness of BMP's related to road building, the Forest agreed that there is insufficient data at this time to "conclusively" determine the effectiveness of BMP's. 36 CFR 219.27(a)(10) is the requirement that roads be designed "to standards appropriate to the planned uses, considering safety, costs of transportation, and effects upon lands and resources." The Transportation Forest-wide S&G's have safety, cost and effects on resources as their primary focus (FEIS Appendix L, p. L-6).

Alternative 11 (of the 1997 Forest Plan), with its improved fish, soil and water, and riparian S&G's, presents the least risk to fish and other riparian and aquatic dependent resources of all the

alternatives which allow for multiple resource management, including timber harvest (FEIS Appendix L, p. L-29).

The Forest also provides a discussion of the cumulative effects on other resources of the likely transportation system that would be in place 150 years from now in the Transportation "Consequences" section of Chapter 3 of the EIS (pp. 3-310 through 3-312). There are also extensive discussions on the effects of roads in the recreation and tourism, fish, soil and water, wildlife, and scenery sections. These analyses sufficiently consider the effects of roads. There is no reason that all effects of roads must be discussed specifically in the Transportation section of the FEIS (Appendix L, p. L-158). Contrary to the appellants' suggestion, the FEIS does adequately discuss and consider the cumulative impacts of log transfer facilities (FEIS, p. 3-311).

Decision

After my review of the record, I find that the 1997 Forest Plan is consistent with the requirements of the NFMA, NEPA, and the Alaska Regional Guide. The Forest is in compliance with the Region's Transportation Planning policies. I affirm the Regional Forester's decision. Nothing in the enclosed 1999 ROD affects the 1997 ROD on this issue.

Tongass Timber Reform Act

The appellants contend that "[t]he FEIS and Plan violated NEPA, NFMA and the TTRA by reclassifying the Tongass timber inventory and eliminating the requirement of preventing the early depletion of the highest-volume old growth on the Tongass" (NOA #0101, p. 85).

The appellants further contend that "[t]he conclusion that the TTRA's high-grading prohibition is no longer applicable on the Tongass ignores the remedial intent of Congress and plain language of the TTRA" (NOA #0101, p. 86) and that "[t]he Revised Tongass Plan does not ensure protection and maintenance of the relatively rare high-volume old growth forest stands" (NOA #0101, p. 89).

The appellants also contend that "[t]he Forest Service's adoption of a Plan which provides timber far in excess of likely demand and which misleads the public as to the likely economic impacts from cutting timber violates the TTRA and NEPA" (NOA #0101, p. 104) and that the "TLMP violates TTRA by failing to balance properly timber demand with the protection of other natural resources" (NOA #0106, p. 2).

The appellants contend that "[t]he new TLMP fails to protect high volume stands. The Tongass has simply, unilaterally and without explanation, decided that ensuring against high-grading, as TTRA required, is 'beyond the scope of the Forest Plan.' Failure to address this issue in the Plan is indefensible, and, among other things, violates 36 CFR 219.27(g)" (NOA #0108, p. 3).

The appellants further contend that "[t]he TLMP NEPA documentation fails to disclose impacts of high-grading. Volume classes 6 and 7 are barely mentioned in the FEIS, and then only in passing. Failure to investigate this issue and to evaluate alternatives for their known or possible impacts on volume class 6 and 7 old growth violates 40 CFR 1502.1" (NOA #0108, p. 5).

The appellants contend that the Forest Service's Kadashan study is unreasonable and fails to comply with the TTRA (NOA #0101, pp. 92-95).

Background

The TTRA amended the ANILCA, to protect certain lands in the Tongass National Forest in perpetuity, to modify certain long-term timber contracts, to provide for protection of riparian habitat, and for other purposes.

Title I, Section 101 of the TTRA amends the ANILCA to state:

Subject to appropriations, other applicable law, and the requirements of the National Forest Management Act of 1976 (Public Law 94-588), except as provided in subsection (d) of this section, the Secretary shall, to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle.

Section 101 clearly states that this provision is "subject to appropriations, other applicable law, and the requirements of the National Forest Management Act of 1976." In addition, it also clearly states that meeting demand is subject to being "consistent with providing for multiple use and sustained yield of all renewable forest resources."

Discussion

Appellants' are concerned that the FEIS and 1997 Forest Plan violate the TTRA (and NEPA and NFMA) by reclassifying the Tongass timber inventory and eliminating the requirement of preventing the early depletion of the highest volume old growth (NOA #0101, p. 85) and that the 1997 Forest Plan does not ensure the protection and maintenance of the relatively rare high-volume old growth forest stands (NOA #0101, p. 89).

High volume old-growth is a concern on the Forest, because past timber harvest has been concentrated in these stands (FEIS, p. 3-27). Table 3-5 (FEIS, p. 3-28) provides a general overview of the anticipated changes to the old-growth resource over time. The FEIS (pp. 3-27 through 3-29) includes a table and discussion on high volume old growth by alternative.

Assessments of the relative likelihood of maintaining a functional and interconnected old-growth ecosystem were performed for nine alternatives by a four-person panel of experts. These assessments focused on the primary producers of the old-growth ecosystem (the vegetation) and the processes and functions associated with the quality and dynamics of those primary producers. The effects of the alternatives on late successional forest ecosystems were evaluated in terms of degrees (outcomes 1 through 4) of ecosystem quantity and quality (FEIS, p. 3-31). Alternative 11 would be closer to the lower effects end, similar to Alternatives 4 and 5 (FEIS, p. 3-38). Alternative 11 was also designed in part to recognize and account for current conditions within each province, and to better maintain future old-growth in provinces where past harvest has been high (FEIS, p. 3-38).

As stated in the FEIS (p. 3-429), Alternative 11 deserves specific discussion because it, more than any other alternative, represents an explicit attempt to address general as well as specific issues related to wildlife viability conservation planning. Alternative 11 (1997 Forest Plan) proposes a harvest of 474,000 acres of old growth forest over the entire 100 year planning period. This maximum harvest level is among the lowest of all alternatives, and represents over a 70 percent reduction in acres of old growth available for harvest from those of the past Tongass Plan (1,700,000 acres; USDA Forest Service 1979). This 70 percent reduction in acres planned for harvest is highly responsive to the FWS warning that a "significant change" in current Tongass management was necessary relative to ESA listing deliberations on the Tongass. Overall, Alternative 11 is projected to have a moderately high likelihood of maintaining viable well-distributed populations of old-growth associated species across the Forest (Id.).

A discussion and analysis of the old-growth forest can be found in the FEIS (pp. 3-18 through 3-39). Table 3-6 of the FEIS (p. 3-29) shows the proportion of 1954 high volume old growth remaining at 1995 and 2095, by alternative. Alternatives 11, 4 and 5 will retain the greatest amount (76 percent) of the original old-growth of those alternative scheduled for any timber harvest (FEIS, p. 3-27). A discussion of the Panel Assessment for the old-growth ecosystems is found at pages 3-31 through 3-39 of the FEIS. The age class distribution of the current timber resource is discussed in the FEIS (pp. 3-251 through 3-255). 85 percent of the tentatively suitable timberlands is in age class 150+ (Table 3-69; FEIS, p. 3-251).

Future timber stand conditions are discussed in the FEIS (pp. 3-299 through 3-305). Figure 3-11 displays the acres of old-growth volume class and young growth scheduled by alternative (FEIS, pp. 3-301 to 3-303). Table 3-99 (FEIS, p. 3-304) shows the age class distribution at the end of the planning horizon (160 years) for timberlands, by alternative, and Table 3-100 shows the Forest-wide stand structures at the end of the planning horizon for all alternatives.

Proportionality is discussed in the FEIS (pp. 3-298 through 3-299). The Forest states that, unlike the 1991 Draft Supplement, this supplement does not provide for specific constraints to directly calculate TTRA Proportionality. The TTRA Proportionality is an implementation requirement for all timber activities on the Tongass National Forest and is beyond the scope of the 1997 Forest Plan. Yield calculations for each alternative were based on scheduling the high, medium, and low old-growth volume classes evenly over the planning horizon (Figure 3-5). This provided enough flexibility in the amount of high and low volume scheduled to implement the TTRA proportional harvest requirement in any management area where KPC long-term contract harvest would have occurred (FEIS, p. 3-299). The court disputes over TTRA Section 301 proportional harvest methodology have been settled, with issuance of an updated Forest Service Handbook Supplement (Region 10, FSH 2409.18 Supplement No. 2409.18-96-1) (FEIS, p. 3-254).

Table 3-113 shows the proportion of productive old growth that is contained within reserves and matrix in each alternative by WAA, an intermediate level of spatial distribution. There are approximately 5,063,000 acres of productive old growth remaining on the Tongass. Alternative 11 (of the 1997 Forest Plan) provides a combination of land allocations that protects 70 percent of this old growth in natural setting LUD's, second only to Alternative 1 that schedules no timber harvest. Alternatives 3 and 10 rank next with 65 percent of the old growth in reserves, Alternative 5 and 6

have 59 percent of the old-growth in reserves, Alternatives 2 and 4 have 56 percent and Alternatives allocate the least amount of old-growth in non-development LUD's, respectively (FEIS, p. 3-382).

Substantial areas containing volume 7 type stands are protected from harvest under the 1997 Forest Plan LUD's and S&G's (FEIS Appendix L, p. L-206).

Based on the above discussion the Regional Forester was confident that contrary to appellants' assertions, the plan will protect and maintain high-volume old-growth (1997 ROD, pp. 32-35) and stated in conclusion:

Our understanding of the biological diversity of the complex old-growth ecosystem of the Tongass National Forest, including its composition, function and structure, is continually growing. Given the complexities involved, management decision necessarily will involve some degree of uncertainty. Based on my review of the record, including the FEIS and Appendix N, I find that the old-growth strategy and specific species management prescriptions represent a balance of wildlife habitat conservation measures which consider the best available scientific information and, within an acceptable level of risk inherent in projecting management effects, will provide fish and wildlife habitat to maintain well-distributed viable populations of vertebrate species in the planning area, and maintain the diversity of plants and animals.

In addition, the NFMA implementing regulations specify a number of elements which guide Forest planning, such as diversity and viability provisions for Fish and Wildlife (1997 ROD, p. 31).

In response to appellants contention that the FEIS and 1997 Forest Plan reclassify the Tongass timber inventory and eliminate the requirement of preventing the early depletion of the highest-volume old growth, the Forest provides a discussion and analysis of the old-growth forest, found in the FEIS (pp. 3-18 through 3-39). Table 3-6 of the FEIS shows the proportion of 1954 high Volume Old Growth remaining at 1995 and 2095, by alternative. Alternatives 11, 4 and 5 will retain the greatest amount (76 percent) of the original old-growth of those alternatives that schedule any timber harvest (FEIS, p. 3-27). A discussion of the Panel Assessment for the old-growth ecosystem is found at pages 3-31 through 3-39 of the FEIS. The age class distribution of the current timber resource is discussed in the FEIS (pp. 3-251 through 3-255).

The FEIS (p. 3-252) states:

The 1980s inventory was designed to achieve an estimate of the standing volume on the Forest within certain error limitations. Sampling errors of area and volume which resulted met the requirements of FSM 2409.13 (Plus or minus 10 percent per billion net cubic feet at a 68-percent confidence level; Rogers and Van Hees, 1992) and Table 3-70 illustrates sampling design goals and sampling errors achieved. A review of the inventory methodology and results was conducted in September 1989 by a Forest Service Biometrician, Jim Brickell. He concluded that the inventory results are reliable as an assessment of forest areas and volumes at the Forest and Area levels, (Brickell, 1989).

Thus the inventory methodology was an acceptable process for analysis.

Similarly, in Sierra Club v. Robertson, 810 F.Supp. 1021, 1028 (W.D. Ark. 1992), affirmed 28 F.3d 753 (Cir 1994), the court reviewed the NFMA requirements regarding forest plan inventories and upheld the inventory information in the Ouachita National Forest Plan. The court concluded that ". . . plaintiffs appear to disagree with how the agency carried out its inventory, but mere disagreement is not enough to state a claim Plaintiffs' inventorying claims must fail because the Forest Service has considerable discretion in inventorying and plaintiffs have failed to persuade the court that the inventory has shortcomings that violate the arbitrary and capricious standard."

Finally, in Krichbaum v. Kelley, 844 F.Supp. 1107, 1114 (W.D. Va. 1994) (on appeal to the 4th Circuit) the court considered arguments concerning the adequacy of forest plan inventory information. Although this case involved a timber sale project and not a forest plan approval decision, the rationale of the court's opinion is applicable here. The court "declined to find the agency in violation of NFMA simply because it had not prepared inventories as the plaintiff would define [] them" In addition, the court noted that although additional inventory information might be desirable, a less costly evaluation was necessarily "infirm in the light of [NEPA] or the NEPA regulations."

Future timber stand conditions is discussed in the FEIS (pp. 3-299 through 3-305). Figure 3-11 displays the acres of old-growth volume class and young growth scheduled by alternative (FEIS, pp. 3-301 to 3-303). Table 3-99 shows the age class distribution at the end of the planning horizon (160 years) for timberlands, by alternative, and Table 3-100 shows the Forest-wide stand structures at the end of the planning horizon for all alternatives.

The appellants contend that "[t]he Forest Service's adoption of a Plan which provides timber far in excess of likely demand and which misleads the public as to the likely economic impacts from cutting timber violates the TTRA and NEPA" (NOA #0101, p. 104). The Regional Forester stated, in his discussion of the TTRA as it applied to "demand" that, "[t]he Tongass National Forest will continue to be managed in compliance with Section 101 of the TTRA, which states in part that the Secretary of Agriculture . . . shall, to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle" (1997 ROD, p. 37).

In addition, concerning the appellants' demand contention, in the 1997 ROD, the Regional Forester directed the Region to develop a methodology to insure compliance with the "seek to meet market demand" standard established in the TTRA. On November 27, 1998, the Forest Service published in the Federal Register an announcement that a draft methodology, prepared by the Forest Service's Pacific Northwest Research Station, for evaluating market demand in order to meet the agency's obligation under the TTRA was available for review. As stated in the enclosed 1999 ROD (p. 58) I have reviewed that methodology and conclude that it is an appropriate methodology for determining market demand for the purposes of implementing the "seek to meet market demand" language of TTRA. I recognize that the methodology is not the only possible methodology for compliance with

the congressional directive. Pending receipt and analysis of the public comments on the draft methodology, the 1999 ROD does not make a final decision on which methodology will ultimately be chosen to meet the requirements of the TTRA.

The appellants contend that the Kadashan study is unreasonable and fails to comply with the TTRA (NOA, #0101, p. 92). The appellants further allege that the Forest failed to identify a legitimate need for a transportation route through the Kadashan River valley (NOA #0101, p. 93) and that the Forest, by denying the valid alternative requests by the City of Tenakee Springs, violates the TTRA (NOA #0101, p. 94).

Included with the 1997 ROD is a study report on the Kadashan watershed, as required by section 203 of the TTRA (1997 ROD, p. 2).

Section 203 of the legislation states:

The Secretary shall complete, as part of the Tongass Land Management Plan revision process, in consultation with the State of Alaska, the City of Tenakee Springs, and other interested parties, a comprehensive study of the Kadashan LUD II Management Area as described in section 201(4). The Secretary shall submit a separate report of such study to the Committee on Energy and Natural Resources in the Senate and the Committee on Interior and Insular Affairs in the House of Representatives, which shall include, but not be limited to:

- (a) an assessment of the natural, cultural, environmental, fish and wildlife (including habitat) resources and values of such area; and*
- (b) an assessment of the need for, potential uses, alternatives to and environmental impacts of providing a transportation corridor route through the Kadashan river valley.*

This comprehensive study of the Kadashan LUD II Management Area fulfills the requirements of Section 203 of the TTRA. Part A of the Study displays an assessment of the resources and values of the Kadashan LUD II Management Area; Part B provides an assessment of the need for, potential uses, alternatives to and environmental impacts of providing a transportation corridor route through the Kadashan river valley (FEIS Appendix K, p. K-2). Part B-1 of Appendix K (of the FEIS) displays the consultation record for the Kadashan LUD II Management Area study.

The resources and values of the Kadashan river valley are comprehensively described in Part A of the Kadashan study. Part B begins with a historical perspective of the existing road in the Kadashan river valley and the activities which led to its being legislated LUD II. Contrary to appellants assertions that the Forest failed to identify a legitimate need for a transportation route through the Kadashan River valley (NOA #0101, p. 93), Part B of the study describes the administrative, research, and public need for and potential uses are described for a road connection in the Kadashan river valley, plus two alternative routes (Id.).

Of the Chichagof Roadless Area (No. 311), 34,281 acres (6 percent) are designated as the Kadashan Legislated LUD II area. It occupies the entire Kadashan River drainage (VCU 235C) on Chichagof Island. The area is approximately five miles south of the community of Tenakee Springs (FEIS,

p. 3-167).

Decision

After my review of the record, I find that the Forest is in compliance with the NEPA and NFMA. The annual timber sale offerings from the Tongass National Forest will be consistent with, and not exceed the amount of timber for which there is demand as referred to in TTRA. Furthermore, in the 1999 ROD I directed that the Forest Service should not seek to offer timber in excess of actual market demand. As noted above, the Forest Service is developing a methodology for determining demand to insure compliance with the "seek to meet market demand" standard established in the TTRA.

Minerals

The appellants contend that " [t]he Forest Service violated the NFMA planning regulations by only analyzing the impacts of each alternative on mineral development. The planning regulations require the Forest Service to assess the forest-wide impacts of probable mineral development on the forest resources" (NOA #0101, p. 97) and that "[t]he minerals LUD is unnecessary" (NOA #0101, p. 96). They further contend that " [t]he Forest Service failed to consider "withdrawing" areas from potential mineral development" (NOA #0101, pp. 63 and 96).

Discussion

Under the MUSYA, the Forest Service is directed to manage the National Forests for multiple use and sustained yield of the renewable products and resources with consideration given to the relative values of the various resources in particular areas, but not necessarily the combination of uses that will give the greatest dollar return or greatest unit output (16 U.S.C. 531). The NFMA implementing regulations at 36 CFR 219.1(a) further require that "the resulting plans shall provide for multiple use and sustained yield of goods and services from the national forest in a way that maximizes long term net public benefits in an environmentally sound manner." Allowable uses within National Forest System lands includes minerals development.

The Regional Forester stated (1997 ROD, p. 3):

The Forest Plan, Chapters 3 and 4, sets forth the management prescriptions that describe how land managers should operate on the Tongass National Forest. These Chapters provide the expectations and limits on how and where activities will be conducted. The prescriptions include Land Use Designations (LUDs) with a range of management objectives, and specific standards and guidelines designed to ensure attainment of those objectives.

In response to appellants concerns regarding the minerals LUD (NOA #0101, p. 96), the 1997 Forest Plan assigns LUD's to specify how areas of the Tongass National Forest are to be managed. Areas under the Minerals LUD will be managed for the exploration and development of mineral resources in areas having high potential for mineral commodities including nationally-designated strategic and critical minerals (FEIS, p. 2-6).

Each LUD has a list of S&G's. The S&G's govern resource management activities and are key to implementation of the 1997 Forest Plan. Some of these S&G's apply to all lands, others to specific LUD's, such as the Minerals LUD's. The Regional Forester stated that "[t]hese standards and guidelines take precedence over annual targets or projected outputs; no project or program will be funded for which the applicable standards and guidelines cannot be carried out" (1997 ROD, p. 3). The S&G's for the Minerals LUD's provide the framework for any site-specific environmental analysis of potential effects of mineral activity and of timber harvest on other resources. These guidelines are designed to assure the long term productivity of the land. Short term effects associated with minerals activities will be mitigated by measures consistent with the scale of the development and the potential resource impacts. The Minerals LUD's are not single-use management any more so than other LUD's (FEIS, p. 2-7). Identification of lands for a particular LUD doesn't preclude all other uses within that LUD. The S&G's for other Resources in the Minerals LUD's are thoroughly

discussed in the 1997 Forest Plan (pp. 3-144 through 3-157). Site-specific environmental analysis of alternative ways to develop and extract the mineral reserve would be undertaken (FEIS Appendix L, p. L-46).

In response to appellants concerns regarding withdrawing areas from potential mineral development (NOA #0101, p. 96) with respect to the Minerals LUD, except for wilderness and certain other withdrawn areas, all Tongass National Forest lands are open to minerals exploration and development. Absent withdrawal, the General Mining Law of 1872, as amended, grants every United States citizen the right to prospect and explore public domain lands open to mineral entry. For certain areas with high mineral development potential, a Minerals LUD has been developed. The 1997 Forest Plan applies the Minerals LUD to all 12 areas with high potential for development that also show likely economic viability. If development occurs, S&G's will be applied to mineral exploration and development and include provisions which require financial bonds where appropriate and review of plans of operation with appropriate mitigation measures (1997 ROD, p. 4).

Contrary to appellants' contention, the FEIS examined various options for seeking withdrawals. Compare Alternative 1 "seek withdrawal of areas where minerals development is not allowed by specific land use designation" (FEIS, p. 2-26) and Alternative 11 "seek withdrawal of specific locations where minerals development may not meet Land Use Designation objectives" (FEIS, p. 2-59). Each alternative recommended additional lands that could be withdrawn (FEIS, p.3-98). With regard to the appellants' concerns about the impacts of mining on other resources, the FEIS states "the effects of any such development (minerals) are analyzed at the time a specific project is proposed" (FEIS, p. 3-99).

Decision

After my review of the record, I find that the Regional Forester is consistent with the NEPA planning regulations with regard to impacts from probable mineral development. The Regional Forester described the minerals LUD, and why it's necessary. The Regional Forester explained that all Tongass National Forest Lands are open to minerals exploration and development (with a few exceptions). I affirm the Regional Forester's decision. Nothing in the enclosed 1999 ROD affects the 1997 ROD on this issue.

Multiple Use

The appellants contend that recreation and tourism still take a backseat to timber in the Tongass planning process (NOA #0101, p. 102).

Discussion

Contrary to appellants contention, of the action alternatives considered in detail (1997 ROD, pp. 11-13) it is apparent that Recreation and Tourism were emphasized, to varying degrees (as was timber and other resources) in all alternatives (see Table 2-7 of the FEIS, p. 2-64, for selected alternative dimensions for Recreation - ROD opportunities by Alternative). For more discussion on Recreation and Tourism related to Table 2-7 see the FEIS (pp. 2-67 to 2-68).

As discussed previously, the 1997 Forest Plan sets forth management prescriptions that describe how land managers should operate on the Tongass National Forest. These prescriptions include LUD's, with a range of management objectives and specific S&G's designed to ensure attainment of those objectives (1997 ROD, p. 3).

As stated by the Regional Forester "[s]everal LUDs, in particular Semi-remote Recreation and Scenic River, provide opportunities for a spectrum of recreation and tourism activities, and permit facilities consistent with the land setting. Where opportunities exist to enhance recreation or tourism experiences in natural settings, LUDs that allow developed recreation or tourism facilities are favored over those that do not encourage developed recreation" (1997 ROD, p. 4). The Forest will cooperatively participate with local communities and user groups when implementing development projects to supplement those opportunities located on other lands and jurisdictions (1997 Forest Plan, pp. 4-33 to 4-50).

The Regional Forester also considered "areas of special interest", many areas of which were part of the Preferred Alternative of the RSDEIS of April 1996; others which represent changes made since that time. These allocations reflect concerns raised in public comment and most provide additional protection to areas of special interest or with specific resources values (1997 ROD, pp. 10-11).

As part of the Purpose and Need for the 1997 Forest Plan, recreation was carried forward from one of the ten original public issues, "Outdoor recreation opportunities offered by the Tongass National Forest play an important role in the quality of life for the majority of Southeast Alaska residents. Many families have favorite places where they fish, hunt, beachcomb, hike, or just go to get away. Many non-residents visit the Tongass for these same opportunities" (FEIS, p. 1-4).

Another key factor in the Regional Forester's decision was to maintain options for a variety of social and economic uses of the Tongass, from continuing a timber harvest program that provides a sustainable supply of timber and other timber products, to providing for subsistence opportunities and unspoiled settings for recreation and tourism. The Regional Forester found that Alternative 11 (1997 Forest Plan) currently provides the best strategy for maximizing net public benefits, within a multiple-use context (1997 ROD, pp. 15-16; FEIS, Chapter 2).

In addition, the Regional Forester's decision focused on the different recreation and tourism opportunities and kinds and quality of recreation experiences available throughout the Forest. The resource S&G's and the changes in LUD allocations reflected in Alternative 11 (1997 Forest Plan) are sufficient to maintain recreational and tourism opportunities throughout the Forest (1997 ROD, p. 22).

*As required by the RPA (The Forest and Rangeland Renewable Resources Planning Act of 1974) for 1990, on the Tongass, one of the four major themes, to enhance recreation, wildlife and fisheries resources, that the 1997 Forest Plan responds to is enhancing recreation, wildlife and fisheries with LUD's for Semi-remote recreation, Old-growth Habitat, Scenic Viewsheds and Modified Landscapes (1997 ROD, p. 28). The draft 1995 RPA program responds to one of the four major goals (providing multiple benefits for people, within the capabilities of the ecosystems) by "providing multiple benefits for people through maintenance of scenic quality, providing for recreation and tourism, responding to subsistence needs, and providing wood products" (*Id.*)*

Recreation and Tourism is thoroughly discussed in the FEIS (pp. 3-100 to 3-147). Roadless areas are discussed in the FEIS (pp. 3-161 to 3-174); Scenery is discussed in the FEIS at pages 3-175 to 3-196. A discussion of the Special Interest Areas are discussed in the FEIS at pages 3-202 through 3-209. Recreation and Tourism, as related to Regional Economy is discussed in the FEIS (pp. 3-457 to 3-463). Additional discussion is found on pages 3-488 to 3-490 of the FEIS. Recreation and Tourism, at the sub-regional level is discussed in the FEIS (pp. 3-520 to 3-521).

The LUD acreages and special designations or classifications, such as wilderness, wild, scenic and recreational rivers, Research Natural Areas, and Special Interest Areas, are displayed in the 1997 Revised Plan (pp. 3-1 through 3-5). Prescriptions for these areas are also found in the 1997 Forest Plan: wilderness (pp. 3-7 through 3-40); SIA's (pp. 3-56 to 3-68); Semi-remote (pp. 3-83 to 3-119); Scenic viewsheds/modified landscapes (pp. 3-126 to 3-143).

The Forest-wide standard and guidelines for Recreation and Tourism are found in the 1997 Forest Plan (pp. 4-35 to 4-52). Appendix F of the 1997 Forest Plan lists the viewpoints from which scenery will be emphasized, both of which further demonstrate the attention and emphasis given to recreation.

Decision

After my review of the record, I find that the Regional Forester took a thorough look at recreation and tourism, and demonstrated that these resources do not take a "backseat to timber" in the 1997 Forest Plan.

However, while a thorough look was given, I have determined that there was a need to modify the provisions of the 1997 Forest Plan to better address environmental protection and further enhance recreation and tourism opportunities in southeastern Alaska. To do that, I have included additional Areas of Special Interest composed almost entirely of semi-remote and remote recreation LUD prescriptions, which will further benefit local tourism industries (1999 ROD, Recreation and Tourism section).

Social/Economics

The appellants contend that the socioeconomic section of the FEIS violates NEPA because of "[t]he erroneous portrayal of likely market demand is reinforced by a misleading description of the existing timber industry" (NOA #0101, p. 112; NOA #0108, p. 62).

The appellants further contend that "[t]he Final EIS fails to address subsistences as a regional economic issue" (NOA #0101, p. 113; NOA #0108, p. 64) and that "[t]he Final EIS misrepresents the long-term value of a high-volume timber program (NOA #0101, p. 115; NOA #0108, p. 65) and "[t]he Final EIS and [1997] ROD fail to recognize the economic transition occurring in the region" (NOA #0101, p. 116; NOA #0108, p. 65).

Discussion

The Regional Forester looked at subsistence as a regional economic issue (NOA #0101, p. 113; NOA #0108, p. 64), contrary to appellants allegations. As stated in the FEIS, "[t]he health and vitality of human socio-cultural and economic systems must be evaluated side-by-side with the health of other biological and physical systems" (FEIS, p. 4-431). Subsistence was previously addressed in this decision. Subsistence use of fish and wildlife continues to be an important component of the economies of Southeast Alaska communities. This is discussed in the Subsistence section of the FEIS (pp. 3-215 to 3-219). As stated by the Regional Forester, "[s]ocioeconomic needs of the communities of Southeast Alaska are an important aspect addressed in the Forest Plan. The Forest Plan includes forest-wide standards and guidelines for rural community assistance which provide for the consideration of development opportunities by resource managers, and for the sharing of information with local agencies, planners and managers. Rural community assistance is a national as well as regional and local emphasis within the Forest Service" (1997 ROD, p. 19).

Contrary to appellants allegations that the socioeconomic section of the FEIS violates NEPA (NOA #0101, p. 112; NOA #0108, p. 62), the Forest provides a comprehensive socioeconomic analysis. The FEIS contains nearly 250 pages of socioeconomic analysis. The FEIS includes several analyses that were not included in previous drafts, including: a description of the economy of Southeast Alaska that has been substantially modified; the history and current situation of the logging camps now operating in Southeast Alaska; the projected economic timber volume of each alternative is compared to both the reported installed capacity and historic processing levels of existing mills, both open and closed; the geographic areas where timber harvest activity is likely to occur (mapped); areas which approximate the extent of each community's day-to-day use area, or community use areas, (both graphically and in a tabular form); and a map of subsistence activities, updated to more accurately reflect where deer actually have been harvested (1997 ROD, pp. 19-20; FEIS, pp. 3-431 to 3-685). These analyses help describe a clear picture of the current economic situation.

Community-specific effects of each alternative on nine socioeconomic factors are also described in the FEIS. Factors include timber jobs, fishing jobs, recreation and tourism jobs, mining jobs, economic diversity, community stability, quality of life, recreation opportunities, and access to traditional life-styles. The description of community-level subsistence effects of the alternatives has been substantially improved by tailoring it to historic subsistence use by each community (1997 ROD, p. 20; FEIS, pp. 3-431 through 3-685).

The Forest is also participating in a large effort by a variety of Federal, State, and local agencies and the private sector to form the Southeast Alaska Community Economic Revitalization Team (SEA CERT). The SEA CERT is expected to include 13 Federal agencies. Local members, to date, include most communities in Southeast Alaska. The goal of SEA CERT is to promote economic stabilization and community development in timber-dependent communities in Southeast Alaska (1997 ROD, p. 19). Participation in SEA CERT will provide an opportunity to further refine the economic picture of the Region.

In response to appellants allegations that the FEIS misrepresents the long-term value of a high-volume timber program (NOA #0101, p. 115 and #0108, p. 65). The Regional Forester provided an adequate discussion of timber (ASQ, demand and non-interchangeable components, and sustainability of the timber industry) in his 1997 ROD (pp. 24-26; FEIS, pp. 2-18 through 2-21) while

a comparison of alternatives with regard to the socioeconomic conditions is found in the FEIS (p. 2-67).

An adequate explanation for the PNV numbers presented in Tables 3-151 and 3-152 is provided in the FEIS (pp. 3-502 to 3-503). The Forest explains that while the timber intensive alternative projects lower or even negative net revenues in latter decades (after 2050) due to the influx of lower grade second growth logs, the effects of the 4 percent discount rate serves to emphasize the near-term over the long-term.

As stated in the FEIS (pp. 2-20 and 2-279):

There is extensive discussion of the Economic and Social Environment in the FEIS (pp. 3-341 through 3-685). Economics is an important consideration in determining what lands can be harvested; however, experience has shown that it is seldom feasible to effectively factor in economics as part of the overall timber suitability determination. Economic conditions can fluctuate greatly during the course of a plan period, and even from year to year specific timber species can shift from being economic to uneconomic to harvest. This makes it difficult to assess the economics of harvesting a particular site even over a 10-year period. Also, the value of the timber sale program must be considered as a whole, rather than by only evaluating individual timber sales or harvest units in isolation, since some sales or units of low value are offset by other higher-value sales or units.

Further discussion by the Forest shows that economic considerations were adequately addressed using the concept of non-interchangeable components (NIC's). Non-interchangeable components allow for separating the ASQ into discrete, individually accountable categories. Chargeable timber volume from one NIC cannot be substituted for the achievement of the volume limit of another NIC, nor can the limits on the sale of chargeable timber volume associated with each non-interchangeable component be exceeded (FEIS, p. 2-20).

For the 1997 Forest Plan, the Forest's analysis of social and economic effects includes an examination of regional (Southeast Alaska) industry and employment impacts, and a more qualitative look at potential effects to each of Southeast Alaska's 30+ communities (including effects on the availability of subsistence resources). The regional analysis concluded that only two employment sectors - timber and recreation/tourism - would show direct or indirect effects from Tongass management over the next decade (FEIS, p. 2-67).

The Economic and Social Environment is also broken down by "Regional Economy" (FEIS, pp. 3-431 to 3-509), the "Subregional" (FEIS, pp. 3-510 to 3-522), and "communities" (FEIS, pp. 3-523 to 3-680).

The appellants allege that the 1997 ROD and FEIS fail to recognize the economic transition occurring in the Region (NOA #0101, p. 116; NOA #0108, p. 65). The Forest's regional analysis includes an estimation of the benefits produced by forest-resource activities. The estimated value in no way comprise the total value society derives from the Tongass National Forest. In addition to incomes and revenues, there are values which are equally important but far more difficult to quantify (FEIS, p. 4-431).

In addition, the subregional overview of Southeast Alaska provides information about the economic and social environments at a scale between the region as a whole, and the level of each individual community. This subregional overview serves in part as a transition to the fourth part of the socioeconomic analysis, which is an examination of the characteristics of, and potential effects to, each of Southeast Alaska's 32 communities (Id.).

Decision

After my review of the record, I find that the Regional Forester's decision was in compliance with NEPA. The Regional Forester adequately addressed the issue of subsistence as a regional economic issue. I also find that he did not misrepresent the long-term value of a high-volume timber program. The Regional Forester recognized the economic transition occurring in southeast Alaska.

However, based upon my review, I have determined that there was a need to modify the provisions of the 1997 Forest Plan to better address social and economic issues. The protections that I have added in the enclosed ROD further address the economic transition occurring in southeastern Alaska (refer to Appendix B of the enclosed ROD). With regard to the timber sale program I have established an average annual ASQ of 187 million board feet to account for: a) increasing from 100 to 200 year rotation within 42 WAA's; and b) changing 18 specific areas from LUD's that allow development, including timber harvesting, to mostly natural LUD's. It should be noted that this ASQ is sufficient to meet all anticipated timber harvest scenarios according to the Forest Service's demand report (Gen. Tech. Rep., PNW-GTR-409) (1999 ROD). Furthermore, as stated in the Subsistence section of this appeal decision, I have increased opportunities for subsistence.

Watershed/Fisheries

The appellants contend that "[t]he Revised Tongass Plan does not fully incorporate all the recommendations of the Anadromous Fish Habitat Assessment Report" (NOA #0101, p. 118) and that the "Revised Tongass Plan fails to assure protection for Tongass watersheds as required by NFMA" (NOA #0101, p. 141). The appellants further contend that ". . . the Forest Service has failed to assure that approved management practices will not 'seriously and adversely affect water conditions or fish habitat' 36 CFR 219.27(e)" (NOA #0101, p. 147; NOA #0108, pp. 72-74).

Discussion

In response to appellants allegations that the Revised Tongass Plan fails to assure protection for Tongass watershed (NOA #0101, p. 141), the Regional Forester addressed the concern that, many reviewers of the RSDEIS recommended a higher level of protection, referred to in that document as "option 1." Others suggested that stream protection measures need to be increased. The State of Alaska recommended a different methodology be used to identify watersheds with the highest fisheries values (1997 ROD, p. 18).

To best respond to all these concerns, the Forest concluded that distinguishing high-value watersheds from lower-value ones posed a significant analytical and administrative problem. A decision was made to develop new riparian management direction for the FEIS that would apply to all watersheds across the Forest, wherever land-disturbing activities are allowed (1997 ROD, p. 18). Another decision was made to incorporate all the recommendations made in the AFHA report for additional protection, because AFHA is the most comprehensive and credible scientific review of the measures needed to protect fish habitat on the Tongass (1997 ROD, p. 18; RS-G-8-i TLMP 314).

The S&G's and other direction of the 1997 Forest Plan meet or exceed all of those recommendations by AFHA, and include some of the features of option 1. These S&G's will be applied in all

watersheds on the Forest, and are sufficient to protect fish habitat and provide for sport and commercial fisheries and subsistence (1997 ROD, p. 18; 1997 Forest Plan, pp. 4-8 through 4-12).

Water quality and state water quality requirements will be maintained and improved. The discussion of water quality and beneficial uses contained in the FEIS (pp. 3-323 and 3-56 through 3-73; 1997 ROD, p. 38). Examples include the beach and estuary fringe areas, riparian buffers, and road design requirements. Additionally, project level analysis for subsequent activities under the 1997 Forest Plan will be required to demonstrate compliance with Clean Water Act and State water quality standards.

As stated in the FEIS (p. 3-71), for most alternatives, the natural range of variation in stream processes and fish habitat will likely be negatively affected by management activities over the long term. The extent of harvest activity and associated road development are likely to result in decreases of some fish populations in managed watersheds. Measures taken to mitigate, or moderate, the negative effects have been incorporated into the alternatives in ways to provide differing levels of risk to the fisheries resource. Both Alternatives 3 and 11 apply option 2 or higher riparian protection to all watersheds and therefore provide less risk to fish and stream channel processes than other alternatives. Alternative 11 (1997 Forest Plan) has the highest level of protection of fish and riparian resources, with the exception of Alternative 1, which has no timber harvest or road construction scheduled.

Forest-wide S&G's for the soils resource are used in all alternatives (see 1997 Forest Plan, Chapter 4), and will apply to all site-specific projects. Forest-wide S&G's are followed to mitigate the effects of management activities. They are designed to minimize accelerated soil erosion and maintain long-term soil productivity. They include soil conservation practices and incorporate the applicable BMP's (see Appendix C of the 1997 Forest Plan). Annual monitoring of BMP's helps ensure that water quality goals, and S&G's, are met during project implementation (see 1997 Forest Plan, Chapter 6; FEIS, p. 3-201)

For the Water Quality Management Plan, the State of Alaska (Department of Environmental Conservation) and the Forest Service have agreed that the Forest Service is the agency responsible for monitoring and protecting water quality on the National Forest System lands in Alaska, for the purposes of the Clean Water Act, as amended. The BMP's as prescribed in the Soil and Water Conservation Handbook (FSH 2509.22), the Alaska Non-point Source Pollution Control Strategy, and the Alaska Water Quality Standards (18 AAC 70) together form the "Forest Service Alaska Region Water Quality Management Plan", as agreed to in the Memorandum of Agreement dated April 6, 1992 (ADEC and USDA Forest Service, 1992). With implementation of this 1997 Forest Plan, the State recognizes that the Forest Service BMPs are the primary means to protect water quality from non-point sources of pollution (FEIS, p. 3-314).

Decision

After my review of the record, I find that the Forest did fully incorporate all the recommendations of the Anadromous Fish Habitat Assessment Report. The Tongass Plan assures protection of it's

watershed, and is in compliance with the NFMA regulations. In his 1997 ROD, the Regional Forester concluded that water conditions and/or fish habitat will be maintained or improved.

In addition, the standards that I have strengthened in the enclosed 1999 ROD (Fish Habitat section) will further enhance protection for watersheds and fisheries.

FORPLAN

The appellant contends that "[c]ontrary to agency claims in the FEIS and Plan, the Tongass timber program is not profitable and the proposed timber program will continue to lose money" (NOA #0101, p. 129) and that "[t]he FEIS fails to provide the public or decision-maker with 'an adequate basis for identifying the alternative that comes nearest to maximizing net public benefits.' This is a violation of Section 219.12(f) of the planning regulations" (NOA #0101, p. 131).

Background

FORPLAN is a linear programming model used by the Forest Service in the development of NFMA forest plans. Each National Forest unit developed a specific FORPLAN model to assist in forecasting effect of management scenarios. It mathematically evaluates the most efficient way to achieve specific objectives, given available resources and production possibilities. Most FORPLAN models were designed to accomplish two major tasks: 1) to help forest planners and managers analyze the economic and production trade-offs among the multiple uses for which forests are managed and 2) to help evaluate the extent to which various alternative plans or scenarios are able to address and resolve the identified issues, concerns, and opportunities.

The major purpose of the FORPLAN model is to provide insight into the behavior of multiple resources and their interactions, and to improve the decisionmaker's understanding of the potential consequences before the selection of any particular management direction. Thus, the model provides information; it does not make decisions. FORPLAN and other models are used to process the large quantities of data that exist concerning the various multiple uses on a National Forest, and to help make some projections of the effects of management prescriptions and practices. However, not all of these projections are made by FORPLAN. Some estimations or calculations are made outside of FORPLAN. It is the job of Forest Service line officers and interdisciplinary teams to make judgments as to how, and to what extent, the model results will be used in the development of forest plan alternatives. It is critical to remember that it is the subsequent establishment of S&G's and assignment of management area direction that are the heart of forest plans. The models exist so that agency professionals can exercise their judgement in an informed manner. The final decision on approving a forest plan is made within a social, historical, political, and legal context relative to the required criterion of maximizing net public benefits (36 CFR 219.1 (a)).

The U.S. District Court of California has considered and rejected a claim that the use of FORPLAN was improper. The court stated that "the methodology used by the Forest Service in developing the Plan was a computer program called FORPLAN." Plaintiff challenges this methodology and its "underlying analytical methods and mathematical tools." However, in passing judgment on an agency's methodologies, courts "must defer to a great extent to the expertise of the agency" (Griffin v. Yeutter, 20 ELR 20400 (S.D. Ohio 1994); Nevada Land Action Ass'n v. United States Forest Service, 8 F.3d 713, 718 n.6 (9th Cir. 1993); Resources Ltd., Inc. v. Robertson, 789 F. Supp. 1529, 1539 (D. Mont. 1991), affirmed, 8 F.3d 1394 (9th Cir. 1993)). FORPLAN is a widely recognized and respected planning tool generally accepted in the professional community.

Discussion

The appellants contend that the agency claims in the FEIS and Plan, that the Tongass timber program is not profitable and the proposed timber program will continue to lose money (NOA #0107, p. 129). Tongass National Forest net revenues are roughly equivalent to the timber cash receipts discussed in the budget section on forest receipts and payments to Alaska except that in this case Forest Service administration and sale preparation costs are subtracted as an additional expense. These net revenues were derived for each decade in the 160 year planning horizon using the FORPLAN harvest scheduling model. Future revenues were discounted at four percent using 1996 as a base year and assuming full implementation of the given alternative beginning in 1997. All estimates are based on the assumption that the total ASQ is harvested. The results are shown in the first row of Table 3-151. In general, alternatives with higher ASQ levels show higher present net value (PNV) estimates. In some cases, an alternative with a lower ASQ may have a higher PNV due to lower-costs associated with timber harvest, as seen in the comparison of Alternatives 10 and 11. While these timber intensive alternatives project lower, or even negative, net revenues in latter decades (after 2050) due to the influx of lower grade second growth logs, the effect of the four percent discount rate serves to emphasize the near term over the long-term. Since the sale of timber constitutes the sole source of revenue used in this stage of the analysis, Alternative 1, in which virtually no timber is harvested, shows a zero PNV. Alternative 7, on the other hand, shows a \$1.3 billion PNV, and the other alternatives are distributed between these two extremes. No additional analysis for Non-interchangeable Component 1 (NIC1) only timber harvest has been done, the magnitude of the PNV would be less but, the trend between alternatives would be similar (FEIS, pp. 3-502 to 3-503).

As stated by the Regional Forester, some respondents expressed concerns that the ASQ is based on the ability to harvest timber on economically marginal lands, as well as economically profitable lands, yet the actual harvest has been derived disproportionately from the more economical lands, leaving the economically marginal lands unharvested. These more economical lands are also of great importance to wildlife (1997 ROD, p. 25).

To help address this, the ASQ has been subdivided into two separate NIC's called NIC I (which is 2.2 billion board feet of timber per decade) and NIC II (which is .47 billion board feet per decade). The reason these components are called non-interchangeable is that lower sale levels in one component may not be compensated for by higher sale levels in the other. The separate limits on each component are binding (1997 ROD, p. 25; FEIS pp. 2-20, 3-280 through 3-281).

*The NIC I component includes land that can be harvested with normal logging systems. Historically, most of the NIC I component has been economical for timber purchasers; about 93 percent of the timber program has come from this component. The NIC II component includes land that has high logging costs due to isolation or special equipment requirements. Historically, about seven percent of the timber program has come from this component. (*Id.*)*

According to the Regional Forester, "[t]he timber sale program in the Forest Plan places a higher reliance on the NIC II component than in the past. About 80 percent of the ASQ comes from NIC I land and about 20 percent comes from NIC II. Based on history, we expect that the NIC I component will generally have harvesting costs that can be borne by most purchasers. However, depending on the market, much of the NIC II component may not be economically feasible to harvest. Subdivision

of the ASQ into components is intended to ensure that the lower-cost NIC I lands are not over-harvested if this proves to be the case" (1997 ROD, p. 26).

The NIC I and NIC II estimates are based on best forest-wide data available. This data will be updated during the implementation of timber sale projects, and it is reasonable to expect that project level analysis will produce more accurate results. The volume offered from NIC I and NIC II components will be tracked carefully during project implementation. The Forest Supervisors will also review the accuracy of the planning information used to allocate the ASQ between the two NIC s during the first year of plan implementation. If the data from these analyses indicate a need to make adjustments, the Forest will do so (1997 ROD, p. 26).

Further discussion regarding the ASQ and NIC for the various alternatives can be found in the FEIS (p. 3-295):

The ASQ s, and NIC I ASQ components, of Alternatives 2-3 and 6-11 are all capable of meeting the estimated lumber demand for the next decade (medium scenario). Alternatives 1, 4 and 5 have neither an ASQ or NIC I component capable of meeting the projected demand. Using the low demand scenario (see page 3-262, as updated), which would be a 68 MMBF average for the next decade, these three alternatives still do not meet demand except for Alternative 4 at full ASQ. Using the high scenario (154 MMBF average), only Alternatives 2, 7 and 9 would meet demand only at the full ASQ level. Using this high-end estimate, Alternatives 1, 3-5 and 11 would not be capable of meeting demand with either component.

The appellants contend that the FEIS fails to provide the public or decision-maker with an adequate basis for identifying the alternative that comes nearest to maximizing net public benefit (NOA #0101, p. 131). As stated previously, the purpose of the FORPLAN model is to provide insight into the behavior of multiple resources and their interactions and to improve the decisionmaker's understanding of the potential consequences before the selection of any management direction. The purpose of Appendix B is to present a discussion of the analytical processes and models used in the planning process. Due to the magnitude (17 million acres) and complexity (25 LUD's proposed) of the planning process, a number of analytical models were used. The discussion includes basic assumptions, modeling components and inputs, rules, methods, and constraints used. This information supplements the broader, less technical descriptions included in the body of Chapter 2 and 3 of the FEIS (FEIS Appendix B).

Alternative development and analysis is discussed in Appendix B of the FEIS (p. B-6). Public issues, resource opportunities, and management concerns were the major elements used to reassess the management situation and to identify potential changes. All of the analysis and accounting for activities unrelated to timber harvest are taken care of within the Tongass GIS database. Appendix B lists some the commonly used GIS coverages (42 layers are listed).

There was sufficient information that went into the Forest's FORPLAN modeling and analysis, which was available for the Regional Forester to make a reasoned decision. See Appendix B of the FEIS for a thorough explanation of the modeling process.

Decision

After my review of the record, I find there was adequate information and analysis for the Regional Forester to make a reasoned decision on maximizing net public benefits. The Forest is in compliance with the planning regulation at 36 CFR219.12(f). I affirm the Regional Forester's decision. Nothing in the enclosed 1999 ROD affects the 1997 ROD on this issue.

Forest-wide Standards and Guidelines

The appellants contend that the "Forestwide standards and guidelines for Threatened, Endangered, and Sensitive species and Wildlife contained in the 1997 TLMP are extremely weak and clearly insufficient" (NOA #0105, p. 14) and that ". . . there is no discussion or evidence presented that mitigation measures presented in the Forest Plan will be suitable or effective to ameliorate unavoidable adverse effects of timber harvest and management. The USFS is required to present evidence that mitigation measures will be effective" (NOA #0105, p. 15).

Discussion

The NFMA planning regulation 36 CFR 219.11 (c) requires a forest plan to contain "multiple-use prescriptions and associated standards and guidelines for each management area including proposed and probable management practices . . ." The S&G's provide protection for the land and its resources in order to maintain healthy, whole, sustainable ecosystems over time. They set the bounds within which management prescriptions are formulated.

The NFMA requires the Secretary of Agriculture to specify "guidelines for land management plans developed to achieve the goals of the Program which provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to met overall multiple-use objectives" (16 U.S.C. 1604(g)(3)(B)). In accord with this diversity provision, the Secretary promulgated a regulation that provides in part: "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area" (36 CFR 219.19).

Panel evaluators were instructed to evaluate the effect that implementation of Forest Plan alternatives 1, 2, 5, 9, 10, or 11 for 100 years would have on the abundance and distribution of habitats suitable to support well distributed and persistent populations of species assessed. In addition, panel evaluators were asked to appraise features used to construct alternatives (e.g. reserves, beach buffers) as to their contribution to maintaining habitat for species assessed. These qualitative appraisals of specific features and the panel discussions were used by the authors of the written summaries prepared for each panel, to interpret the quantitative evaluation of alternatives as indicated by the assignment of likelihood points by outcome and to identify important ecological considerations (FEIS Appendix N, p. 2). The viability analysis conducted for the Tongass shows that all species will maintain viable populations (FEIS, pp. 3-46 through 3-73, 3-351 through 3-429; Appendix N; 1997 ROD, pp. 32- 36).

Consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service reviewed the Biological Assessment for the Threatened and Endangered species under their regulatory jurisdiction and concluded that the 1997 Forest Plan was "not likely to adversely affect"

threatened or endangered species occurring on the Tongass National Forest (1997 ROD, p. 39; FEIS Appendix J).

In response to concerns regarding "weak and clearly insufficient" S&G's for T, E, and S species, the Regional Forester stated:

"In determining compliance with the NFMA fish and wildlife resource regulation, I have considered existing and reasonably foreseeable conservation measures. In addition to the Plan's land allocations and standards and guidelines, other possible measures include activities undertaken pursuant to internal policy directives (e.g., the Forest Service's sensitive species program) and steps taken during project planning. Moreover, interagency efforts may suggest additional conservation measures."

"In reaching this decision, I also have considered the standards and guidelines that were developed specifically for Alternative 11 after consideration of the results of the risk assessment panels for selected species, conducted in March and April of 1997. The added measures strengthen the forest-wide standards and guidelines for the Queen Charlotte goshawk, the American marten, and endemic mammals, plus connectivity of old-growth forest among large and medium old growth habitat reserves and other natural setting LUDs. These additional standards and guidelines, which are discussed in Appendix N of the FEIS, are designed to contribute to the viability of these species" (1997 ROD, pp. 31-32).

Forest-wide S&G's have been developed to protect the threatened, endangered and sensitive species and/or their habitat, found on the Tongass. A discussion of the environment and potential effects to the TE&S species can be found in the FEIS (pp. 3-230 through 3-147). A listing of those Wildlife S&G's can be found in the FEIS Appendix J, as well as in the 1997 Forest Plan (pp. 3-76 to 3-82, 4-4 to 4-5, 4-8 to 4-12, 4-53 to 4-73, 4-88 to 4-93 and 4-112 to 4-122).

Appendix N of the FEIS provides a summary of additional analyses pertaining to the wildlife habitat conservation measures of FEIS alternatives, with emphasis on the old-growth habitat conservation strategy adopted for the 1997 Forest Plan (FEIS Alternative 11). Included are an explanation and overview of a second set of panel assessment meetings held in March and April 1997, a comparison of the results of these panels with the analysis contained in Chapter 3 of the FEIS, and discussions of how this and other information was used in strengthening the 1997 Forest Plan (Sections II and III of this appendix). Section IV is a detailed analysis of the old-growth forest habitat conservation strategy of the 1997 Forest Plan; how it was developed, its relationship to other proposed strategies, and its effectiveness in providing the amount and distribution of habitat sufficient to maintain viable and well distributed wildlife populations of old-growth associated species across the Tongass National Forest. Section IV also contains additional evaluations of the viability strategies for the Alexander Archipelago wolf and Queen Charlotte goshawk. Section V lists all references cited (FEIS Appendix N).

There were many comments to the Draft regarding S&G's, and whether they were sufficient to maintain viable populations, or suitable or effective to ameliorate adverse effects of timber management activities (FEIS Appendix L, pp. L-206 through L-214). In response the Forest stated:

"The Forest-wide standards and guidelines are intended to provide direction and guidelines to individual projects for avoiding or minimizing effects on resources Forest-wide. Land use designation standards and guidelines provide ways to avoid or minimize effects on resources consistent with the goals and objectives of that individual land use designation. They are not used to meet area-wide types of objectives (such as population objectives or the amount of habitat to maintain), although they will often help attain such objectives" (FEIS Appendix L, p. L-203).

*Implementation of the 1997 Forest Plan will take place through project-level decisions which must be within the bounds of the programmatic framework (1997 ROD, p. 40). As stated in the 1997 Forest Plan, implementation is "accomplished through the recurrent identification of proposed actions . . . consistent with activities anticipated in the Plan; the analysis and evaluation of such actions . . . ; related documentation and decisionmaking; and project execution and administration, in a manner that is consistent with the management direction of the Plan" (1997 Forest Plan, p. 5-1). Thus, the 1997 Forest Plan standards operate as parameters within which projects must take place. Approval of any project must be consistent with the management standards. If a project cannot be conducted within these parameters, these safeguard mechanisms in the Forest Plan will prevent such development from going forward (see *Swan View Coalition v. Turner*, 824 F.Supp 923, 933 (D. Mont. 1992)).*

The Regional Forester stated, "[d]ecisions on site-specific projects are not made in this document" (1997 ROD, p. 43). He further noted, "[d]ecisions on proposed projects will not be made until completion of environmental analysis and documentation for the specific project, in compliance with the National Environmental Policy Act" (1997 ROD, p. 43). Thus approval of the 1997 Forest Plan does not mandate any project decisions. Each project or activity must be consistent with the programmatic environmental protection direction in the Revised Plan (16 U.S.C. 1604 (i)).

Decision

After my review of the record, I find that the forest-wide S&G's for threatened, endangered and sensitive species will be effective in providing protection for those species found on the Tongass National Forest, for all proposed and probable management practices.

However, based upon my review, I have determined that there was a need to modify the provisions of the 1997 Forest Plan to better address potential environmental risk and to further enhance habitat protection for certain species. Therefore, I have added (enclosed in Appendix B) and modified S&G's to reduce the risk of potential environmental harm and provide more protection to selected areas of the Forest. This new direction includes: a) increasing timber harvest rotation from 100 to 200 years in 42 WAA's for deer habitat and subsistence concerns; b) reducing road density to improve wolf viability and c) changing development to mostly natural LUD's in 18 Areas of Special Interest.