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Tongass Land Management

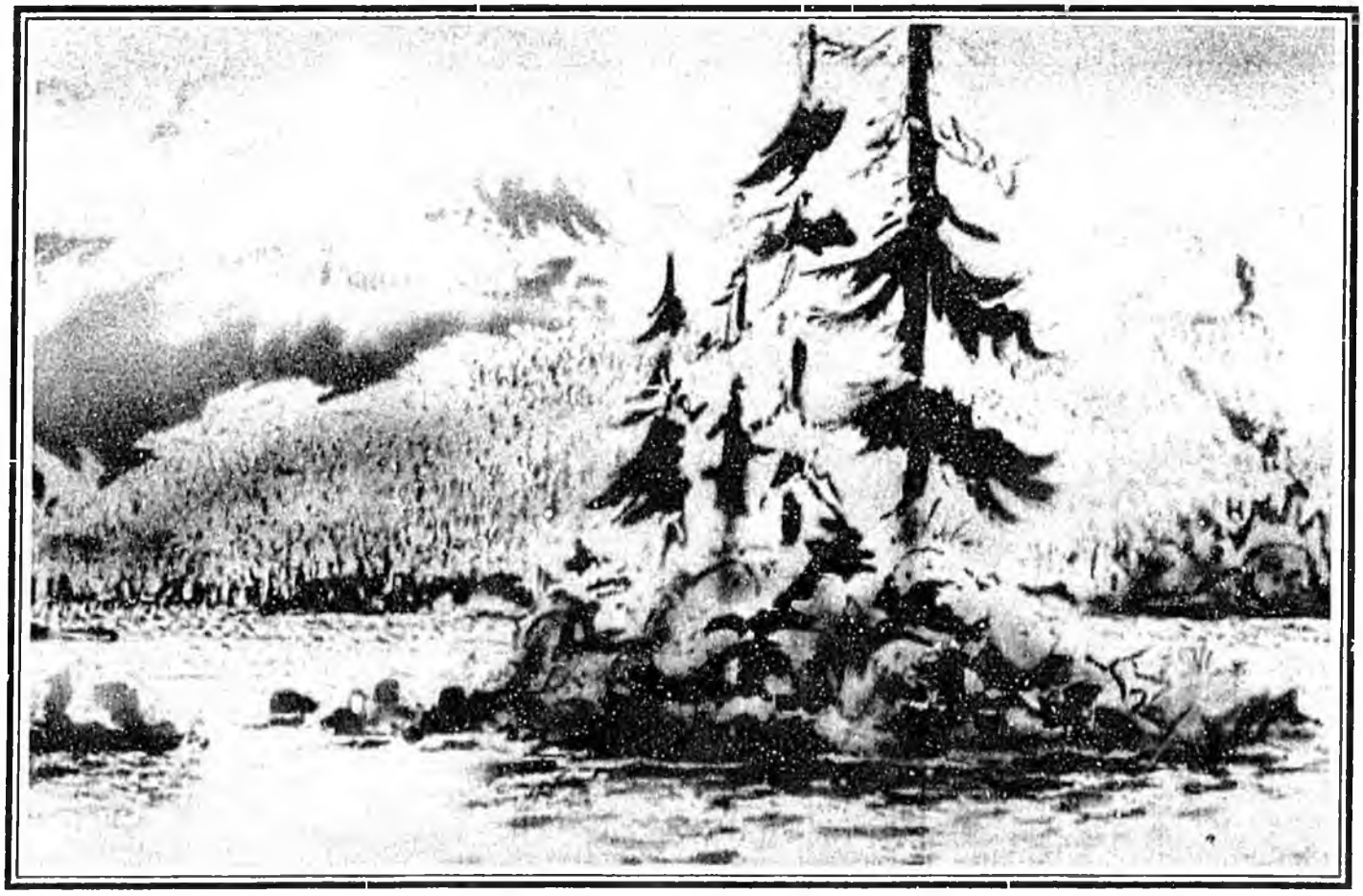
Tongass Forest Plan Review

A Newsletter for the Forest Plan Revision - Issue 12
April 1996

Summary

Revised Supplement to the Draft Environmental Impact Statement

Tongass Land Management Plan Revision



Tongass Forest Plan Review

A Newsletter for the Forest Plan Revision - Issue 12
April 1996

This extended issue of the Tongass Review is a summary of the Revised Supplement to the Draft Environmental Impact Statement for the Tongass Land Management Plan Revision (hereinafter called the "Revised Supplement"), which is now out for public review. In 1994 the Revision process began to focus on specific unresolved issues, and this led to completion of several science assessments and resource reports, the development of preliminary alternatives and their presentation at public meetings, and the holding of a number of scientific panel assessment meetings. The Revised Supplement is the latest step in this process, presenting the Proposed Forest Plan and the environmental analysis required by the National Environmental Policy Act.

Introduction

Land and resource management planning is a process for developing, amending, and revising National Forest land and resource management plans (forest plans). Forest plans are required by the National Forest Management Act of 1976 (NFMA). Each forest plan is intended to guide the management of a National Forest for a 10-15 year period, after which a formal revision is required.

Contents of the Newsletter

The 17-million acre Tongass National Forest, the largest forest in the National Forest System, was also the first to complete a Land and Resource Management Plan under the National Forest Management Act. The original Tongass Forest Plan was approved in 1979, and has been amended twice (in 1986 and 1991). The first revision of this plan is now being considered. The Revised Supplement is the third release under the National Environmental Policy Act of a public review draft displaying Forest Plan alternatives and their estimated effects.

A draft environmental impact statement (DEIS) documenting the environmental analysis for this revision was released for public review in June 1990. In November 1990, Congress passed the Tongass Timber Reform Act (TTRA). This Act imposed several new requirements for management of the Tongass. This affected the Forest Plan and resulted in the preparation of a Supplement to the DEIS (SDEIS), which was released in August 1991, and which entirely replaced the DEIS. The release of a final statement (FEIS) and Record of Decision was anticipated for early 1993, but was deferred so that additional information necessary to making a decision could be obtained. The Revised Supplement is a supplement to the 1991 SDEIS.

Public Issues

Ten public issues for the Forest Plan Revision were originally identified in 1988. These were used for the 1990 DEIS, and remained the same, with some updating, for the 1991 SDEIS. The topics covered by these issues included *scenic quality, recreation and tourism, wildlife and fish habitats, subsistence uses and resources, timber harvesting, roads, minerals, roadless areas, wild and scenic rivers, and local (community and regional) economies.* The 1991 SDEIS displays in detail how these issues were addressed.

Since the release of and comment period on the 1991 SDEIS, considerable new information bearing on the Tongass Forest Plan Revision has come to light, including additional scientific reviews and studies, new or updated resource inventories, and comments and reports from interest groups and individuals. From this information emerged five issues needing more study and evaluation before a final Revised Forest Plan could

be adopted. Some of these issues are aspects or extensions of the original issues; others are new issues. The five focus issues are now described.

Wildlife Viability. This issue centers on questions of whether the current Forest Plan, or the alternatives considered for revising the Forest Plan (in either the 1991 SDEIS or the unpublished draft FEIS of 1992), provide for sufficient habitat to maintain viable, well-distributed wildlife populations within the Tongass National Forest. Early in 1993, the Alaska Regional Forester requested a scientific peer review of a wildlife viability strategy recommended by an Interagency Viable Population Committee, and other information related to wildlife viability in Southeast Alaska. The peer review concluded (in March 1994) that a strategy like that recommended by the Committee went further in ensuring habitat to maintain long-term distribution of viable populations of wildlife than the (1992) Revision alternatives, but that more study and information was necessary, and other methods and approaches needed consideration.

Maintaining options for habitats for viable wildlife populations was considered in developing the Fiscal Year 1994-95 timber sale/timber offerings schedule for the Tongass, and was followed by public release and review of a proposed Forest Plan amendment to further address short-term habitat concerns related to wildlife distribution and viability. Early in 1995 the U.S. Fish and Wildlife Service, in decisions on petitions for listing of two species (northern goshawk and Alexander Archipelago wolf) in Southeast Alaska under the Endangered Species Act, concluded that while neither species was found in need of listing at this time, future viability was a concern, and implementation of a further habitat strategy would be an important factor in deciding not to list in the future.

Fish Habitat. The Alaska Anadromous Fisheries Habitat Assessment (AFHA) was conducted in 1994, at the direction of Congress to study the effectiveness of current procedures for protecting anadromous fish habitat, and determine if any additional protection was needed. This assessment concluded that current measures and their implementation, though considerably improved over past practices, were not fully effective for preventing habitat degradation or protecting salmon and steelhead stocks in the long term. AFHA included recommendations to consider for the Tongass Plan Revision, and additional recommendations were made by the team that conducted the on-the-ground analysis for AFHA.

Karst and Caves. The extent and importance of the cave resources of the Tongass have only come to light recently. The 1991 SDEIS considered caves, and included some recognition of the "karst" geology in which they are typically found, in Forest-wide standards and guidelines, and through a proposed Karst Areas Geological Area. More recent studies and surveys have indicated a more extensive resource of world-class significance, and the need to consider improved standards and guidelines. Several recent timber sale projects in karst areas have identified a similar need.

Alternatives to Clearcutting. Commercial timber harvest in the Tongass National Forest has traditionally relied on one even-aged silvicultural system, clearcutting. This system has proven very successful in Southeast Alaska. On the other hand, clearcutting continues to be controversial; in Southeast Alaska, the principal objections are to the visual changes in the landscape, and potential adverse effects to streams, slope stability, and loss of old-growth forest, particularly as habitat for wildlife. Since the 1991 SDEIS, the Forest Service's Ecosystem Management policy has come out, which includes a strong emphasis on limiting the amount of traditional clearcutting, and on using alternative silvicultural systems.

Socio-economic Considerations. The socio-economic environment of Southeast Alaska and its relation to the resources and uses of the Tongass has undergone some significant changes in recent years. Since the 1991 SDEIS, the timber industry has seen the permanent closure of one of two major pulp mills (the Alaska Pulp Corporation mill in Sitka), closures of two sawmills, the development of several new small mill operations, and the termination in 1994 of one of two long-term sale contracts. The need to address habitat for wildlife distribution and viability has led to some reductions in timber sale offerings, and other potential sales have been delayed through legal action. At the same time, timber harvest volumes from private lands have dropped substantially since 1990.

The timber industry is not the only economic segment undergoing change. For instance, the tourism industry continues to see rapid growth, indicating a need to better reflect tourism needs and concerns through specific management direction and improved inventories. An extensive update of the social and economic settings and concerns of the 30+ Southeast Alaska communities became necessary in order to have the best information on local uses of, and economic ties to, the Tongass, and to better understand what each community itself desires from the Tongass National Forest.

What a Forest Plan Includes

Land management planning may be compared to city, county or borough zoning. Just as areas in a community are zoned as commercial (allowing business uses), industrial (allowing factories), or residential (allowing only homes, schools, etc.), the forest is also "zoned" to allow, or not allow, various uses and activities. Land management (forest plan) zoning is done through the use of land use designations.

Land use designations (LUD's) specify ways of managing an area of land and the resources it contains. LUD's may emphasize certain resources (such as Wilderness, or old-growth wildlife habitat), or combinations of resources (such as providing for scenic quality in combination with timber harvesting). Each land use designation has a detailed management *prescription* which includes practices and standards and guidelines.

Practices are specific actions or treatments used in the management of forest resources, such as even-aged timber harvest methods (clearcutting, for instance). Each management prescription specifies which practices are allowed to be considered for site-specific project proposals, and under what conditions.

Standards and guidelines, on the other hand, impose limitations on how, where, and when management activities are carried out, usually for specific resource protection purposes.

The land use designations are assigned, or "allocated," to specified areas of land. Some LUD's, such as Wilderness, are congressionally designated, but many can be allocated differently depending on the issue or issues being addressed. Under any one alternative, a given area of land will normally have only one LUD assigned to it.

The Alternatives, Including the Preferred

Nine alternatives are considered in detail in the Revised Supplement; an additional alternative, the Forest Supervisors' Preferred Alternative is identified and discussed in a cover letter to the Revised Supplement. Most of the alternatives are based on alternatives from the unpublished 1992 Final Environmental Impact Statement, which in turn were derived from alternatives in the 1991 SDEIS. The details of these relationships are discussed in the Revised Supplement. One reason that many of the original ten issues are not being revisited at this time is because they have been adequately addressed in the 1991 SDEIS. They were also addressed through alternatives contained in the unpublished 1992 FEIS, particularly in Alternative P, which was the preferred alternative at that time and which forms the basis for several of the new alternatives.

Options for Addressing the Issues. Information about the five focus issues just discussed has been combined with that used to develop the 1992 FEIS alternatives to create alternatives for detailed consideration in the Revised Supplement. For wildlife viability, information from several species assessments, an old-growth forest inventory, and other recent wildlife surveys and studies, was evaluated and synthesized to help identify ways in which adequate habitats to support viable wildlife populations could be provided. Four general approaches (each of which could include a variety of options or component parts) were identified:

1. A system of large, medium, and small old-growth reserves, or "habitat conservation areas," distributed across the forest, in which most management activities are restricted. Habitat corridors connecting reserves can be provided through beach fringe corridors, riparian areas and other measures.

2. Modifications to silvicultural harvest practices throughout the area of planned timber harvesting so that old-growth habitat characteristics, if not true old growth, are perpetuated or extensively achieved. These include "alternatives to clearcutting."

3. A combination of 1. and 2. could be used, such as using reserves in areas which have a history of extensive timber harvesting, and employing alternative silvicultural systems elsewhere.

4. Relying on existing withdrawn areas (such as Wilderness), areas to be managed for purposes other than timber harvesting, and other ways in which old-growth forest would be maintained (such as within riparian areas). This approach does not necessarily identify areas for protection based on specific wildlife habitat values, or their location and distribution across the Forest.

For considering fish habitat, three options for streamside (riparian) habitat management are available, all in the form of Riparian Forest-wide standards and guidelines. Option 3 is similar to the Stream and Lake Protection LUD used in the 1991 SDEIS (and, renamed Riparian Area, in the unpublished 1992 FEIS) for most alternatives. Option 2 basically represents the protection called for in the Anadromous Fish Habitat Assessment, providing greater protection than Option 3. Option 1, the most protective, incorporates additional measures over Option 2 to reduce the risk to fish habitat.

One of the three options available for karst and caves is contained in the Minerals, Geology, and Caves Forest-wide standards and guidelines from the 1992 draft FEIS. Along with caves these include some recognition of karst features, but not of karst as an ecosystem or unique system. The Karst and Cave Resources Assessment (1995) has used more and newer information, much of it from field studies, than was available in 1992, and has proposed in-depth, detailed Forest-wide standards and guidelines for Karst and Cave Resources. A third option is to apply cave protection measures only to the extent needed to comply with the Federal Cave Resources Protection Act, which provides for the identification and protection of significant caves.

Two alternatives to clearcutting, and one variation, are identified: uneven-aged management, which can be the harvest of individual trees or small groups of trees (although only experimental in Southeast Alaska so only incidental yields are expected); a system called "two-aged" management, which is designed to maintain and regenerate trees with two age classes but may trend toward uneven-aged conditions; and clearcutting that has planned future harvests occurring at longer time intervals than the minimum required by regulation. The time intervals for the clearcutting approach are called "rotation ages," signifying the age of a stand at the time it is harvested again. These can be extended from the current planned average rotation of about 100 years to rotations of 200 years or greater.

Alternatives have addressed socio-economic considerations in different ways. Alternative P from the 1992 FEIS emphasized several economically-important resources: recreation and tourism, minerals, subsistence, and timber. The land allocations of Alternative P were based on extensive internal analysis presented in the 1990 DEIS and 1991 SDEIS, and the public comments on those documents, to be responsive to a broad cross-section of the public. Providing a supply of timber sufficient to meet market demands is a goal. Alternative 2 in the Revised Supplement carries forward Alternative P. Alternatives 3-6, and the Forest Supervisors' Preferred Alternative, use Alternative P as a starting point. Another alternative considered in the 1992 FEIS and labeled there Alternative D++ was developed to offer the maximum opportunity for supplying timber. Alternative 7 is based on Alternative D++, and Alternative 8 uses it as a starting point. Alternative 9 is the current Forest Plan (which still has an annual allowable sawlog sale quantity of 450 million board feet). Recreation, tourism, and subsistence are emphasized in most alternatives. Commercial and sport fishing and hunting, through greater protection for important habitat elements, are positively addressed in Alternatives 1-6 and 8, and the Preferred Alternative.

Table 1 shows how many of the issue-related options have been included in the alternatives (including the Forest Supervisors' Preferred). (More options were used than are shown in the table or discussed above. These are discussed and displayed in the Revised Supplement.) The table also includes the ASQ for each alternative, and the NIC I and NIC II portions of the ASQ. Components and options are explained in the footnotes.

A Word on Timber Volumes and the "ASQ." The amount of timber that could be sold under a Forest Plan alternative is expressed as an "allowable sale quantity" (ASQ). The ASQ is the maximum amount of timber that may be sold from the area of suitable land covered by the Forest Plan within a given decade (although usually expressed in average annual terms). The ASQ is not a targeted amount. Many factors can result in timber sale offerings that are below the average annual ASQ, including Congressional budget constraints, new resource issues that need to be addressed, changes in timber markets, and sales held up by appeals or lawsuits.

In order to better address the uncertainties of timber markets and timber sale economics, the Revised Supplement expresses the ASQ in two parts, called non-interchangeable components, or "NIC's." The NIC I portion of the ASQ represents the amount that is projected to be economical to log, given ground conditions, market conditions, and available logging technology. The NIC II portion is that amount projected to be economically or technologically marginal to log. Harvest of the NIC II generally requires additional incentives for pre-roading and advanced logging system technology or improved market conditions.

One other point on timber volumes. In the past timber volumes have usually been expressed as "net sawlog," an estimate of the amount of wood usable for sawlogs. But a portion of harvested timber, typically about 15 percent, is usable for chips (though not sawlogs), and so the amount "sawlog plus utility" is a better representation of total usable wood volume. Throughout the Revised Supplement, and in this newsletter, timber volumes are expressed as sawlog plus utility, and will therefore average about 15 percent higher than most timber volume amounts shown in previous documents.

Table 1
Alternative Components and Options - Tongass Forest Plan Revision Revised Supplement

Component	Alternative 1	2	3	4	5	6	7	8	9	Preferred[1]
Base	1992 A	1992 P	1992 P	92 P	1992 P	1992 P	1992 D++	1992 D++	Current Plan	1992 P
OG Reserves	None	None	All	None	4 Prov.	4 Prov.	None	All	None	All
Rotation Age	200	100	100	200	200	100	100	100	100	100
Silv. System	UM	ES	UM, 2A	UM, 2A	UM, 2A	UM, 2A	ES	2A	ES	UM,2A,ES
Karst/Caves	K/C S&G	92 S&G	K/C S&G	K/C S&G	K/C S&G	K/C S&G	92 S&G	92 S&G	Cave Act	K/C S&G
Riparian:										
FHIP 1	Option 2	Option 3	Option 1	Option 2	Option 2	Option 2	Option 3	Option 2	TTRA/BMP	Option 2
FHIP 2,3	Option 3	Option 3	Option 2	Option 3	Option 3	Option 3	Option 3	Option 3	TTRA/BMP	Option 3
Beach Fringe:										
(0-500')	S&G	S&G	S&G	S&G	S&G	S&G	None	S&G	None	S&G
(500-1000')	UM	None	UM	UM	UM	UM	None	UM	None	None
Sale Quantity (average annual sawlog plus utility volume):										
ASQ (MMBF)	0	489	278	145	139	362	689	364	513	357
NIC I (MMBF)	0	406	232	121	114	300	577	305	474	297
NIC II (MMBF)	0	83	46	24	25	62	112	59	39	60
W&S Rivers	112	25	25	25	25	25	11	11	0	25

[1]This is the Forest Supervisors' Preferred Alternative. The ASQ figure assumes all two-aged management.

Abbreviations and Definitions:

S&G: Forest-wide standards and guidelines

Base: alternative, from 1992 draft FEIS or elsewhere, on which the alternative was initially based.

OG Reserves: All = application of old-growth reserve strategy forest-wide; 4 Prov. = old-growth reserves applied only to four biogeographic provinces.

Rotation Age: average length of time in years to next harvest.

Silv. (silvicultural) System : UM = uneven-aged management (single tree/group selection); ES = even-aged management (clearcutting); 2A = two-aged management (retention of 10-20% of trees per unit).

Karst/Caves: K/C S&G = lowest risk; 92 S&G = moderate risk; Cave Act = highest risk.

Riparian (level of riparian management): Option 1 = lowest risk; Option 2 = moderate risk (incorporates the AFHA report recommendations, as does Option 1); Option 3 = higher risk; TTRA/BMP (Tongass Timber Reform Act/Best Management Practices) = highest risk.

FHIP (Forest Habitat Integrity Project): FHIP 1 = higher quality watersheds for sport and/or commercial fish production. FHIP 2, 3 = moderate to less important watersheds for sport and/or commercial fish production.

Beach Fringe: standards and guidelines applied to the vegetation adjacent to saltwater shorelines. The 0-500' S&G typically excludes timber harvesting, and also applies to a 1,000' estuary fringe. The 500-1000' beach fringe, if used, would allow only uneven-aged silviculture.

Sale Quantity (average annual sawlog plus utility volume, in million board feet): ASQ = allowable sale quantity; NIC I = non-interchangeable component I (the more economic portion of the ASQ); NIC II = non-interchangeable component II (the less economic portion of the ASQ).

W&S Rivers: number of eligible rivers or river segments recommended as Wild, Scenic or Recreational Rivers.

The Nine Alternatives in the Revised Supplement. The basic themes of the nine alternatives are briefly stated here. Table 1 shows many of the key components of each, which are not repeated in these descriptions. The Preferred Alternative will be discussed following this listing.

Alternative 1. This alternative emphasizes National Forest resource uses and opportunities associated with undeveloped, natural settings. All geographic areas identified in public comments as deserving of protection, and all identified recreation places, are assigned natural setting land use designations. Alternative 1 allows uneven-aged timber harvesting in some areas, but does not schedule any harvest.

Alternative 2. This alternative provides a mix of National Forest uses and activities, including scenery, recreation, tourism, subsistence uses, and timber production. Alternative P from the unpublished 1992 Final Environmental Impact Statement for the Tongass Forest Plan Revision is the basis of this alternative.

Alternative 3. This alternative provides a mix of National Forest uses and activities similar to Alternative 2, with additional emphasis on fish and wildlife habitat protection and the karst and caves resource. A system of large, medium, and small old-growth forest reserves is added to Alternative P from the unpublished 1992 Final Environmental Impact Statement for the Tongass Forest Plan Revision.

Alternative 4. This alternative provides a mix of National Forest uses and activities similar to Alternative 2, with additional emphasis on fish and wildlife habitat protection and the karst and caves resource. The even-aged timber harvest of Alternative P from the unpublished 1992 Final Environmental Impact Statement for the Tongass Forest Plan Revision is replaced with two-aged and uneven-aged management.

Alternative 5. This alternative provides a mix of National Forest uses and activities similar to Alternative 2, with additional emphasis on fish and wildlife habitat protection and the karst and caves resource. The even-aged timber harvest of Alternative P from the unpublished 1992 Final Environmental Impact Statement for the Tongass Forest Plan Revision is replaced with two-aged and uneven-aged management using a 200-year harvest rotation. Large, medium, and small old-growth reserves are added in four biogeographic provinces.

Alternative 6. This alternative provides a mix of National Forest uses and activities similar to Alternative 2, with additional emphasis on fish and wildlife habitat protection and the karst and caves resource. The even-aged timber harvest of Alternative P from the unpublished 1992 Final Environmental Impact Statement for the Tongass Forest Plan Revision is replaced with two-aged and uneven-aged management using a 100-year harvest rotation. Large, medium, and small old-growth reserves are added in four biogeographic provinces.

Alternative 7. This alternative emphasizes an economic supply of timber from National Forest lands intended to meet Southeast Alaska timber industry demand. Alternative D++, an alternative considered but eliminated from detailed study in the unpublished 1992 Final Environmental Impact Statement for the Tongass Forest Plan Revision, is the basis of this alternative.

Alternative 8. This alternative emphasizes an economic supply of timber from National Forest lands, while also emphasizing fish and wildlife habitat protection and the karst and caves resource. A system of large, medium, and small old-growth reserves is added to Alternative D++, an alternative considered but eliminated from detailed study in the unpublished 1992 Final Environmental Impact Statement for the Tongass Forest Plan Revision.

Alternative 9. This alternative provides a mix of National Forest uses and activities while maintaining a supply of timber comparable to or greater than the last 15 years. This alternative is the current Tongass Land Management Plan (1979, amended 1986 and 1991).

The Preferred Alternative

The Forest Supervisors' Preferred Alternative is a variation of Alternative 3 described above. It also provides a mix of National Forest uses and activities similar to Alternative 2, with additional emphasis on fish and wildlife habitat protection and the karst and caves resource. A system of large, medium, and small old-growth forest reserves is added to Alternative P from the unpublished 1992 Final Environmental Impact Statement for the Tongass Forest Plan Revision.

The Preferred Alternative differs from Alternative 3 in several ways (see Table 1). Riparian Option 2 is used for the higher quality watersheds rather than Option 1, and Option 3 (rather than Option 2) for the rest. Special management of the extended beach fringe (500-1000 feet) and management direction related to deer habitat capability are not included. The allowable sale quantity is 357 MMBF annually for the first decade, and the NIC I ASQ component is 297 MMBF, assuming all two-aged management.

The Forest Supervisors used nine criteria to identify a Preferred Alternative, and discussed their rationale for the selection in a cover letter accompanying the Revised Supplement. The criteria and some of the accompanying reasons are listed here:

1. **Incorporate a habitat management strategy for wildlife viability.** The Preferred Alternative will maintain wildlife populations through a complex of large, medium and small old-growth habitat reserves laid out across the Tongass totaling over one million acres outside Congressionally designated areas. Also, the Preferred establishes a beach fringe of 500 feet and an estuary fringe of 1,000 feet in which no scheduled timber harvesting will occur; and where site-specific conditions allow, it uses two-age management in which 10-20 percent of the trees in each harvest unit would be left uncut to improve the habitat quality of second-growth stands in the future.

2. **Strengthen the riparian management direction.** The Preferred Alternative improves protection of watersheds with high fish values by incorporating recommendations of the Anadromous Fish Habitat Assessment (AFHA) report (Riparian Option 2). In other watersheds, management direction is also substantially expanded over current stream protection direction.

3. **Protect karst and cave resources.** The Preferred Alternative increases protection for vulnerable karst areas and caves through Forest-wide standards and guidelines that exceed the Federal Caves Resources Protection Act.

4. **Address resource-supply needs and socio-economic effects on local communities.** The Preferred Alternative has an annual average allowable sale quantity (ASQ) of 357 MMBF, of which 297 MMBF is projected to be economically feasible to schedule for harvest. Of the 297 MMBF, an estimated 261 MMBF is sawlog timber. It will meet 95 percent of the estimated market demand for timber from the Tongass over the next 10 years, and will supply enough timber for both the Ketchikan Pulp Company long-term sale contract and about 100 MMBF or more annually to independent timber purchasers. The Preferred also meets the needs of the mining and fishing industries and should not significantly affect the tourism industry.

5. **Protect special and unique areas.** The Preferred Alternative recommends 25 rivers for Wild, Scenic, or Recreational River designation totaling 431 miles. It protects 16 new Special Interest Areas with unique geologic, zoological, or botanical features totaling 173,000 acres.

Recommended Wild, Scenic, or Recreational Rivers of the Preferred Alternative

Chatham Area:	Dangerous River, Glacial River, Hasselborg River, Kadashan River, Katzehin River, King Salmon River. Lisianski River
Stikine Area:	Anan Creek, Blind River, Fall Dog Creek, Farragut River, Harding River, Kadake Creek, Kah Sheets Creek, LeConte Glacier, Marten Lake and Creek, Petersburg Creek, Santa Anna Creek and Lake, Virginia Lake and Creek
Ketchikan Area:	Blue River, Chickamin River, Naha River, Salmon Bay Lake & Stream, Sarkar Lakes, Thorne River -- Hatchery Creek

Proposed New Special Interest Areas of the Preferred Alternative

Arena Cove, Bailey Bay, Blind Slough, Blue River, Clear River, Duke Island, Falls Creek Windthrow, Fish Creek, Karst Areas, Keku Islets, Mt. Edgecumbe, N. Hamilton River, Patterson Glacier, Pike Lakes, Soda Bay, Ward Lake

Table 2
Land Use Designation Group Comparisons (million acres)

Alt.	Wilderness	Natural Setting	Moderate Development	Intensive Development
1	5.9	10.9	<0.1	0.2
2	5.9	5.8	1.7	3.6
3	5.9	6.7	1.3	3.1
4	5.9	5.8	1.7	3.6
5	5.9	6.1	1.5	3.5
6	5.9	6.1	1.5	3.5
7	5.9	3.0	1.5	6.6
8	5.9	4.4	1.4	5.3
9	5.9	4.9	2.3	3.8
Preferred	5.9	6.7	1.3	3.1

Wilderness, Natural Setting, Moderate Development, and Intensive Development are roughly equivalent to LUD's I, II, III, IV of the current plan.

6. **Incorporate input from within and outside of the Forest Service on previous revision proposals.** The Preferred is based on Alternative P from the unpublished 1992 FEIS, which was a modification, based on public comment and additional analysis, of the Preferred Alternative in the 1991 SDEIS.

7. **Meet the requirements of all laws governing management of the Tongass.**

8. **Maintain future options and allow for changes based on new information.** The Preferred Alternative provides for a research program to generate additional scientific data over the next 10-15 years. It has the flexibility to adapt forest management strategies based on new significant information.

9. **Be implementable.**

Comparison of Alternatives

Table 1 compares many of the key components of the alternatives, including the projected timber sale quantities. This section includes one other tabular comparison, and briefly discusses some potential environmental consequences of the alternatives in relation to the public issues, with an emphasis on the focus issues.

Table 2 summarizes the land use designation (LUD) allocations of the alternatives using "LUD Group" combinations. The four LUD Groups are Wilderness, Natural Setting, Moderate Development, and Intensive Development; they combine the individual LUD's in terms of similarities in management and/or potential effects. Wilderness, including the National Monuments, does not vary by alternative. Natural Setting generally includes most of the non-Wilderness LUD's that do not allow timber harvesting (such as Remote and Semi-remote Recreation, Old-growth Habitat, and Special Interest Areas). Moderate Development includes the two LUD's in which timber harvesting is done in a manner that considers recreation and scenic values (Modified Landscape and Scenic Viewshed). Intensive Development includes the Timber Production LUD.

The table can be used to make some general comparisons. Overall, those alternatives with higher acreages in the Natural Setting LUD group (remembering that Wilderness stays constant) will maintain more portions of the Forest in natural settings for dispersed recreation uses, high scenic quality, and undisturbed wildlife and fish habitats, including old-growth forest. Alternatives with higher acreages in the Moderate and Intensive Development groups will have more areas in a roaded and/or harvested condition, with a different kind of recreation setting, more visual disturbance, and more fragmented or altered habitats for wildlife. Between Moderate and Intensive Development, the more acres in the former group relative to the latter group, the less will be the effects on the natural condition of recreation settings and often seen scenic vistas. Generally, a more positive economic condition would exist with more acres in the development groups.

Wildlife Habitat and Wildlife Viability. The analysis of these issues in the Revised Supplement includes both short-term and long-term considerations. Potential short-term effects focus on areas within the Tongass that are currently experiencing, or may experience within the next decade, adverse effects due to losses of old-growth habitat, and where current levels of deer harvesting (hunting) may not be sustainable. Alternative 1 schedules no additional timber harvesting.

Alternatives 3, 5, 6, 8, and the Preferred Alternative include old-growth reserve systems in all or most of the major geographic areas of concern, and Alternatives 4 and 5 would reduce potential effects by using extended timber harvest rotations. Alternatives 3, 4, 5 and 6 also maintain important deer winter range in areas where deer harvesting is high, to provide continued deer hunting opportunities at current levels. Alternatives 2, 7 and 9 would be expected to increase existing problems. Subsistence use associated with deer hunting could be correspondingly affected.

In the long-term, the ability of several alternatives to maintain habitats adequate to sustain well distributed viable wildlife populations Forest-wide is a concern, as evidenced in the ratings from six wildlife species panel assessments. (As noted in the Revised Supplement, these ratings embody considerable uncertainty about wildlife and habitat interactions, and are better used for alternative comparisons than actual - or quantifiable - measures of risk.) The alternatives tended to cluster in groups, with Alternatives 1, 4 and 5 generally having the least expected risk to well-distributed viable wildlife populations, and Alternatives 2, 7 and 9 the greatest risk. In terms of maintaining conditions in the future that would be likely to sustain well distributed viable populations, Alternatives 2, 7 and 9 rated lowest, Alternatives 3, 6 and 8 somewhere in-between, and Alternatives 1, 4 and 5 highest. These relative ratings were fairly consistent between species overall. The Preferred Alternative was not available for the panel assessments; it likely would fall in the Alternative 3-6-8 group. Due to existing altered or degraded habitats, and their likely persistence over time, none of the Alternatives was considered free from some level of risk.

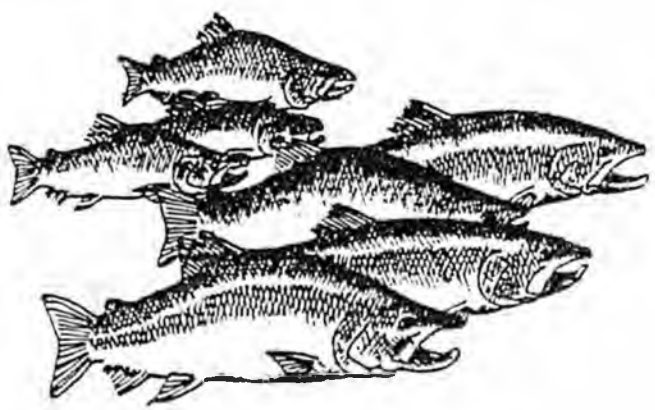
Fish Habitat. Most alternatives include combinations of three "Riparian Options" designed to minimize to various degrees potential adverse effects to fish habitat. Alternative 3 applies Option 1 (lowest risk) to the higher value watersheds, and is the only alternative applying Option 2 to other watersheds. Alternatives 1, 4, 5, 6, 8, and the Preferred Alternative use Option 2 for the higher value watersheds, and Option 3 for the rest. Alternatives 2 and 7 use only Option 3; Alternative 9 uses only current direction. All alternatives include minimum 100-foot no-harvest buffers on either side of anadromous and most other fish streams, and use Best Management Practices Forest-wide.

Beyond these riparian-area measures, risks to maintaining high-quality fish habitat come primarily from the amounts and methods of timber harvesting, and the associated amount of new roads constructed. These and other factors were considered by the Fish/Riparian panel. Their overall ranking of alternatives in terms of long-term risk to fish habitats Forest-wide, from lowest risk to highest, was:

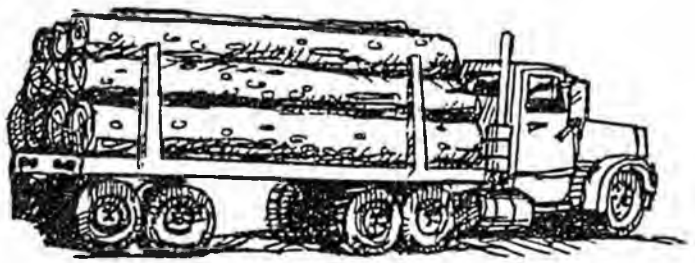
Alternatives 1, 5, 4, 3, 6, 8, 2, 9 and 7. The Preferred Alternative would likely rank similar to Alternative 6.

Noticeable short-term effects to fish habitat are most likely to occur in watersheds where past and near-term future activities are concentrated. This occurs most in alternatives with the highest levels of timber harvesting. These same alternatives project the greatest amounts of road construction over the next decade, and entry into more areas with steep slopes. Alternatives 2, 7 and 9 are distinctly higher in these categories, and also have the higher-risk riparian measures. They thus have higher short-term potential to adversely affect fisheries than the other alternatives.

Karst and Caves. All alternatives comply with the Federal Cave Resources Protection Act in protecting caves determined to be significant. However, most cave resources of the Tongass are part of an extensive limestone formation known as karst, which has complex relationships to water flows and forested lands. Fully protecting the cave resource requires a wider recognition of these karst areas. Special Karst and Caves Forest-wide standards and guidelines are applied in Alternatives 1, 3, 4, 5, 6, and the Preferred Alternative, and these alternatives are most likely to protect sensitive karst areas and the cave resource (still largely unexplored). Alternatives 2, 7, 8 and 9 have less protection, and also greater amounts of timber harvesting, and pose a higher risk to karst areas and caves.



Timber Harvest and Alternatives to Clearcutting. Projected timber harvest levels, as inferred from the ASQ's of the alternatives, range from no scheduled harvest in Alternative 1 to 689 MMBF in Alternative 7 (these and the following are all average annual amounts for the first decade). The NIC I portion of the ASQ is the amount considered likely to be economically viable over the next decade. Alternatives 2, 7 and 9 have a NIC I sale quantity higher than what has, on the average, been harvested annually over the last decade, and would be most likely to allow the timber industry in Southeast Alaska to operate at or above historic levels. Alternatives 6, 8, and the Preferred alternative are somewhat below this average, but have sufficient NIC I volumes to meet long-term timber sale contract requirements and supply a viable independent sale program. Alternative 3 is marginal in this regard. Alternatives 4 and 5 would probably not provide sufficient volume to meet long-term contract requirements, but could supply a viable independent sale program in the absence of such a contract. Alternative 1 has no scheduled timber harvest.



The Revised Supplement discusses the pros and cons of the different harvest methods, and describes the reasons for currently and historically relying on even-aged management, which has been very successful in regrowing forests across the Tongass. For Southeast Alaska there are many unknowns surrounding the silvicultural alternatives to clearcutting, and this translates into considerable uncertainty over their long-term success and effectiveness. This is a moot point for uneven-aged management, however, because this harvest method is generally not projected to be economically feasible. Only in Alternatives 2, 7 and 9, which all have substantial amounts of even-aged harvest, is a small amount of uneven-aged harvest scheduled (from areas where even-aged is not allowed).

Two-aged systems are used in Alternatives 3, 4, 5, 6, 8; and (where site-specific conditions allow) the Preferred Alternative. Alternatives 3, 6, 8, and the Preferred Alternative combine two-aged systems with 100-year rotations; Alternatives 4 and 5 combine the two-aged systems with 200-year rotations. The differences in sale quantities among these combinations can be seen in Table 1. Using two-aged rather than even-aged management with a 100-year rotation results in about 20 percent less timber volume scheduled for harvest; using a 200-year rotation instead of 100 years, with all else being equal, results in a drop of over 60 percent in harvest volume. Besides the reduced timber volumes from two-aged harvest, the ultimate success of this method is not assured, nor have the anticipated benefits to wildlife and diversity been tested. The use of this method instead of clearcutting did not appear to influence the wildlife-related panel assessment ratings.

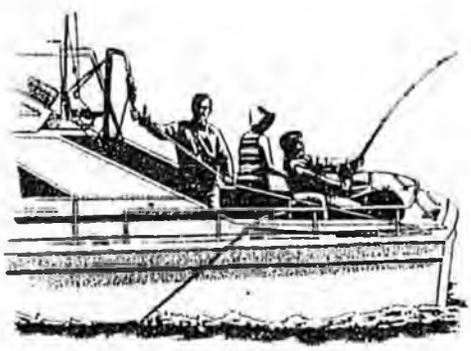
Socio-economic Considerations. The analysis of social and economic effects in the Revised Supplement includes an examination of regional (Southeast Alaska) industry and employment impacts, and a more qualitative look at potential effects to each of Southeast Alaska's 30+ communities (including effects 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. There is a fairly direct, linear relationship between the allowable sale quantity of an alternative and the timber jobs that could result from the harvest of that quantity. However, for alternatives with sale quantities (ASQ or the NIC I portion of ASQ) insufficient to keep a known mill operation in business, offering sales below that amount would not necessarily provide employment. Alternatives 2, 7 and 9 all have allowable sale quantities adequate to support an increase in timber-related employment over the next decade. Alternatives 6, 8, and the Preferred Alternative show a slight decrease, and the other alternatives progressively more of a decrease (Alternative 3, followed by 4 and 5, followed by 1).

Employment in the recreation and tourism sectors (considered together in the analysis) increases moderately, and about the same amount, under all alternatives during the first decade.

The subsistence analysis predicts no significant decline in salmon, other finfish, or invertebrate habitat capability from implementation of any alternative. The analysis does indicate that deer habitat capabilities in several portions of the Tongass may not be adequate to sustain the current levels of deer harvest and that implementation of any alternative could be accompanied by a restriction of subsistence uses of deer. The possibility for restrictions is less in Alternatives 1, 3, 4, 5 and 6 which apply a Forest-wide standard and guideline to exclude or minimize future timber harvesting in areas where habitat capability may be limiting.

Recreation and Tourism. LUD group allocations (Table 2) in relation to recreation opportunities were briefly discussed above. Alternative 1 has a considerably larger acreage in the Natural Setting category than the other alternatives (10.9 million). Alternatives 3, 5, 6, and the Preferred Alternative all have over 6 million acres, and Alternatives 2 and 4 have 5.8 million. Alternatives 7, 8 and 9 each have less than 5 million acres, with 7 offering only 3 million. "Roaded" recreation opportunities in the Moderate and Intensive Development groups are offered in the reverse of this order.

For the analysis of recreation and tourism, various types of "recreation places" - areas popular for specific types of recreation and for tourism - have been identified. In most cases, relatively undeveloped or natural settings for these places are preferred. It is predicted that none of the alternatives can meet the demand for natural settings with motorized access. Forest-wide, for all types of recreation places, Alternative 1 has the most acres in Natural Setting LUD's, followed by Alternatives 3 and the Preferred Alternative, then Alternatives 5 and 6, and then 2, 4 and 8,. Alternatives 7 and 9 have the fewest recreation place acres in natural settings. Tourism recreation places are recognized in generally the same order and relative amount, with the exception that Alternative 8 joins Alternatives 7 and 9 at a level noticeably lower than the other alternatives.



Scenery. Recognition of scenic quality through application of visual quality objectives is discussed in detail in the Revised Supplement. Outside of Wilderness, the Retention and Partial Retention categories would be considered capable of maintaining natural or natural-appearing scenery. Acres in these combined categories are highest in Alternative 1. Alternatives 3, 6, and the Preferred Alternative have 7 million or more acres, closely followed by Alternatives 2, 4 and 5 (6.7-6.9 million), and Alternative 9 (6.3 million). Alternatives 7 and 8 have considerably fewer acres in retention and partial retention objectives.

A list of "visual priority routes and use areas" has been developed to identify the viewpoints from which scenery will be managed. Apart from Alternative 1 (which, with no additional scheduled timber harvest or road construction, has essentially no future alterations affecting scenic quality), Alternatives 2-6 all include the majority of these routes and areas either in natural setting LUD's, or in the moderate development LUD's. Many are also included in Alternative 9 in the LUD II and LUD III categories, but many are also allocated to LUD IV. Alternatives 7 and 8 did not allocate LUD's based on these routes or areas.

Rationale for the Preferred Alternative

The Forest Supervisors chose the preferred alternative because they concluded that it best meets all the key criteria, and represents a balanced approach to management of the Tongass for the next 10-15 years. The process through which they arrived at the preferred alternative may be summarized as follows:

1. They concluded that changes are warranted to improve the current plan's protection of wildlife viability, fish habitat, and karst and cave resources. This led them away from Alternatives 2, 7, and 9.

2. They thought it would not be prudent to propose a wholesale shift to untried timber harvest and stand management methods without experimenting with them on smaller scales over the next 10-15 years. This led them away from Alternatives 4, 5, and 6.

3. They did not think it was necessary or appropriate to select an alternative with no commercial timber harvest program, which led them away from Alternative 1.

4. With Alternatives 3 and 8 left to work with, they felt that the land allocations developed out of the two previous rounds of extensive internal analysis and public involvement, as portrayed in Alternative 3, were more responsive to a broad cross-section of the public than those proposed by the State of Alaska in 1992 as a way of maximizing timber harvest, as portrayed in Alternative 8. This led them to Alternative 3.

5. Because of the concern for the potential socio-economic impacts of the revised plan, they made changes in Alternative 3 that would allow for timber harvest to continue during the next 10-15 years at near current levels and considered the likely environmental effects using the information described in the Revised Supplement.

6. They concluded that the Preferred Alternative would not have significantly different environmental effects if implemented in the next 10-15 years than would Alternative 3.

For all these reasons, they chose the modified version of Alternative 3 as the Preferred Alternative.

We have tried to take into account the desires of all parties, in this and future generations, who are interested in or affected by decisions we make in how to manage the Tongass National Forest. We also considered carefully the agreements reached by Forest Service Chief Jack Ward Thomas and Alaska Governor Tony Knowles last summer. Among those agreements are commitments to work with Alaskans toward:

- A strong, healthy, diversified economy for Southeast Alaska.
- Multiple, balanced, and sustainable use of the Tongass.
- Public participation in the forest planning process.
- Habitat protection measures based on science.
- Planning decisions guided, but not dictated, by scientific information that is reviewed by all interested parties.
- A supply of timber that meets the terms of the long-term contract with Ketchikan Pulp Company and also provides about 100 MMBF for independent and Small Business Administration purchasers.

The preferred alternative honors all of these objectives. In keeping with the commitment to public participation, we want reviewers to know that in order to meet the timber supply commitment, the Preferred Alternative would result in timber sales in areas where some members of the public have expressed strong opposition to such proposals in the past. The analysis indicates that without entering these areas, the timber supply commitment cannot be honored. We all must recognize each others' needs if we are to develop a balanced program for management of the Tongass for the future.

Your Turn

Your participation in the public review of the Revised Supplement is welcome. You may find the information summarized in this newsletter sufficient for you to comment on the alternatives, including the Preferred Alternative. Comments may be made orally at the 30+ public hearings scheduled throughout Southeast Alaska. These hearings will provide the opportunity to comment on the possible restriction of subsistence uses identified in the Revised Supplement. The schedule is given on the next page. Comments may also be made in writing, addressed to:

Tongass Forest Plan Revision Team
8465 Old Dairy Road
Juneau, AK 99801

ALL COMMENTS ARE DUE JULY 26, 1996. (This is one week later than the date published in the Revised Supplement.)

If you need more information, there will be an informational open house held just prior to each public hearing. Open houses will also be held in Anchorage, AK and Washington, D.C. Team members and local Forest Service personnel will be there to provide information and answer questions. The Revised Supplement itself, which this newsletter has summarized, may be reviewed at Tongass National Forest offices and local libraries throughout Southeast Alaska, and copies are also available upon request (at most Tongass National Forest offices or from the address above). The Revised Supplement is in four parts: the Revised Supplement to the DEIS (about 650 pages); a map packet; the Proposed Revised Forest Plan (about 600 pages); and a 14-page cover letter.

All of your comments are important. To be most useful to us, however, it will be helpful if you can focus on specific alternatives or resources you have concerns about, and give us not only your opinions, but your reasons behind them. Any specific information you may have about forest resources or uses, local geographic areas, or the practices and management direction being proposed, is likely to add to our information base. On the other hand, form letters or statements copied from interest group or industry publications are often not as useful in helping us understand how these alternatives affect you or your community.

All comments will be reviewed and analyzed, and, in combination with the public comments on the two previous Revision review documents, will be instrumental in developing a final revised Tongass Forest Plan.

Public Meeting/Hearing Schedule

Date	Community	Location	Time
Monday, May 20	Petersburg	ANB Hall	Open House 4-7 p.m. Hearing 7-9:30 p.m.
	Thorne Bay	Bay Chalet	Open House 4-7 p.m. Hearing 7-10 p.m.
Tuesday, May 21	Kake	Community Hall Kitchen	Open House 4-7 p.m. Hearing 7-9 p.m.
	Point Baker/Port Protection	Community Center	Open House 12-2 p.m Hearing 2-5 p.m.
Wednesday, May 22	Wrangell	St. Rose Parish Hall	Open House 4-7 p.m. Hearing 7-9:30 p.m.
	Coffman Cove	City Hall	Open House 4-7 p.m. Hearing 7-10 p.m.
Thursday, May 23	Sitka	Centennial Building	Open House 4-7 p.m. Hearing 7-9:30 p.m.
	Whale Pass	Community Building	Open House 4-7 p.m. Hearing 7-10 p.m.
Friday, May 24	Port Alexander	Bear Hall	Open House 2-4 p.m. Hearing 4-6 p.m.
	Naukati	Naukati School	Open House 4-7 p.m. Hearing 7-10 p.m.
Tuesday, May 28	Juneau	Centennial Hall	Open House 4-7 p.m. Hearing 7-9:30 p.m.
	Edna Bay	School Building	Open House 1-3 p.m. Hearing 3-5 p.m.
Wednesday, May 29	Skagway	City Hall Council Chambers	Open House 4-7 p.m. Hearing 7-9 p.m.
	Kasaan	City Hall (tentative)	Open House 12-2 p.m. Hearing 2-4 p.m.
Thursday, May 30	Haines	Municipal Building	Open House 4-7 p.m. Hearing 7-9 p.m.
	Metlakatla	To be Announced	Open House 4-7 p.m. Hearing 7-10 p.m.
Friday, May 31	Angoon	Community Center	Open House 2-4 p.m. Hearing 4-6 p.m.
	Ketchikan	Ted Ferry Civic Center	Open House 4-7 p.m. Hearing 7-10 p.m.
Monday, June 3	Tenakee Springs	City Hall	Open House 2-4 p.m. Hearing 4-6 p.m.
	Meyers Chuck	School Building	Open House 12-2 p.m. Hearing 2-4 p.m.
Tuesday, June 4	Hoonah	City Hall	Open House 4-7 p.m. Hearing 7-9 p.m.
	Saxman	To be Announced	Open House 4-7 p.m. Hearing 7-10 p.m.
Wednesday, June 5	Gustavus	School	Open House 4-7 p.m. Hearing 7-9 p.m.
	Craig	To be Announced	Open House 4-7 p.m. Hearing 7-10 p.m.
Thursday, June 6	Elfin Cove	City Building	Open House 4-7 p.m. Hearing 7-9 p.m.
	Hollis	To be announced	Open House 4-7 p.m. Hearing 7-10 p.m.
Friday, June 7	Pelican	City Hall	Open House 4-7 p.m. Hearing 7-9 p.m.
	Klawock	ANB Hall	Open House 4-7 p.m. Hearing 7-10 p.m.
Saturday, June 8	Hydaburg	City Council Chambers	Open House 4-7 p.m. Hearing 7-10 p.m.
Monday, June 17	Yakutat	High School	Open House 4-7 p.m. Hearing 7-9 p.m.

USDA Forest Service
Tongass Land Management Planning Team
8465 Old Dairy Road
Juneau, AK 99801

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Statement of
Mark Rey, Professional Staff
U.S. Senate Committee on Energy and Natural Resources
Hearing of the Alaska House of Representatives Committee on Resources
August 23, 1996

Good Morning, Mr. Chairman. I appreciate the opportunity to offer a brief statement on behalf of Senator Murkowski who chairs the U.S. Senate Committee on Energy and Natural Resources. I will review the Committee's and Alaska Delegation's recent activities in two areas. First, I will discuss efforts underway to provide a legislative extension to the fifty-year timber sale contract between the Ketchikan Pulp Corporation (KPC) and the United States Forest Service. Second, I will review the Committee's and Delegation's oversight of the Forest Service's development of the Tongass Land Management Plan (TLMP).

I want to commend your leadership in helping to develop a strong, bi-partisan majority of both the Alaska Senate and House of Representatives to recommend an extension of the Ketchikan Pulp Corporation contract. In response to your efforts, the efforts of the Alaska Senate, and those of the Governor, the Alaska congressional delegation introduced S. 1877, the Environmental Improvement Timber Contract Extension Act of 1996 on June 13. The bill extends the KPC contract for an additional 15 years, and modifies the contract to offset the negative effects that have occurred as a consequence of the unilateral contract changes made in the Tongass Timber Reform Act of 1990 (TTRA).

The contract extension is needed, as you know, to allow for the amortization of more than $175 million of capital expenditures to bring KPC into compliance with its consent decree with the Environmental Protection Agency (EPA), and into conformance with its waste discharge permits from the State and EPA. The bill imposes conditions set forth by the Governor for the contract extension.

The contract changes are designed to reverse some deleterious changes to the bilateral contract made in 1990. These 1990 changes have reduced operability of the contract, are the subject of damage claims filed (and in some cases already secured) by KPC, and ~~are very likely~~ may be ~~to be~~ found unlawful. In the July 1, 1996 decision U.S. v Winstar Corporation, the Supreme Court held that neither the government generally, nor Congress specifically, can use Sovereign Act authority to absolve itself from any liability incurred as a consequence of unilaterally modifying a contract with another party. Without the contract changes included in S. 1877 (including a requirement that liability associated with the 1990 changes cease upon enactment), we are concerned that the government will eventually be found liable for damage claims in excess of $300 million.

S. 1877, and a companion measure in the House, have been fully heard by the relevant Senate and House Committees. When Congress resumes in September we will be pursuing

every avenue available to secure passage of S. 1877. We appreciate the State's efforts to assist in building support for the measure. It will require unified, bi-partisan support from Alaska to convince the President to sign the bill. While the Clinton Administration has testified in opposition to the measure as introduced, we have already made some changes and are prepared to work further with the Forest Service and the Administration to produce a bill that responds to their concerns while protecting the economy of Ketchikan.

Now let me turn to the oversight of the ongoing Tongass Land Management Planning process. As you know, Congress has historically played a larger role in the management of the Tongass National Forest than any other national forest in the system. Separate pieces of legislation addressing management on the Tongass passed in both 1980 and 1990. This legislation has created specific statutory obligations for the Tongass that do not occur in other national forests. At the same time, management on the Tongass must still meet the requirements of the more generic National Forest Management Act (NFMA), National Environmental Policy Act (NEPA), Endangered Species Act (ESA), and other relevant federal land management and environmental statutes.

Consistent with this larger congressional role in the management of the Tongass, our oversight of the TLMP process over the last two years has been detailed and extensive. Since the draft TLMP was first released earlier this summer by the Forest Service we have had three oversight hearings on the draft plan. These hearings occurred on April 18, in Washington, D.C., and on May 28 and 29, in Ketchikan and here in Juneau, respectively.

I would like to be able to say that our oversight has concluded that the draft TLMP is in full accordance with the statutes governing management of the Tongass specifically, as well as the public lands and environmental statutes generally. Regrettably, this is not the case as we have uncovered a series of significant problems associated with both the process used to develop the draft plan, as well as the substance embodied in the plan alternatives, including the preferred alternative. The findings of our oversight process have been reviewed with the Forest Service and transmitted to the Secretary of Agriculture, Dan Glickman, for his review and consideration.

Most recently, our problems with the draft plan were summarized in an August 15 letter to the Secretary, co-signed by the three members of the Alaska Delegation. I will submit this letter for the record of your hearing and summarize. In short, we registered serious concerns with the recent revelations that there would be a fall-down in the allowable sale quantity (ASQ) in all plan alternatives as a consequence of failure to properly account for forest-wide standards and guidelines and accurately calibrate the implementation of some forest-wide models. But apart from the most recent revelations concerning the fall-down in the ASQ, we also apprised the Secretary of four categories of failings that our oversight has uncovered.

First, we raised several concerns with the process used to develop the TLMP and questioned whether that process follows all of the NFMA planning regulations and NEPA public disclosure and comment requirements. In our view, it does not for reasons that are outlined in

the letter to the Secretary. The recent revelations about the fall-down in ASQ and subsequent modifications between the draft and final plan only heighten our concerns about compliance with NFMA and NEPA public involvement requirements. We are doubtful that the public will have had a meaningful opportunity to offer their views in an informed manner.

Second, we raised concerns about the applicability of the island biogeographic/habitat conservation area model on the Tongass. This model is not validated for southeast Alaska and appears to be applied on the Tongass in ways that are highly disputable. We do not accept the Agency's rationale that this type of approach is mandated by the species viability requirements of NFMA. Indeed, this approach is only one of several approaches to meeting species viability obligations that the Agency could choose. It is true that this approach has been ratified by a District Court judge sitting in this judicial circuit, and would likely be ratified by the Ninth Circuit. However, the Fifth Circuit has ratified a far different approach to maintaining species viability the Forest Service in the Lake States has embraced. The dispute among the circuits, in our view, affords the Administration much more flexibility in selecting an appropriate conservation plan than the Agency is exhibiting on the Tongass.

Third, we have raised serious concerns, as have you, about the inadequacy of the socio-economic impact analysis that has been performed to date. In our view, it does not meet the standards of either the NFMA or the TTRA.

Fourth, during the course of our oversight we have been apprised of a wide range of problems by past and current TLMP Team members. This series of revelations by Agency experts involved in the process is both significant and unique in our experience with land management planning.

We have apprised the Secretary that the Alaska Delegation is taking the view that TLMP fits within the definition of a "major rule" under the 1996 amendments to the Regulatory Flexibility Act (P.L. 104-121). Thus, we are assuming and we expect that the Department will submit the final Tongass Land Management Plan to Congress to provide us with the 60 statutorily-mandated session days to evaluate the plan and decide whether to endorse it or pass a resolution rejecting it. It is our view that the 1996 Act precludes the final plan from taking effect until the requisite session days have expired.

However, we have heard one persuasive rationale for why the Agency needs a final TLMP on a more expedited basis. That is, the Administration's July 10, 1996 testimony that it could not contemplate S. 1877 or similar legislation to extend the KPC contract without a final TLMP to evaluate the contract's extension against. Consequently, in the Delegation letter to Secretary Glickman, we offer to consider condoning the Agency going forward with a interim final document so that the Administration would have the information necessary to evaluate the KPC contract legislation if we succeed in passing a bill to send to the President for his consideration. Under these circumstances, the delegation might countenance an interim final TLMP with a mutually agreeable comment period to provide a fair opportunity for informed

public review. This is an option that fairly responds to the Administration's testimony on the contract extension, as well as provides a basis for closing on a TLMP that meets all of the Agency's statutory and regulatory obligations and strikes a fair balance for the country and the people of southeast Alaska.

Once again I appreciate the opportunity to testify today. I would be happy to respond as best I can to your Committee's questions.

STATEMENT OF
JIM CAPLAN, DEPUTY REGIONAL FORESTER,
ALASKA REGION, FOREST SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

Before the
Resources Committee
Alaska House of Representatives
Alaska State Legislature

Concerning the Revision of the Tongass Land Management Plan

August 23, 1996
Juneau, Alaska

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I appreciate the opportunity to appear before this Committee and provide information regarding the management and use of natural resources on the Tongass National Forest. With me today are: Fred Norbury, Ecosystem Planning and Budget Director; Gary Morrison, Forest Supervisor for the Chatham Area; and Beth Pendleton and Doug Swanston, co-team leaders for the Tongass Land Management Plan Revision effort.

Mr. Chairman, you asked me to address four questions in your letter of August 14. The first two questions deal with the Administration's position on S. 1877, the Ketchikan Pulp Company Timber Contract Extension Act.

The Administration strongly opposes S. 1877, because it undermines the Secretary of Agriculture's authority to manage the resources of the Tongass National Forest; restricts the Secretary's ability to adapt to changing environmental information; and conflicts with certain existing laws, including the Tongass Timber Reform Act. I would ask that a copy of the Administration's July 10 testimony on S. 1877 be made part of the hearing record today.

Having answered your question about the legislation, I would like to emphasize that the Administration is committed to maintaining a sustainable flow of timber to Ketchikan Pulp Company in accordance with the terms of the existing contract, the Tongass Timber Reform Act, and other relevant statutes. Under Secretary Lyons said at the July hearings in Washington, D.C., that once the revision of the Tongass management plan is completed, he would welcome a discussion of timber-related opportunities for Southeast Alaska. Also, as indicated by Under Secretary Lyons if the United States decides to continue a contractual relationship beyond the year 2004 with KPC, we believe that the appropriate vehicle would be a new contract in accordance with the Tongass Timber Reform Act.

We agree that we will be better equipped to make decisions about future long-term commitments to the timber industry in Southeast Alaska -- reflecting sound scientific information and extensive public input -- once the revision process is completed. That is

why discussing the revision of the Tongass management plan with you today is so important, and why we hope to clear up the recent confusion surrounding the process that we have been engaged in over the last several years.

Turning to your remaining questions, let me address reports of reductions in Allowable Sale Quantities (ASQ) for the alternatives in the revised supplement to the Draft Environmental Impact Statement (DEIS).

No final plan or related ASQ has been established at this time. The Forest Service is still receiving public input on the draft revision. We extended the comment period in response to requests from many interests, including the Alaska Forest Association and C.A.R.E. (Concerned Alaskans for Resources and Environment), to provide more time for comment. Since April of this year, we have received over 16,000 comments from the public. These comments will be considered along with the original 10,000 comments we received in our initial revision process in 1992.

After the public comment period on the draft revision closes on August 16, we will continue to analyze public comment and develop the final revised plan. So, any estimates regarding ASQ in the final revised Forest Plan or Final Environmental Impact Statement alternatives are premature.

At this point in the planning process -- between draft and final

-- we are, among other things, validating computer-model runs and testing resource assumptions to ensure they accurately reflect resource conditions on-the-ground. These common sense steps do not indicate problems with the planning process or flaws in the information used to develop the draft alternatives.

We are reviewing our draft and making adjustments like this to assure that the final plan -- and the final direction for the management of the Tongass -- is based on the best information available.

The ASQ's for the alternatives in the Final Environmental Impact Statement could be higher or lower than those stated in the draft. This depends on the outcome of the computer validations and ground-testing, as well as changes that the Tongass Forest Supervisors and Forest Service planning team might make in response to new information.

Our Tongass Land Management Planning Co-team Leaders, Beth Pendleton, and Doug Swanston, and Fred Norbury, Ecosystem Planning and Budget Director, can provide you with insights into how the ASQ may be adjusted up or down as we move through the planning process to a final plan.

Mr. Chairman, I would ask that a copy of the letter from Regional Forester Janik dated August 16, 1996, to Mr. Jack Phelps, Executive Director for the Alaska Forest Association, Inc., which

discusses these issues, be made part of today's hearing record.

We know that people care deeply about the resources of the Tongass National Forest and we will continue to work toward completing the revision to reach an acceptable balance for management of the Tongass. We are committed to a viable timber industry and want to provide a resource program built on sound science. It will provide a sustainable source of raw material to the timber industry in Southeast Alaska while adequately considering all of the other important resources of the Tongass. When the final plan is published, we will make all of the planning information -- and the planners to explain it -- available to the public.

This concludes my testimony, Mr. Chairman. My colleagues and I would be pleased to address any questions you or members of the committee may have.

August 22, 1996

SENT VIA FAX
465-3075

Diane Mayer, Director
Division of Governmental Coordination
PO Box 110030
Juneau, AK 99811

Questions from the House Resources Committee to the Knowles Administration, for the House Resources Committee meeting, August 23, 1996.

The following is a list of more in-depth questions (supplement to the 8/14 hearing invitation letter) regarding the reported 23% reduction in TLMP Allowable Sale Quantity. other TLMP issues and Ketchikan Pulp Company contract extension issues.

1. Who informed the State of the 23% ASQ reduction Commissioner Hensley reported in Ketchikan on August 7, 1996?

2. Was the State made aware of the fact that 23% reduction in ASQ is a net number, made up of a series of "add backs" to the plan as well as "take aways" from the RSDEIS? What were you told in this regard? Have you been advised by the Forest Service of any additional shift in the figures?

3. Did the Forest Service advise you of how they intended to let the public comment on the propriety of what was added back and taken away to the current RSDEIS?

4. What type of follow up have you instituted in your office to determine the impacts from the 23% Allowable Sale Quantity (ASQ) fall down to each of the alternatives? Has the Forest Service told you of these impacts? What is the plan for letting the public respond to these impacts?

5. A 23% fall down from the 297 MMBF net including utility of the preferred alternative would leave us 229 MMBF net including utility in the preferred. Considering the point made by the Southeast Conference that the Forest Service has historically sold on 68% of the ASQ, does the preferred alternative protect the timber dependent communities and timber workers of Southeast Alaska?

6. Does the Knowles Administration still support pressing ahead with TLMP or does it favor delaying the current TLMP to straighten out the errors which Commissioner Hensley announced in Ketchikan? Why or why not?

7. Does the Knowles Administration still want the Forest Service to consider the impacts of the proposal for Landless Natives Legislation in the RSDEIS?

8. 36CFR 219.7d requires consultation with State and local governments and Indian tribal governments at the beginning of the planning process to develop procedures for coordination. This activity must take place prior to recommending the preferred alternative. Did USFS consultation activity with the State government occur prior to the USFS recommendation of the preferred alternative? If so, in what form did consultation take place.

9. 36CFR 219.7e requires the responsible line officer to seek input from Federal, State and local governments and universities in

developing the forest plan to help resolve management concerns and the planning process, and identify areas where additional research is needed. Was any input sought from State official under this section? If so, please explain in which manner.

10. 36CFR 219.12b requires the interdisciplinary team to identify and evaluate public issues and management concerns identified through the public process and through coordination with State and Federal agencies and local governments and Indian tribes. Did coordination occur between the USFS and State officials, and if so, in what manner?

11. 36CFR 219.7c requires a review of State land management plans and local government land use plans. Was there interaction between the State and the USFS, if so, in what form was such interaction?

12. 40CFR 1506.2 requires Federal agencies to cooperate to the fullest extent possible to reduce duplication between National Environmental Policy Act and State and local requirements. Cooperation is supposed to include joint planning, joint environmental research, joint hearings, and joint environmental assessments. Did any cooperation occur between the State and the USFS?

13. Would you please supply the Committee with all State correspondence with the USFS concerning TLMP. (The Committee does not expect such documentation at the 8/23 hearing, but would like such documents as soon as possible)

14. In a July 1995 memorandum, then Forest Service employees Guy Cellier and Kathleen Morse stated that they had advised the interdisciplinary team superiors of the need for a community-by-community effects analysis to describe the impacts of each TLMP alternative. They attached a description of how the socioeconomic analysis should proceed. Their plan was apparently rejected on the grounds that there was insufficient time or resources to perform it. Mr. Cellier has since resigned from the USFS and Ms. Morse has moved to the Alaska Department of Commerce and Economic Development. Has the state reviewed this memorandum and come to any conclusions on whether it is accurate? Has there been any follow up with Ms. Morse, who now works for the State, regarding whether the socioeconomic study in the RSDEIS is adequate?

15. Is the State concerned that the public is being denied a right to meaningfully comment on the RSDEIS because the 'add backs' and 'take aways' which have been made by the USFS to reduce the ASQ impacts it has discovered? Have the 'add backs' and 'take aways' changed certain land uses and standards and guidelines in the plan?

16. Has the State compared what was done in the RSDEIS with the requirements of the National Forest Management Act (NFMA) planning regulations? Has the State considered whether submitting the preferred alternative as a separate letter outside the RSDEIS meets the requirement the planning regulations?

17. Is the State concerned that the community effects analysis done by the socioeconomic Assessment Panel shows exactly the same decrease in jobs for each alternative harvest level ranging from no harvest to nearly 300 Million Board feet?

18. There was an explanation from the Governor in the Ketchikan Daily News on his efforts to extend the KPC contract. The Governor makes the excellent point that the one meeting with the President cannot resolve the issue. Your strong support for opening ANWR to development has helped keep that issue in the forefront of the national consciousness. What more, if anything, can the Knowles

Administration do to persuade the President of your resolve to see the KPC contract extended? Have there been other contacts by the Governor with the President?

19. The Governor's letter does not say anything about the contract modifications that KPC has testified are as equally important to its survival as the extension. Does the Governor support the contract modifications which KPC points out are needed to give the contract economic viability?

20. The Governor says the "there are no environmental constraints that require an immediate decision regarding the mill." Does that mean the Department of Environmental Conservation has now agreed to a mixing zone for KPC?

Thank you for your cooperation and willingness to testify. The Committee and the people of Alaska appreciate your hard work on their behalf.

Sincerely,

Representative William K. Williams, Co-Chair
House Resources Committee

cc. House Resources Committee

Summary of Tables and Effects

Tongass Land Management Plan Revision
Revised Supplement to the Draft Environmental Impact Statement

Table 3-5
Productive old-growth forest planned for harvest by Biogeographic Province by alternative

Biogeographic Province	Current [2] (1995)	Alternatives and Percent Cumulative Harvest After Decades 1 and 10																					
		Preferred		1		2		3		4		5		6		7		8		9			
		1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10
1	6	6	33	6	6	6	28	6	32	6	12	6	10	6	21	9	34	6	26	6	3		
2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	8	4	5	4			
3	11	13	37	11	11	15	42	13	30	12	31	12	29	14	34	16	43	13	31	15	4		
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
5	12	20	36	12	12	23	43	18	28	13	31	14	31	15	42	21	52	18	31	23	4		
6	7	9	14	7	7	12	24	7	11	7	12	7	11	9	18	13	20	8	11	14	2		
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0			
8	2	5	17	2	2	5	23	4	11	2	9	4	11	4	22	5	35	4	15	5	2		
9	0	3	18	0	0	3	22	3	15	2	11	2	12	5	20	5	32	3	19	4	2		
10	10	14	39	10	10	13	44	14	38	12	25	12	25	15	41	14	47	14	39	13	4		
11	9	12	30	9	9	13	33	11	28	9	26	9	24	12	31	11	42	10	34	14	3		
12	2	5	14	2	2	6	15	4	13	4	11	4	11	5	15	10	26	7	18	8	2		
13	15	19	37	15	15	21	41	18	33	16	31	16	32	17	40	27	55	21	44	21	5		
14	32	35	55	32	32	36	64	35	52	32	50	32	46	34	53	39	74	36	58	38	7		
15	6	9	19	6	6	11	23	8	18	7	16	7	15	10	23	12	34	9	25	11	2		
16	14	15	23	14	14	16	26	15	20	14	18	14	21	15	24	17	33	16	23	18	3		
17	1	2	7	1	1	3	9	1	4	2	5	2	5	3	6	11	50	3	16	11	5		
18	1	5	18	1	1	7	23	5	14	5	16	5	15	7	23	8	39	6	21	9	3		
19	1	1	2	1	1	1	2	1	2	1	2	1	2	1	2	2	3	1	3	1			
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
21	4	5	7	4	4	6	9	4	6	4	6	4	6	4	9	5	10	4	5	5			

[1] All figures represent the cumulative harvest of productive old-growth forest to the end of the period specified (present cumulative harvest, and at the end of one decade and ten decades of alternative Revised Forest Plan implementation), expressed as a percent of 1954 productive old-growth. (Estimated acreages of old-growth harvest are contained in the Planning Record.)

[2] From Table 3-3.

Table 3-6
Old-growth harvest in selected biogeographic provinces, first decade by alternative [1]

Biogeo-graphic Province	Current Harvest Percent	Percent in Harvested Condition After Decade One Alternative [2]								
		Pref.	2	3	4	5	6	7	8	9
14	32	35	36	35	32	32	34	39	36	38
13	15	19	21	18	16	16	17	27	21	21
16	14	15	16	15	14	14	15	17	16	18
5	12	20	23	18	13	14	15	21	18	23
3	11	14	15	13	12	12	14	16	13	15
10	10	14	13	14	12	12	15	14	14	13
11	9	12	13	11	9	9	12	11	10	14
6	7	9	12	7	7	7	9	13	8	14
15	6	9	11	8	7	7	10	12	9	11
1	6	6	6	6	6	6	6	9	6	6

[1] See Table 3-5. All figures are percents of 1954 productive old growth. Provinces are listed in decending order by current harvest percent.

[2] All percents for alternatives represent cumulative old-growth harvest at the end of decade one (2005). Alternative 1 results in no change to the present percentages, and is not included in the column comparisons; however, the "Current Harvest" column can be taken to also represent Alternative 1 at the end of the first decade.

Table 3-20
Miles of system roads existing and planned by Alternative [1]

	Alternative									
	Pref	1	2	3	4	5	6	7	8	9
Existing Rds	4,335	565	4,364	4,335	4,375	4,350	4,350	4,377	4,356	4,327
New Roads	5,137	N/A	11,162	7,640	6,258	5,869	9,782	15,391	9,690	14,018
Total Roads	9,472	565	15,526	11,975	10,633	10,219	14,132	19,768	14,046	18,345
% Increase	219%	N/A	356%	276%	243%	235%	324%	452%	322%	424%
Rd. Density per sq. mi.	1.07	1.02	1.67	1.35	1.14	1.11	1.53	2.00	1.23	1.89

[1] Only roads in VCUs to be entered for timber harvest, in each alternative, are included. Road (Rd.) density calculations are based on the area of the VCUs being entered for timber harvest. (The FORPLAN model did not calculate road mileage for Alternative 1 because of low levels of harvest.)

Table 3-21
Estimated miles of temporary roads to be constructed during a 10-year period [1]

	Alternative									
	Pref	1	2	3	4	5	6	7	8	9
Miles of temp. Roads	357	0	488	278	145	139	362	689	364	521

Table 3-22
Riparian management levels applied in each Alternative, and percentage of streams in timber harvest VCUs receiving Option 2 (AFHA recommended protection level) protection. [1]

	Alternative									
	Pref.	1	2	3	4	5	6	7	8	9
Total miles of streams in VCUs entered	22,988	1,691	23,977	22,988	24,045	23,807	23,807	28,308	27,189	24,556
FHIP1, watershed level of protection	Opt 2	Opt 2	Opt 3	Opt 1	Opt 2	Opt 2	Opt 2	Opt 3	Opt 2	TTRA /BMP
% of total streams protected with Option 2 or higher	20	21	0	100	20	20	20	0	20	0
FHIP2,3 VCU level of protection	Opt 3	Opt 3	Opt 3	Opt 2	Opt 3	Opt 3	Opt 3	Opt 3	Opt 3	TTRA /BMP
% of total streams protected with Option 2 or higher	0	0	0	100	0	0	0	0	0	0

[1] Stream miles include all streams in the watershed and/or watershed.

Table 3-23
Ground-disturbing activities, first decade

Alternative	Timber Harvest (acres)	Road Construction (miles)
Preferred	117,640	1,550
1	0	0
2	167,672	1,791
3	94,338	1,212
4	49,432	633
5	47,120	602
6	123,178	1,577
7	232,414	2,983
8	123,253	1,589
9	177,477	2,643

Table 3-24
Inventoried karst area within Moderate and Intensive Development LUD groups by alternative

Alternative	Total Inventoried Karst Areas	Portion that is Tentatively Suitable Timber Lands
Preferred	258,870	129,086
1	6,183	3,321
2	316,753	160,574
3	258,870	129,086
4	316,753	160,453
5	238,136	143,617
6	238,136	143,617
7	268,832	191,543
8	297,653	127,264
9	356,021	188,665

Source: Query Qkarstrx.

Table 3-25
Effects on economic availability of identified mineral resources, shown as a percent of the 604,989 acre total

	Withdrawn Areas		Open Areas	
	Existing	Recommended	Higher Cost	Average Cost
Preferred	23.6%	0.5%	39.7%	36.2%
Alternative 1	23.6%	1.9%	53.2%	21.3%
Alternatives 2-6	23.6%	0.5%	39.7%	36.2%
Alternatives 7-8	23.6%	0.0%	37.9%	38.6%
Alternative 9	23.6%	0.0%	24.2%	52.2%

Based on 1991 SDEIS

Table 3-26
Effects on economic availability of undiscovered mineral resources, shown as a percent of the 6.66 million acre total

	Withdrawn Areas		Open Areas	
	Existing	Recommended	Higher Cost	Average Cost
Preferred	33.8%	0.8%	35.1%	30.3%
Alternative 1	33.8%	1.8%	45.9%	18.5%
Alternatives 2-6	33.8%	0.8%	35.1%	30.3%
Alternatives 7-8	33.8%	0.3%	34.9%	31.0%
Alternative 9	33.8%	0.4%	32.7%	33.1%

Based on 1991 SDEIS

Table 3-27
Unrealized values (in millions) due to potential withdrawals of identified or undiscovered mineral resources by alternative

	Alternatives				
	Preferred	1	2-6	7-8	9
Identified	$0.0	$705.0	$0.0	$37.0	$0.0
Undiscovered	$197.3	$830.9	$197.3	$247.9	$194.1
Combined	$197.3	$1,535.9	$197.3	$284.9	$194.1

Based on 1991 SDEIS

Table 3-31

Forest-wide Recreation Opportunity Spectrum (ROS) acres (in 1,000's), and percents by alternative after 150 years of plan implentation [1]

ROS Class [2]	1995	Alternatives								
		Preferred	1	2	3	4	5	6	7	8	9
P	11,010	9,094	10,711	8,975	9,094	8,975	9,020	9,020	7,293	8,755	8,243
	65%	54%	63%	53%	54%	53%	53%	53%	43%	52%	49%
SPNM	3,170	2,246	3,276	1,736	2,246	1,736	1,939	1,939	1,109	1,957	1,575
	19%	13%	19%	10%	13%	10%	11%	11%	7%	11%	9%
SPM	1,187	841	1,184	736	841	736	773	773	534	754	660
	7%	5%	7%	4%	5%	4%	5%	5%	3%	5%	4%
RN	191	428	286	404	428	404	419	419	302	302	436
	1%	3%	2%	2%	3%	2%	3%	3%	2%	2%	3%
RM	1,373	4,323	1,473	5,080	4,323	5,080	4,780	4,780	7,694	5,163	6,017
	8%	25%	8%	30%	25%	30%	28%	28%	45%	30%	35%
R, U	7	7	7	7	7	7	7	7	7	7	7
	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%

[1] Acres are rounded to the nearest thousand. All percents are percents of total Forest acres (16.939 million). Rural and Urban ROS have been combined, and represent less than one percent of total acres in all alternatives.

[2] P = Primitive; SPNM = Semi-primitive Non-motorized; SPM = Semi-primitive Motorized; RN = Roaded Natural; RM = Roaded Modified; R = Rural; U = Urban

Table 3-32

Forest-wide recreation place acres (in 1,000's), by LUD group by alternative.

LUD Group[1]	Alternatives									
	Pref.	1	2	3	4	5	6	7	8	9
W	1,316	1,316	1,316	1,316	1,316	1,316	1,316	1,316	1,316	1,316
NS	1,454	2,425	1,156	1,454	1,156	1,254	1,254	590	1,068	879
MD	446	11	602	446	602	550	550	277	230	679
ID	546	10	688	546	688	642	642	1,579	1,148	888

Source: Query Q249C

[1] W = Wilderness; NS = Natural Setting; MD = Moderate Development; ID = Intensive Development.

Acreage totals may not be the same as other tables due to rounding

Table 3-33

Home range recreation place acres (in 1,000's), by LUD group by alternative.

LUD Group[1]	Alternatives									
	Pref.	1	2	3	4	5	6	7	8	9
W	427	427	427	427	427	427	427	427	427	427
NS	829	1,406	645	829	645	720	720	370	640	510
MD	316	8	409	316	409	372	372	156	146	433
ID	277	8	368	277	368	330	330	896	636	478

Source: Query Q3093A

[1] W = Wilderness; NS = Natual Setting; MD = Moderate Development; ID = Intensive Development.

Table 3-34
Acreages (in 1,000's) in specific recreation place categories, by LUD group for each alternative.

Rec Place Type and LUD Group[1]	Alternative									
	Preferred	1	2	3	4	5	6	7	8	9
Marine Recreation										
W	443	443	443	443	443	443	443	443	443	443
NS	474	728	392	474	392	414	414	156	315	260
MD	162	<1	223	162	223	209	209	106	93	195
ID	96	2	116	96	116	108	108	468	323	276
Facilities										
W	448	448	448	448	448	448	448	448	448	448
NS	575	718	462	575	462	537	487	199	343	343
MD	132	4	181	132	181	161	161	105	86	231
ID	66	2	81	66	81	75	75	420	295	150
Hunting										
W	444	444	444	444	444	444	444	444	444	444
NS	651	1,040	530	651	530	559	559	299	473	485
MD	170	7	234	170	234	218	218	188	168	306
ID	233	7	290	233	290	277	277	567	413	263
Fishing										
W	166	166	166	166	166	166	166	166	166	166
NS	186	283	137	186	137	151	151	56	128	87
MD	58	1	85	58	85	76	76	40	34	116
ID	41	1	64	41	64	58	58	189	123	83

Source: Query Q3093A
[1] W = Wilderness; NS = Natural Setting; MD = Moderate Development; ID = Intensive Development.

Table 3-35
Tourism recreation place acres (in 1,000's), by LUD group by alternative.

LUD Group[1]	Alternatives									
	Pref.	1	2	3	4	5	6	7	8	9
W	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
NS	852	1,143	740	852	740	774	774	365	583	601
MD	190	9	258	190	258	238	238	189	171	297
ID	112	3	157	112	157	142	142	600	400	256

Source: Query Q3093A
[1] W = Wilderness; NS = Natural Setting; MD = Moderate Development; ID = Intensive Development.

Table 3-36
Allocation of the six suitable potential RNA's by alternative

	Alternatives [1]					
	Preferred	1	2	3-6	7-8	9
Warm Pass	R	R	R	R	R	N
Marten River	R	R	R	R	R	W
Robinson Lake	R	R	R	R	R	W
Tonalite Creek	R	R	R	R	R	N
Kadin Island	R	R	R	R	I	M
Rio Roberts	R	R	R	R	I	I

[1] Letter symbols represent the following: R= recommended for Research Natural Area designation; W= Wilderness LUD group; N= Natural Setting LUD group; M= Moderate Development LUD group; I= Intensive Development LUD group.

Table 3-37
Summary of how the priority potential RNA proposals are allocated in each alternative

	Alternatives [1]				
	Preferred	1	2-6	7-8	9
Akwe Beach	N	N	N	N	N
Akwe-Ustay Lakes	N	N	N	N	N
Mountain Lake	W	W	W	W	W
Pike Lakes	W/N/M	W/N	W/N/M	W/M/I	W/M/I
Upper Situk	W/N	W/N	W/N	W/N/I	W/N/I
Dayebas Creek	N	N	N	N	N
Blue Lake Lava	W	W	W	W	W
Twin Lakes	W	W	W	W	W
Crater Ridge-Freds Creek	N	N	N	N/M	M
Myriad Islands	W	W	W	W	W
Plotnikof-Pt Bank	W	W	W	W	W
Gambier Bay	W	W	W	W	W
Tiedeman Island	W	W	W	W	W
Pleasant Island	W	W	W	W	W
Upper Tenakee Hot Springs	N/M/I	N	N/M/I	N/M/I	N/M
Swan Cove	W	W	W	W	W
Bailey Bay Hot Springs	N	N	N	N	N
Falls Creek Windthrow	N	N	N	I	I
South Etolin Island	W	W	W	W	W
Mt. Calder-Virginia Mt.	N/I	N	N/I	N/I	N/I
Sarkar Lakes	N/I	N	N/I	I	N/I
Thunder Mountain	N	N	N	I	I
Klakas Lake	W/N/I	WN	W/N/I	W/I	W/N
El Capitan	N	N	N	N	N

[1] Letter symbols represent the following: W= Wilderness LUD group; N= Natural Setting LUD group; M= Moderate Development LUD group; I= Intensive Development LUD group.

Table 3-38
Allocation of total roadless area (in 1,000 acres) to LUD group by alternative [1]

LUD Group[2]	Alternatives									
	Preferred	1	2	3	4	5	6	7	8	9
NS	6,603	9,677	5,854	6,603	5,834	6,138	6,138	3,247	4,462	4,717
MD	872	13	1,223	872	1,223	1,105	1,105	1,457	1,356	1,914
ID	2,129	108	2,528	2,129	2,528	2,361	2,361	4,923	3,809	2,783

[1] This is in addition to the 5.7 million acres of Wilderness within the Tongass.
[2] NS = Natural Setting; MD = Moderate Development; ID = Intensive Development.

Table 3-42
Visual Quality Objectives by alternative, Forest-wide

Alternative	Visual Quality Objective			
	Retention	Partial Retention	Modification	Maximum Modification
Preferred				
Seen Areas	2,331,436	1,483,042	366,293	1,055,735
Seldom-seen	2,091,290	1,425,858	0	2,274,463
Wilderness	5,723,253			
Alternative 1				
Seen Areas	2,337,325	2,893,975	1,180	741
Seldom-seen	3,583,642	1,983,636	0	220,171
Wilderness	5,723,253			
Alternative 2				
Seen Areas	1,822,706	1,653,882	452,668	1,307,249
Seldom-seen	1,728,367	1,425,858	0	2,637,386
Wilderness	5,723,253			
Alternative 3				
Seen Areas	2,331,436	1,483,042	366,293	1,055,735
Seldom-seen	2,091,290	1,425,858	0	2,274,463
Wilderness	5,723,253			
Alternative 4				
Seen Areas	1,822,706	1,653,882	452,668	1,307,249
Seldom-seen	1,728,667	1,425,858	0	2,637,386
Wilderness	5,723,253			
Alternative 5				
Seen Areas	1,978,690	1,615,361	421,656	1,220,796
Seldom-seen	1,902,330	1,425,858	0	2,463,424
Wilderness	5,723,253			
Alternative 6				
Seen Areas	2,021,316	1,598,775	416,157	1,200,732
Seldom-seen	1,934,607	1,411,096	0	2,446,188
Wilderness	5,723,253			
Alternative 7				
Seen Areas	1,160,149	597,493	1,010,389	2,465,605
Seldom-seen	834,616	690,578	0	4,259,651
Wilderness	5,723,253			
Alternative 8				
Seen Areas	1,977,239	580,517	767,556	1,908,325
Seldom-seen	1,410,700	690,578	0	3,683,566
Wilderness	5,723,253			
Alternative 9				
Seen Areas	2,631,432	1,090,184	354,184	1,157,866
Seldom-seen	2,529,073	0	0	3,255,771
Wilderness	5,723,253			

Source: Q47D

Table 3-43
"Development" LUD and Natural Setting LUD Group acres (in 1,000's), by alternative [1]

		Alternatives								
LUD	**Pref.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Development LUD's:										
SV	815	1	815	577	815	761	759	0	0	
ML	856	0	856	680	856	761	755	1,484	1,368	
TM	3,482	222	3,482	2,981	3,482	3,295	3,258	6,336	5,058	
OD	181	169	181	181	181	181	181	181	181	184
WSR [2]	91	332	91	91	91	91	91	0	0	
LUD III										2,334
LUD IV										3,818
Natural Setting LUD Group	5,875	10,688	5,875	6,892	5,876	6,212	6,448	3,357	4,751	4,883

[1] SV = Scenic Viewshed, ML = Modified Landscape, TM = Timber Production, OD = other development LUD's (see text), WSR = Wild/Scenic/Recreational River. For Alternative 9, LUD III is roughly equivalent to the total of SV and ML in the other alternatives, and LUD IV equivalent to TM. In addition, each alternative has 5,723 thousand acres of Wilderness.
[2] "Development" in terms of timber harvesting or road construction would only occur in Scenic or Recreational Rivers. Rivers proposed within Wilderness are not included.

Table 3-44
Adopted VQO's for selected viewsheds by alternative [1] [2]

Travel Route/ Viewshed	EVC	Pref.	Alternative 1	2	3	4	5	6	7	8	9
Behm Canal											
Type I EVC	28,797										
Retention(II)	160	9,674	25,979	2,645	9,674	2,645	2,645	2,645	120	9,330	3,985
Par. Ret(III)	3,729	7,710	13,776	9,252	7,710	9,252	9,252	9,252	420	420	6,009
Modific.(IV)	1,582	11,717		16,784	11,717	16,784	16,784	16,784	9,393	6,290	5,948
Max. Mod.(V)	5,487	10,654		11,075	10,654	11,075	11,075	11,075	29,822	23,715	23,813
Type VI EVC											
Chatham Strait											
Type I EVC	90,093										
Retention(II)	618	56,604	31,407	27,251	56,604	27,251	44,391	48,865	34,873	64,626	39,102
Par. Ret(III)	360	19,874	84,837	24,670	19,874	24,670	20,971	20,491			15,642
Modific.(IV)	700	3,733		8,173	3,733	8,173	4,993	4,754	5,768	4,148	1,819
Max.Mod.(V)	24,472	36,032		56,149	36,032	56,149	45,889	42,134	75,602	47,469	59,680
Type VI EVC	20										
Cholmondeley Sound											
Type I EVC	36,796										
Retention(II)		4,984	17,124		4,984					4,944	5,528
Part. Ret(III)		3,966	19,430	3,966	3,966	3,966	3,966	3,966			11,617
Modific.(IV)	360	11,567		11,567	11,567	11,567	11,567	11,567	11,018	3,297	6,771
Max. Mod.(V)	922	17,541		22,525	17,541	22,525	22,525	22,525	25,438	28,215	14,142
Type VI EVC											
Clarence Strait											
Type I EVC	46,498										
Retention(II)	782	23,126	21,047	4,800	23,126	4,800	14,032	14,032		24,170	5,080
Part.Ret.(III)	5,332	16,090	53,979	23,247	16,090	23,247	23,126	23,126			26,584
Modific.(IV)	13,603	18,008		27,419	18,008	27,419	18,408	18,408	12,177	8,396	5,479
Max.Mod.(V)	8,490	17,761		19,519	17,761	19,519	19,419	19,419	62,909	42,520	29,557
Type VI EVC	381										

Travel Route/ Viewshed	EVC	Alternative Pref.	1	2	3	4	5	6	7	8	9
Duncan Canal											
Type I EVC	16,547										
Retention(II)		6,275	5,614	1,219	6,275	1,219	6,275	6,275		7,794	3,895
Part.Ret(III)	300	7,375	22,106	10,952	7,375	10,952	7,375	7,375			7,075
Modific.(IV)	5,496	8,135		8,875	8,135	8,875	8,135	8,135	5,116	1,999	2,139
Max.Mod.(V)	5,397	5,934		6,674	5,934	6,674	5,934	5,934	22,604	17,928	14,611
Type VI EVC											
Eastern Passage											
Type I EVC	49,326										
Retention(II)	380	17,762	20,563	5,461	17,762	5,461	5,461	5,461		18,602	4,861
Part.Ret.(III)	7,802	37,347	51,169	48,869	37,347	48,869	48,869	48,869			30,965
Modific.(IV)	1,880	8,161		8,321	8,161	8,321	8,321	8,321	10,101	5,421	5,240
Max.Mod.(V)	12,903	8,461		9,081	8,461	9,081	9,081	9,081	62,191	48,269	23,863
Type VI EVC											
Ernest Sound											
Type I EVC	28,345										
Retention(II)		14,258	15,181	1,041	14,258	1,041	5,792	5,792		13,198	20
Part.Ret.(III)	20	6,583	16,202	7,302	6,583	7,302	6,883	6,883			
Modific.(IV)	3,157	7,298		10,872	7,298	10,872	8,217	8,217	4,842	4,222	3,802
Max.Mod.(V)		3,363		12,287	3,363	12,287	10,610	10,610	26,540	13,962	22,999
Type VI EVC											
Frederick Sound											
Type I EVC	63,082										
Retention(II)	2,060	15,851	17,874	1,221	15,851	1,221	4,714	4,714		1	1,861
Part.Ret.(III)	120	27,438	63,007	34,571	27,438	34,571	34,531	34,531			20,378
Modific.(IV)	10,117	7,242		7,362	7,242	7,362	7,322	7,322	2,822	2,782	1,421
Max.Mod.(V)	5,562	30,390		37,767	30,390	37,767	34,354	34,354	77,419	62,788	57,261
Type VI EVC											
Hyder/Salmon River Highway											
Type I EVC	24,025										
Retention(II)		11,302	12,362	11,302	11,302	11,302	11,302	11,302			11,282
Part.Ret.(III)		12,722	11,662	12,722	12,722	12,72	12,722	12,722	24,025	24,025	2,742
Modific.(IV)											
Max.Mod.(V)											
Type VI EVC											

Travel Route/ Viewshed	EVC	Alternative								
		Pref.	1	2	3	4	5	6	7	8	9
Icy Strait											
Type I EVC	36,237										
Retention(II)		14,623	5,607	220	14,623	220	260	1,021		14,483	80
Part.Ret.(III)	3,698	8,341	45,870	9,983	8,341	9,983	9,983	9,983	80		360
Modific.(iV)	280	560		560	560	560	560	560	1,740	1,380	1,380
Max.Mod.(V)	11,322	27,993		40,754	27,993	40,754	40,714	39,953	49,657	35,614	49,717
Type VI EVC											
Lynn Canal											
Type I EVC	138,617										
Retention(II)	401	42,184	28,316	20,470	42,184	20,470	20,470	20,470	12,140	48,102	63,395
Part.Ret.(III)	2,422	74,376	112,963	92,072	74,376	92,072	92,072	92,072	19,167	14,512	43,218
Modific.(IV)		21,797		21,817	21,797	21,817	21,817	21,817	84,133	53,427	
Max.Mod.(V)		2,963		6,961	2,963	6,961	6,961	6,961	23,302	22,702	18,681
Type VI EVC											
Mendenhall Glacier											
Type I EVC	252,987										
Retention(II)		163,780	163,540	163,780	163,780	163,780	163,780	163,780	163,520	163,540	140,604
Part.Ret.(III)	959	90,166	90,406	90,166	90,166	90,166	90,166	90,166	68,343	68,343	113,341
Modific.(IV)									11,505	11,505	
Max.Mod.(V)									10,578	10,558	
Type VI EVC											
Peril Strait											
Type I EVC	120,582										
Retention(II)	720	69,371	1,744	24,014	69,371	24,014	24,074	29,206	20	59,772	27,447
Part.Ret.(III)	2,194	40,690	165,515	44,684	40,690	44,684	44,684	39,552	24,953	24,953	57,020
Modific.(IV)	13,793	4,374		11,276	4,374	11,276	11,256	11,256	15,566	6,439	220
Max.Mod.(V)	26,151	52,904		87,365	52,904	87,365	87,325	87,325	126,720	76,095	71,890
Type VI EVC	5,239										

Travel Route/ Viewshed	EVC	Alternative								
		Pref.	1	2	3	4	5	6	7	8	9
Salmon Bay Lake											
Type I EVC	2,056										
Retention(II)	80	2,002	20	119	2,002	119	2,002	2,002		1,982	119
Part.Ret.(III)	1,761	1,499	4,174	3,162	1,499	3,162	1,499	1,499	20		3,778
Modific.(IV)		396		536	396	536	396	396	100	20	
Max.Mod.(V)	296	296		377	296	377	296	296	4,074	2,192	296
Type VI EVC											
Stephens Pass											
Type I EVC	127,296										
Retention(II)	1,061	35,401	9,114	12,149	35,401	12,149	12,149	13,083	2,508	36,714	10,625
Part.Ret.(III)	1,060	69,307	118,789	90,986	69,307	90,986	90,986	90,847	17,464	14,671	55,898
Modific.(IV)	520	1,573		2,607	1,573	2,607	2,607	2,091	41,618	27,228	1,440
Max.Mod.(V)	3,932	21,641		22,180	21,641	22,180	22,180	21,902	65,534	48,510	33,682
Type VI EVC											
Stikine Strait											
Type I EVC	32,848										
Retention(II)		8,853	1,302	461	8,853	461	461	461		8,392	461
Part.Ret.(III)	921	35,423	53,169	43,475	35,423	43,475	43,475	43,475			51,270
Modific.(IV)	4,619	1,883		1,883	1,883	1,883	1,883	1,883	461	461	
Max.Mod.(V)	16,083	8,312		8,652	8,312	8,652	8,652	8,652	54,010	45,618	2,740
Type VI EVC											
Sumner Strait											
Type I EVC	21,829										
Retention(II)	100	14,224	10,886	9,120	14,224	9,120	11,548	13,268	3,915	9,039	7,317
Part.Ret.(III)	4,553	17,408	54,905	17,508	17,408	17,508	17,408	17,408			23,853
Modific.(IV)	9,842	6,844		6,844	6,844	6,844	6,844	6,844	9,370	9,370	5,908
Max.Mod(V)	29,447	27,294		32,298	27,294	32,298	29,571	28,251	52,485	47,361	28,692
Type VI EVC											
Sweetwater Lake/Honker Divide											
Type I EVC	11,699										
Retention(II)	1,380	10,361	7,402	7,181	10,361	7,181	12,622	12,622		5,081	7,421
Part.Ret.(III)	4,881	5,620	14,859	7,060	5,620	7,060	4,699	4,699			8,821
Modific.(IV)	3,240	5,980		7,720	5,980	7,720	4,640	4,640	9,040	7,300	1,740
Max.Mod.(V)	1,080	420		420	420	420	420	420	13,221	9,880	4,400
Type VI EVC	100										

Travel Route/ Viewshed	EVC	Pref.	Alternative 1	2	3	4	5	6	7	8	9
Tenakee Inlet To Tenakee Springs											
Type I EVC	23,202										
Retention(II)		9,439	1,980	460	9,439	460	7,701	9,620		9,419	1,879
Part.Ret.(III)	780	20	41,288	1,400	20	1,400	20	20			4,700
Modific.(IV)	4,074	2,358		2,358	2,358	2,358	2,358	2,338	460	20	20
Max.Mod.(V)	14,772	31,450		39,049	31,450	39,049	33,189	31,289	42,788	33,808	33,548
Type VI EVC	440										
West Coast Waterway - P.O.W.											
Type I EVC	44,452										
Retention(II)	861	23,221	14,907	13,459	23,221	[illegible]59	19,390	21,637	8,855	21,722	3,494
Part.Ret.(III)	7,527	10,835	67,726	11,215	10,835	[illegible]	11,054	10,733			
Modific.(IV)	10,101	21,526		24,315	21,526	[illegible]	23,732	23,091	28,115	25,449	7,039
Max.Mod.(V)	19,671	27,031		33,624	27,031	33,624	28,436	27,152	45,664	35,461	16,230
Type VI EVC	100										
Wrangell Narrows											
Type I EVC	32,020										
Retention(II)	1,301	17,245	4,003	11,044	17,245	11,044	17,245	17,245		11,144	8,883
Part.Ret.(III)	920	19,542	38,785	25,022	19,542	25,022	19,542	19,542			28,686
Modific.(IV)	3,141	2,161		2,221	2,161	2,221	2,161	2,161	8,263	6,121	
Max.Mod.(V)	7,045	4,040		4,700	4,040	4,700	4,040	4,040	34,725	25,722	4,280
Type VI EVC											
Zimovia Strait											
Type I EVC	27,641										
Retention(II)	80	14,064	841	5,179	14,064	5,179	5,179	5,179		10,267	2,980
Part.Ret.(III)	2,800	21,121	39,24	25,662	21,121	25,662	25,662	25,662			17,678
Modific.(IV)	1,941	1,021		5,106	1,021	5,106	5,106	5,106	5,761	4,219	2,781
Max.Mod.(V)	7,644	3,820		4,080	3,820	4,080	4,080	4,080	34,345	25,620	16,667
Type VI EVC											

Source: Queries 47F and Viscomy

(1) EVC and VQO terms are defined in the Scenery affected environment section. With two exceptions the Wilderness portions of viewsheds are not included. The Clarence Strait viewshed includes a portion of South Etolin Island Wilderness, and the Duncan Canal viewshed includes a portion of Duncan Salt Chuck Wilderness.

(2) The acres in the table are only those seen from a Visual Priority Travel Route and Use Area

Table 3-45
Current cumulative roaded acres, and by alternative at the end of decades 1 and 5

Alt.	Current Cumulative Roaded Acres [1]	Cumulative Acres at End of Decade 1	Cumulative Acres at End of Decade 5
Preferred	13,950	18,600	27,450
1	13,950	13,950	13,950
2	13,950	19,323	32,310
3	13,950	17,586	24,303
4	13,950	15,849	18,951
5	13,950	15,756	18,684
6	13,950	18,681	27,585
7	13,950	22,899	41,448
8	13,950	18,744	27,684
9	13,950	21,879	38,568

[1]Total acres covered by roads as of 1995. Roaded acres are calculated based on an average of three acres per one mile of road.

Table 3-46
Projected timber harvest acres and estimated increased landslide frequency[1]

	Decade 1			Decades 1-5		
		Estimated Landslides			Estimated Landslides	
Alt.	Acres Harvested	Harvest Areas	Non-Harvest Areas [2]	Acres Harvested	Harvest Areas	Non-Harvest Areas [2]
Pref.	147,878	66	22	681,197	304	101
1	0	0	0	0	0	0
2	167,672	75	25	870,519	389	130
3	94,338	42	14	495,704	221	74
4	49,432	22	7	258,391	115	38
5	47,120	21	7	242,006	108	36
6	123,178	55	29	645,008	288	96
7	232,414	104	35	1,227,398	548	182
8	123,253	55	18	640,880	286	95
9	177,477	79	26	923,918	412	137

[1] Based on an average of one landslide for every 2,240 acres of timber harvesting. See text for explanation.
[2] Estimated number of natural landslides expected from similar landbase with no timber harvest activities. Alternative 1 has no acres scheduled for timber harvesting.

Table 3-50
Land Classification (thousands of acres) Tentatively Suitable and Suitable Lands

Classification	Preferred	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8	Alt. 9
1. Non-Forest land (includes water)	6,960	6,960	6,960	6,960	6,960	6,960	6,960	6,960	6,960	6,960
2. Forest land	9,978	9,978	9,978	9,978	9,978	9,978	9,978	9,978	9,978	9,978
3 Forest land withdrawn from timber production	4,174	4,174	4,174	4,174	4,174	4,174	4,174	4,174	4,174	4,174
4. Forest land not capable of producing crops of industrial wood.	2,416	2,416	2,416	2,416	2,416	2,416	2,416	2,416	2,416	2,416
5. Forest land physically unsuitable:										
•irreversible damage likely to occur	573	573	573	573	573	573	573	573	573	573
•not restockable within 5 years	63	63	63	63	63	63	63	63	63	63
6. Forest land - inadequate information	431	431	431	431	431	431	431	431	431	431
7. Tentatively suitable forest land (item 2 minus items 3, 4, 5 and 6)	**2,321***	**2,321***	**2,321***	**2,321***	**2,321***	**2,321***	**2,321***	**2,321***	**2,321***	**2,321***
8. Forest land not appropriate for timber production										
Research Natural Areas	2	2	2	2	2	2	2	0	0	0
Remote Recreation	81	427	81	81	81	81	81	14	14	247
Old Growth	354	20	7	354	7	136	136	0	507	0
Semi-Remote Recreation	362	1,657	362	362	362	362	358	121	121	16
Scenic Viewshed (beach fringe)	48	0	65	52	66	62	62	0	0	28
Modified Landscape (beach fringe)	52	0	68	57	68	62	61	7	13	0
Timber Production (beach fringe)	107	6	121	129	127	118	118	103	245	69
Wild, Scenic or Recreation Rivers	30	82	30	30	30	30	30	0	0	0
Special Areas	29	24	29	29	29	29	32	1	1	0
LUD III -Special	0	0	0	0	0	0	0	0	0	53
Total:	1065	2,248	765	1,096	772	882	880	246	901	413
9. Unsuitable forest land (items 3, 4, 5, 6, and 8)	8722	9,905	8,422	8,753	8,429	8,539	8,537	7,903	8,558	8,070
10. Total suitable forest land (item 2 minus item 9)	**1256**	**73**	**1,526**	**1,225**	**1,549**	**1,439**	**1,441**	**2,075**	**1,420**	**1,908**
11. Total national forest land (items 1 and 2)	16938	16,938	16,938	16,938	16,938	16,938	16,938	16,938	16,938	16,938

*May decrease by 100,000 acres due to a data coding error in the Ketchikan database.

Table 3-51
Vegetative Management Practices

Average Annual Harvest Acres of Suitable Lands Modeled in First Decade	Alternative[1]								
	Pref.	2	3	4	5	6	7	8	9
Regeneration Harvest									
Clearcut		16,768					23,207		17,709
Clearcut w/Reserves	11,764		9,386	4,943	4,712	12,318		12,325	
Group Selection	64		48				35		38
Regeneration Treatments [2]									
Natural & Artificial	11,828	16,768	9,434	4,943	4,712	12,318	23,241	12,325	17,747
Intermediate Treatments									
Precommercial Thinning	6,300	6,300	6,300	3,150	3,150	6,300	6,300	6,300	6,300

Source: FORPLAN table F10.1 (Forest-wide Activity and Output Results)
[1] Alternative 1 is not displayed because it doesn't have any scheduled timber harvest.
[2] Artificial regeneration would occur on about six percent of the total acres.

Table 3-52
Timber management intensity by alternative (Thousands of acres) [1]

Alt	No Yield (Category IV)	High Timber Yields (Category I)	Moderate Timber Yields (Category II)	Incidental Yields (Category III)	Total [1]
Preferred	1,094	-	1,103	124	2,321
1	2,248	-	-	73	2,321
2	795	1,394	-	132	2,321
3	1,125	-	957	239	2,321
4	803	-	1,291	227	2,321
5	912	-	1,200	209	2,321
6	912	-	1,200	209	2,321
7	278	1,898	-	145	2,321
8	932	-	1,213	176	2,321
9	452	1,735	-	134	2,321

Source: Oracle Query QRegClassRS95, 21 Feb. 1996
[1] All tentatively suitable timber lands.

Table 3-53
Allowable Sale Quantity and Timber Sale Program Quantity (1st Decade, Average Annual)

Alt	Sawtimber (MMCF)	Utility (MMCF)	Total (MMCF)	Total (MMBF)
Pref.	75.6	12.9	88.5	357.0
1	0.0	0.0	0.0	0
2	104.7	15.6	120.3	488
3	59.5	8.8	68.3	278
4	31.1	4.6	35.7	145
5	29.6	4.4	34.0	139
6	77.5	11.8	89.3	362
7	146.2	22.5	168.7	689
8	77.8	11.4	89.2	364
9	109.9	16.2	126.1	521

MMCF = Million Cubic Feet
MMBF = Million Board Feet

Table 3-54
Implementation adjustments by alternative

Alt	Suitable Timber Base	Implementation Acres (Thousands of Acres) [1]	Scheduled Timber Base Periods 1-15	Scheduled as a % of the Suitable Timber Base
Pref	1,256	206	979	78
1	73		0	0
2	1,556	253	1,252	80
3	1,225	283	831	68
4	1,549	310	879	57
5	1,439	270	827	57
6	1,441	270	1,081	75
7	2,075	359	1,691	81
8	1,420	246	1,085	76
9	1,908	312	1,325	69

[1] Also known as "model implementation reduction acres."

Table 3-55
Average Annual First Decade Allowable Sale Quantity (ASQ) and Non-Interchangeable Components (NIC's).

Alt.	Average Annual ASQ MMCF[1]	NIC I MMCF[1]	NIC II MMCF[1]	Average Annual ASQ MMBF[2]	NIC I MMBF[2]	NIC II MMBF[2]
Pref	85.1	70.8	14.3	357	297	60
1	-	-	-	-	-	-
2	120.3	100.0	20.3	488	408*	80*
3	68.3	57.0	11.3	278	239*	39*
4	35.7	29.8	6.0	145	128*	17*
5	34.0	28.1	5.9	139	120*	19*
6	89.3	74.0	15.3	362	312*	50*
7	168.7	141.3	27.4	689	582*	107*
8	89.2	74.7	14.5	364	314*	50*
9	126.1	116.5	9.6	521	479*	42*

* Reflects a correction in utility calculation for Chatham and Stikine
[1] Million cubic feet
[2] Million board feet

Table 3-56
Scheduled Harvest acres by NonInterchangeable Component

Alt.	Period (decades)	NIC I (acres)	NIC II (acres)	Total (acres)
Pref.	1	98,276	19,366	117,642
	1 to 5	502,815	99,437	
	1 to 10	906,933	187,452	
1	1	-	-	-
	1 to 5	-	-	-
	1 to 10	-	-	-
2	1	139,199	28,473	167,672
	1 to 5	717,031	153,488	870,519
	1 to 10	1,251,473	260,044	1,511,517
3	1	78,383	15,955	94,338
	1 to 5	411,081	84,623	495,704
	1 to 10	751,139	158,835	909,974
4	1	42,222	7,210	49,432
	1 to 5	220,917	37,474	258,391
	1 to 10	450,254	78,943	529,197
5	1	38,820	8,300	47,120
	1 to 5	199,669	42,337	242,006
	1 to 10	407,510	87,472	494,982
6	1	101,986	21,192	123,178
	1 to 5	533,824	111,184	645,008
	1 to 10	974,599	211,810	1,186,409
7	1	194,193	38,221	232,414
	1 to 5	1,014,938	212,460	1,227,398
	1 to 10	1,808,582	365,376	2,173,958
8	1	102,987	20,266	123,253
	1 to 5	535,024	105,856	640,880
	1 to 10	967,544	206,032	1,173,576
9	1	172,935	4,535	177,470
	1 to 5	897,294	24,714	922,008
	1 to 10	1,563,141	41,135	1,604,276